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Appendices

Appendix A – Flood Protection Operations Drawings
Document History

**BIM reference number:** 663475-HP3-CH2-ALL-SO-RE-Z-0001

This document has been issued and amended as follows:

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General

In exercise of the powers conferred upon them by the Flood Risk Management (Scotland) Act 2009 (hereinafter referred to as the ‘Act’), Scottish Borders Council (hereinafter referred to as the ‘Council’) hereby proposes the following Flood Protection Scheme (hereinafter referred to as the ‘Scheme’), the purpose of which is:

- To mitigate the effects of flooding to residential, community and business properties along the length of the River Teviot from Volunteer Park to the Council depot downstream of Albert Park.
- To mitigate the effects of flooding to residential and business properties along the length of the Slitrig Water from Drumlanrig Bridge to its confluence with the River Teviot.
- To mitigate the effects of flooding to business properties adjacent to the Stirches Burn, located between Mansfield Gardens and Waverley Walk.

The intention to make this scheme is aligned with the Flood Risk Management Strategy published by the Scottish Environment Protection Agency in December 2015 and the associated Local Flood Risk Management Plan published by the Council on 22 June 2016. This plan identified actions to be carried out in the first planning cycle from 2016 to 2022.
Terms of the Scheme

The terms of the Scheme are detailed hereunder.
Site of the Flood Protection Operations

The sites at which the Flood Protection Operations (hereinafter referred to as the ‘Operations’) are to be carried out in terms of the Scheme are situated:

- On land adjacent to the River Teviot at Common Haugh car park (occupying land wholly within the Scottish Borders)
- On land adjacent to the River Teviot along the length of the A7 Commercial Road (occupying land wholly within the Scottish Borders)
- On land adjacent to the River Teviot and Stirches Burn along the length of Mansfield Road (occupying land wholly within the Scottish Borders)
- On land adjacent to the River Teviot from Mansfield Park to the Council depot (occupying land wholly within the Scottish Borders)
- On land adjacent to the River Teviot at Volunteer Park and Buccleuch Park (occupying land wholly within the Scottish Borders)
- On land in the channel and adjacent to the River Teviot from Hawick High School to the confluence with the Slitrig Water (occupying land wholly within the Scottish Borders)
- On land in the channel and adjacent to the Slitrig Water from Drumlanrig Bridge to its confluence with the River Teviot (occupying land wholly within the Scottish Borders)
- On land in the channel and adjacent to the River Teviot along Mill Port, Teviot Road, and from Little Haugh park to, and including, Laidlaw Terrace (occupying land wholly within the Scottish Borders)
- On land adjacent to the River Teviot along Duke Street and Glebe Mill Street (occupying land wholly within the Scottish Borders)
- On land adjacent to the River Teviot around Weensland industrial area (occupying land wholly within the Scottish Borders)
and are shown on the most up to date revision of the plans marked as listed below:

663475-HP4-CH2-MUL-SO-DR-Z-0001  663475-HP4-CH2-MUL-SO-DR-Z-0027
663475-HP4-CH2-MUL-SO-DR-Z-0002  663475-HP4-CH2-MUL-SO-DR-Z-0028
663475-HP4-CH2-MUL-SO-DR-Z-0003  663475-HP4-CH2-MUL-SO-DR-Z-0029
663475-HP4-CH2-MUL-SO-DR-Z-0004  663475-HP4-CH2-MUL-SO-DR-Z-0030
663475-HP4-CH2-MUL-SO-DR-Z-0005  663475-HP4-CH2-MUL-SO-DR-Z-0031
663475-HP4-CH2-MUL-SO-DR-Z-0006  663475-HP4-CH2-MUL-SO-DR-Z-0032
663475-HP4-CH2-MUL-SO-DR-Z-0007  663475-HP4-CH2-MUL-SO-DR-Z-0033
663475-HP4-CH2-MUL-SO-DR-Z-0008  663475-HP4-CH2-MUL-SO-DR-Z-0034
663475-HP4-CH2-MUL-SO-DR-Z-0009  663475-HP4-CH2-MUL-SO-DR-Z-0035
663475-HP4-CH2-MUL-SO-DR-Z-0010  663475-HP4-CH2-MUL-SO-DR-Z-0036
663475-HP4-CH2-MUL-SO-DR-Z-0011  663475-HP4-CH2-MUL-SO-DR-Z-0037
663475-HP4-CH2-MUL-SO-DR-Z-0012  663475-HP4-CH2-MUL-SO-DR-Z-0038
663475-HP4-CH2-MUL-SO-DR-Z-0013  663475-HP4-CH2-MUL-SO-DR-Z-0039
663475-HP4-CH2-MUL-SO-DR-Z-0014  663475-HP4-CH2-MUL-SO-DR-Z-0040
663475-HP4-CH2-MUL-SO-DR-Z-0015  663475-HP4-CH2-MUL-SO-DR-Z-0041
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663475-HP4-CH2-MUL-SO-DR-Z-0020  663475-HP4-CH2-MUL-SO-DR-Z-0046
663475-HP4-CH2-MUL-SO-DR-Z-0021  663475-HP4-CH2-MUL-SO-DR-Z-0047
663475-HP4-CH2-MUL-SO-DR-Z-0022  663475-HP4-CH2-MUL-SO-DR-Z-0048
663475-HP4-CH2-MUL-SO-DR-Z-0023  663475-HP4-CH2-MUL-SO-DR-Z-0049
663475-HP4-CH2-MUL-SO-DR-Z-0024
663475-HP4-CH2-MUL-SO-DR-Z-0025
663475-HP4-CH2-MUL-SO-DR-Z-0026

which are attached and executed as relative hereto.
Description of the Operations

Work Section 1

The flood protection operations to be carried out in terms of the Scheme at Work Section 1 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0008, and are as follows:

WS1-01

- From chainage WS1-000 to WS1-180 or thereby, construct a reinforced concrete flood defence wall up to 2.3 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Provide watertight transparent viewing windows at intervals in the flood defence wall, at a height of 1.4 metres or thereby above ground level on the dry side, to enable the river to be viewed from the dry side of the wall.
- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Generally, take up the adjacent footpath and kerbs to facilitate construction of the flood defence wall, and replace with a footpath of equivalent width.
- Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Remove the existing fence and shrubs along the edge of the footpath and replace with suitable landscaping.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS1-02

- From chainage WS1-38.5 to WS1-040 or thereby, construct a flood defence gate, up to 1.3 metres or thereby above existing ground level, which is integral to operation WS1-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.
Work Section 2

The flood protection operations to be carried out in terms of the Scheme at Work Section 2 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0009, and are as follows:

WS2-01
- From chainage WS2-000 to WS1-167 or thereby, construct a reinforced concrete flood defence wall up to 1.2 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Generally, where required, take up the adjacent car park and kerbs to facilitate construction of the flood defence wall, and replace with a car park of equivalent construction.
- Take up the adjacent grassed area to facilitate construction of the flood defence wall, and reinstate upon completion.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Take down and remove existing fence along the edge of the nearby footpath.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS2-02
- From chainage WS2-42.8 to WS2-67.8 metres or thereby, construct a new pedestrian access over the flood defence wall described in operation WS2-01, connecting Common Haugh car park with Lawson footbridge. This shall comprise a 2.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and an accompanying set of steps. Both shall be equipped with handrails.

WS2-03
- From chainage WS2-132.8 to WS2-134.3 or thereby, construct a flood defence gate, up to 1.2 metres or thereby above existing ground level, which is integral to operation WS2-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.
Work Section 3

The flood protection operations to be carried out in terms of the Scheme at Work Section 3 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0010, and are as follows:

WS3-01  
- From chainage WS3-000 to WS3-49 or thereby, construct a reinforced concrete flood defence wall up to 2.9 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.8 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Ground level between the flood defence wall and Hawick Burns Club shall be raised by up to 1.0 metre above existing ground level. Existing riverbank materials shall be retained and, where suitable, the riverbank reinstated on the wet side of the flood defence wall.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

Work Section 4

The flood protection operations to be carried out in terms of the Scheme at Work Section 4 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0011, and are as follows:

WS4-01  
- From chainage WS4-000 to WS4-37 or thereby, carry out earthworks to raise ground level by up to 0.7 metres or thereby above existing ground level.
- Provide a seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Take up existing landscaping works and replace with an equivalent bound surface.

WS4-02  
- Perpendicular to chainage WS4-017 and chainage WS4-37 or thereby, construct a new ramped access over the works described in operation WS4-01. This shall comprise a 2.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 16.

Work Section 5

The flood protection operations to be carried out in terms of the Scheme at Work Section 5 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0012, and are as follows:
WS5-01

- From chainage WS5-000 to WS5-050 or thereby, construct a reinforced concrete flood defence wall up to 0.6 metre or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding). Where flood defence level is lower than an existing structure
- Provide a seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Generally, where required, take up the adjacent footpath to facilitate construction of the flood defence wall, and replace with a footpath of equivalent width.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Take down and remove or recycle the existing masonry wall along the edge of the existing footpath.
- Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

Work Section 6

The flood protection operations to be carried out in terms of the Scheme at Work Section 6 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0013, and are as follows:

WS6-01

- From chainage WS6-000 to WS6-162 or thereby, construct a reinforced concrete flood defence wall up to 2.8 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.
• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Construct a new **2.5 metre wide** or thereby maintenance and emergency access track on the dry side of the new flood defence wall, raised to a level of 1.5 metres or thereby below the top of the wall.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

**Work Section 7**

The flood protection operations to be carried out in terms of the Scheme at **Work Section 7** are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0014, and are as follows:

**WS7-01**

• From chainage **WS7-000 to WS7-087** or thereby, construct a reinforced concrete flood defence wall up to **2.0 metres** or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of **0.3 metres** or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding **10.0 metres** or thereby below existing ground level, which may include driven sheet piles.

• Exposed faces of the flood defence wall shall be finished in **stone or ‘stone-type’ cladding on the dry side** and **formed concrete on the wet side**. The wall shall be finished with a **stone or ‘stone-type’ cope**.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Generally, take up the adjacent footpath and kerbs to facilitate construction of the flood defence wall, and replace with a footpath of equivalent width.

• Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS7-02

• From chainage WS7-085.5 to WS7-087 or thereby, construct a flood defence gate, up to 2.0 metres or thereby above existing ground level, which is integral to operations WS7-01 and WS8-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.

WS7-03

• At chainage WS7-087 metres or thereby, construct a new pedestrian ramp up to the flood gate described in operation WS7-01, and down again to Victoria bridge. This shall comprise a 2.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20. The ramp shall be equipped with handrails.

Work Section 8

The flood protection operations to be carried out in terms of the Scheme at Work Section 8 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-015 and 663475-HP4-CH2-MUL-SO-DR-Z-016, and are as follows:

WS8-01

• From chainage WS7-000 to WS7-313 or thereby, construct a reinforced concrete flood defence wall up to 1.9 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

• Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Take up the adjacent road surface and kerbs, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunication, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Take down and remove the existing masonry parapet wall, and where required, all or part of the existing retaining wall beneath.
- Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS8-02

- At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.

- Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.

- Construct a discharge outfall on the wet-side of operation WS8-01 at chainage WS8-185 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.

Work Section 9

The flood protection operations to be carried out in terms of the Scheme at Work Section 9 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0017, and are as follows:

WS9-01

- From chainage WS9-000 to WS9-284 or thereby, construct a reinforced concrete flood defence wall up to 1.8 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.

- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

- Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.

- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

- Take down and remove existing fence along the edge of the footpath.

- Take down and reinstate existing road signage.
• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS9-02
• From chainage WS9-281.5 to WS9-284 or thereby, construct a flood defence gate, up to 1.8 metres or thereby above existing ground level, which is integral to operations WS9-01 and WS10-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.

Work Section 10
The flood protection operations to be carried out in terms of the Scheme at Work Section 10 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0018, and are as follows:

WS10-01
• From chainage WS10-000 to WS10-275 or thereby, construct a reinforced concrete flood defence wall up to 1.7 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

• Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• From chainage WS10-000 to WS10-060 or thereby, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. From chainage WS10-060 to WS10-275 or thereby, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. From chainage WS10-000 to WS10-275 or thereby, the wall shall be finished with a stone or ‘stone-type’ cope.

• Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Take down and remove existing fence along the edge of the footpath.

• Take down and reinstate existing road signage.
• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

Work Section 11
The flood protection operations to be carried out in terms of the Scheme at Work Section 11 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0019, and are as follows:

WS11-01

• From chainage WS11-000 to WS11-150 or thereby, construct a reinforced concrete flood defence wall up to 1.3 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

• Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.

• Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Take down and remove existing fence along the edge of the footpath.

• Take down and reinstate existing road signage.

• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.
Work Section 12

The flood protection operations to be carried out in terms of the Scheme at Work Section 12 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0020 and 663475-HP4-CH2-MUL-SO-DR-Z-0021, and are as follows:

**WS12-01**

- From chainage WS12-000 to WS12-450 or thereby, construct a reinforced concrete flood defence wall up to 2.0 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.
- Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Take down and remove existing fence along the edge of the footpath.
- Take down and reinstate existing road signage.
- Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

**WS12-02**

- At a position in or near the Wastewater Treatment Works, to be mutually agreed with Scottish Water, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.
• Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.

• Construct a discharge outfall on the wet-side of operation WS12-01 at chainage WS12-185 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.

Work Section 13

The flood protection operations to be carried out in terms of the Scheme at Work Section 13 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0022, and are as follows:

WS13-01

• From chainage WS13-000 to WS13-249 or thereby, construct a reinforced concrete flood defence wall up to 2.3 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

• Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

• Provide opportunity for informal parallel parking off Mansfield Road, adjacent to the flood defence wall.

WS13-02

• At chainage WS13-142 or thereby, construct a new pedestrian access over the flood defence wall described in operation WS13-01. This shall comprise a 3.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and shall be equipped with handrails.
Work Section 14

The flood protection operations to be carried out in terms of the Scheme at Work Section 14 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0023 and 663475-HP4-CH2-MUL-SO-DR-Z-0024, and are as follows:

WS14-01
- From chainage WS14-000 to WS14-369 or thereby, construct a reinforced concrete flood defence wall up to 2.2 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS14-02
- At chainage WS14-348 or thereby, construct a new pedestrian access over the flood defence wall described in operation WS14-01. This shall comprise a 3.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and shall be equipped with handrails.

WS14-03
- At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.
- Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.
• Construct a discharge outfall on the wet-side of operation WS14-01 at chainage WS14-330 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.

Work Section 15

The flood protection operations to be carried out in terms of the Scheme at Work Section 15 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0025, and are as follows:

WS15-01

• From chainage WS15-000 to WS15-160 or thereby, construct a reinforced concrete flood defence wall up to 2.0 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
• Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.
• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.
• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

Work Section 16

The flood protection operations to be carried out in terms of the Scheme at Work Section 16 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0026, and are as follows:

WS16-01

• From chainage WS16-000 to WS16-239 or thereby, construct a reinforced concrete flood defence wall up to 1.55 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.

- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

- Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.

- Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

- Take down and remove existing fence along the edge of the footpath.

- Take down and reinstate existing road signage.

- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

**Work Section 17**

The flood protection operations to be carried out in terms of the Scheme at Work Section 17 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0027, and are as follows:

**WS17-01**

- From chainage WS17-000 to WS17-148 or thereby, construct a reinforced concrete flood defence wall up to 1.75 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

- From chainage WS17-000 to WS17-092 or thereby, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. From chainage WS17-092 to WS17-148 or thereby, exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. From chainage WS17-000 to WS17-148 or thereby, the wall shall be finished with a stone or ‘stone-type’ cope.

- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
• Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.

• Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Take down and remove existing fence along the edge of the footpath.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

Work Section 18

The flood protection operations to be carried out in terms of the Scheme at Work Section 18 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0028, and are as follows:

WS18-01

• From chainage WS18-000 to WS18-43 or thereby, construct a reinforced concrete flood defence wall up to 1.95 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

• Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Provide watertight transparent viewing window(s) in the flood defence wall, at a height to enable uninhibited viewing of the cricket field from the first floor windows of the adjacent cricket pavilion.

• Provide a new footpath to connect the flood gate described in operation WS18-02 to the nearby tennis court.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location
of those removed, and shall be of an appropriate variety and provenance for the replacement location.

**WS18-02**
- From chainage **WS18-30** to **WS18-33** or thereby, construct a flood defence gate, up to **1.95 metres** or thereby above existing ground level, which is integral to operations WS18-01 and WS18-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.
- Construct a new ramp up to the flood gate, which shall comprise a **3.0 metre** wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20.

**Work Section 19**

The flood protection operations to be carried out in terms of the Scheme at **Work Section 19** are as generally shown on said plan(s), marked **663475-HP4-CH2-MUL-SO-DR-Z-0029**, and are as follows:

**WS19-01**
- From chainage **WS19-000** to **WS19-092** or thereby, construct a reinforced concrete flood defence wall up to **2.15 metres** or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of **0.3 metres** or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding **10.0 metres** or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in **formed concrete on the dry side** and **formed concrete on the wet side**. The wall shall be finished with a **concrete cope**.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- From chainage **WS19-055** to **WS19-092** or thereby, take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.
- Take up the adjacent car park surface, where required to facilitate construction of the flood defence wall, and replace with a car park surface of equivalent construction.
- Take down and remove the existing reinforced concrete flood defence wall.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- From chainage **WS19-000** to **WS19-055** or thereby, Take down and remove existing fence.
- Take down and reinstate the existing cricket nets.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location
of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS19-02

- At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.
- Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.
- Construct a discharge outfall on the wet-side of operation WS19-01 at chainage WS19-060 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.

Work Section 20

The flood protection operations to be carried out in terms of the Scheme at Work Section 20 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0030, and are as follows:

WS20-01

- From chainage WS20-000 to WS20-211 or thereby, construct a reinforced concrete flood defence wall up to 2.65 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Take up the adjacent footpath, where required to facilitate construction of the flood defence wall, and replace with a footpath of equivalent construction.
- Take up the adjacent school playground surface, where required to facilitate construction of the flood defence wall, and replace with a surface of equivalent construction.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Take down and remove the existing fence adjacent to the existing footpath and replace with a new fence of similar construction.
- Take down and remove the existing masonry wall between the footpath and school playground.
• Where required, provide new riverbank erosion protection.
• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS20-02
• From chainage WS20-203.5 to WS20-205 or thereby, construct a flood defence gate, up to 2.50 metres or thereby above existing ground level, which is integral to operation WS20-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.

Work Section 21
The flood protection operations to be carried out in terms of the Scheme at Work Section 21 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0031, and are as follows:

WS21-01
• From chainage WS21-000 to WS21-119 or thereby, construct a reinforced concrete flood defence wall up to 1.9 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles, and/or cast-in-place concrete piles.
• Provide concrete or structural backfill between the flood defence wall and the existing riverbank retaining wall up to dry side finished ground level. Dress with topsoil and grass seed.
• From chainage WS21-000 to WS21-035 or thereby, exposed faces of the flood defence wall above dry-side finished ground level shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. From chainage WS21-035 to WS21-119 or thereby, exposed faces of the flood defence wall above dry-side finished ground level shall be finished in formed concrete on the dry side and stone or ‘stone-type’ cladding on the wet side. From chainage WS21-000 to WS21-119 or thereby, exposed faces below dry-side finished ground level of the flood defence wall shall be finished in formed concrete. From chainage WS21-000 to WS21-119 or thereby, the wall shall be finished with a stone or ‘stone-type’ cope.
• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
• From chainage WS21-000 to WS21-035 or thereby, Take down and remove the existing blockwork wall above ground level.
• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location
of those removed, and shall be of an appropriate variety and provenance for the replacement location.

**WS21-02**

- Take down and remove existing garage to facilitate construction of the flood defence wall, and replace with new garage on completion.

**Work Section 22**

The flood protection operations to be carried out in terms of the Scheme at **Work Section 22** are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0032, and are as follows:

**WS22-01**

- From chainage **WS22-000** to **WS22-127** or thereby, construct a reinforced concrete flood defence wall up to **1.4 metres** or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of **0.3 metres** or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding **10.0 metres** or thereby below existing ground level, which may include driven sheet piles, and/or cast-in-place concrete piles.
- From chainage **WS22-000** to **WS22-045** or thereby, provide concrete or structural backfill between the flood defence wall and the existing building no higher than 1.5 metres below flood defence level. Provide a suitable bound surface on top.
- From chainage **WS22-088** to **WS22-127** or thereby, provide concrete or structural backfill between the flood defence wall and the existing building no higher than 1.5 metres below flood defence level. Provide a suitable bound surface on top.
- Exposed faces of the flood defence wall above dry-side finished ground level shall be finished in **stone or ‘stone-type’ cladding on the dry side** and **stone or ‘stone-type’ cladding on the wet side**. Exposed faces of the flood defence wall below dry-side finished ground level shall be finished in formed concrete. The wall shall be finished with a **stone or ‘stone-type’ cope**.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

**WS22-02**

- At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.
• Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.

• Construct a discharge outfall on the wet-side of operation WS22-01 at chainage WS22-55 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.

Work Section 23

The flood protection operations to be carried out in terms of the Scheme at Work Section 23 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0033, and are as follows:

WS23-01

• From chainage WS23-000 to WS23-121 or thereby, construct a reinforced concrete flood defence wall up to 1.75 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

• Above dry-side finished ground level, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. Below dry-side finished ground level, exposed faces of the flood defence wall shall be finished in formed concrete. The wall shall be finished with a stone or ‘stone-type’ cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• From chainage WS23-025 to WS23-118 or thereby, construct a new 2.0 metre wide or thereby footpath adjacent to the new flood defence wall.

• Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Remove the existing masonry wall along the edge of the existing road.

• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.
Work Section 24

The flood protection operations to be carried out in terms of the Scheme at Work Section 24 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0034, and are as follows:

WS24-01
- From chainage WS24-000 to WS24-20 metres or thereby, modify the existing pedestrian access to the south abutment of James Thomson bridge such that it provides a continuation of the flood defence level between operation WS23-01 and operation WS25-01 and is up to 0.2 metres or thereby above the existing top of abutment. This shall comprise a 2.2 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than the existing ramp, and an accompanying set of steps. Both shall be equipped with handrails.

Work Section 25

The flood protection operations to be carried out in terms of the Scheme at Work Section 25 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0035, and are as follows:

WS25-01
- From chainage WS25-000 to WS25-187 or thereby, construct a reinforced concrete flood defence wall up to 1.8 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Provide watertight transparent viewing windows at intervals in the flood defence wall, at a height of 1.4 metres or thereby above ground level on the dry side, to enable the river to be viewed from the dry side of the wall.
- Above dry-side finished ground level, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. Below dry-side finished ground level, exposed faces of the flood defence wall shall be finished in formed concrete. The wall shall be finished with a stone or ‘stone-type’ cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Construct a new 2.5 metre wide or thereby combined footpath and cycle path adjacent to the new flood defence wall, raised to a level of 1.5 metres or thereby below the top of the wall.
- Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Take down and remove the existing masonry wall along the edge of the existing road.
- Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

Work Section 26

The flood protection operations to be carried out in terms of the Scheme at Work Section 26 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0036, and are as follows:
WS26-01

- From chainage WS26-000 to WS26-197 or thereby, construct a reinforced concrete flood defence wall up to 2.0 metres or thereby above existing ground level with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS26-02

- From chainage WS26-000 to WS26-059 metres or thereby, construct a new pedestrian access over the flood defence wall described in operation WS26-01, connecting Teviot Crescent to Little Haugh park. This shall comprise a 2.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and an accompanying set of steps. Both shall be equipped with handrails.

WS26-03

- From chainage WS26-190 to WS26-191.5 or thereby, construct a flood defence gate, up to 2.0 metres or thereby above existing ground level, which is integral to operation WS26-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.

Work Section 27

The flood protection operations to be carried out in terms of the Scheme at Work Section 27 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-2-0037, and are as follows:

WS27-01

- From chainage WS27-000 to WS27-186 or thereby, construct a reinforced concrete flood defence wall up to 1.9 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
• Provide watertight transparent viewing windows at intervals in the flood defence wall, at a height of 1.4 metres or thereby above ground level on the dry side, to enable the river to be viewed from the dry side of the wall.

• Above dry-side finished ground level, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. Below dry-side finished ground level, exposed faces of the flood defence wall shall be finished in formed concrete. The wall shall be finished with a stone or ‘stone-type’ cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Take up the adjacent footpath and kerbs to facilitate construction of the flood defence wall, and construct a new 2.0 metre wide or thereby footpath adjacent to the new flood defence wall.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• From chainage WS27-065 to WS27-186 or thereby, Take down and remove the adjacent masonry wall, where required to facilitate construction of the flood defence wall, and replace with a suitable boundary up to 2.4 metre high or thereby.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS27-02

• At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with substmersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.

• Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.

• Construct a discharge outfall on the wet-side of operation WS27-01 at chainage WS27-180 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.

Work Section 28

The flood protection operations to be carried out in terms of the Scheme at Work Section 28 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0038, and are as follows:

WS28-01

• From chainage WS28-000 to WS28-108 or thereby, construct a reinforced concrete flood defence wall up to 1.6 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall)
with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.

- Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and formed concrete on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.

- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

- Construct a new 1.5 metre wide or thereby footpath adjacent to the new flood defence wall.

- Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

- From chainage WS28-000 to WS28-100 or thereby, Take down and remove the existing fence, and from chainage WS28-100 to WS28-108 or thereby, Take down and remove the existing masonry wall. Beyond chainage WS28-108 or thereby, Take down and remove the existing masonry wall as required to facilitate construction of the flood defence wall, and on completion of the flood defence wall, construct a new masonry wall to the same height as the original, continuous with the flood defence wall.

- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

### Work Section 29

The flood protection operations to be carried out in terms of the Scheme at **Work Section 29** are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0039 and 663475-HP4-CH2-MUL-SO-DR-Z-0040, and are as follows:

**WS29-01**

- From chainage **WS29-000** to **WS29-309** or thereby, construct a reinforced concrete flood defence wall up to 1.8 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
• Provide watertight transparent viewing windows at intervals in the flood defence wall, at a height of 1.4 metres or thereby above ground level on the dry side, to enable the river to be viewed from the dry side of the wall.

• Exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. The wall shall be finished with a stone or ‘stone-type’ cope.

• Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

• Take up the adjacent footpath and kerbs to facilitate construction of the flood defence wall, and replace with a footpath of equivalent width.

• Take up the adjacent road surface, where required to facilitate construction of the flood defence wall, and replace with a road surface of equivalent construction.

• Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

• Take down and remove the existing railing along the edge of the existing footpath.

• Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS29-02

• From chainage WS29-307.5 to WS29-309 or thereby, construct a flood defence gate, up to 1.8 metres or thereby above existing ground level, which is integral to operations WS29-01 and WS30-01. The gate shall be hinged, with appropriate seals, gaskets and locking devices. Appropriate flood warning signage shall be erected.

Work Section 30

The flood protection operations to be carried out in terms of the Scheme at Work Section 30 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0041 and 663475-HP4-CH2-MUL-SO-DR-Z-0042, and are as follows:

WS30-01

• From chainage WS30-000 to WS30-300 or thereby, construct a reinforced concrete flood defence wall up to 1.5 metres or thereby above existing ground level (excluding any railing, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).

• Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
From chainage WS30-000 to WS30-060 or thereby, above dry-side finished ground level, exposed faces of the flood defence wall shall be finished in stone or ‘stone-type’ cladding on the dry side and stone or ‘stone-type’ cladding on the wet side. From chainage WS30-060 to WS30-300 or thereby, above dry-side finished ground level, exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. From chainage WS30-000 to WS30-300 or thereby, below dry-side finished ground level for this stretch, exposed faces of the flood defence wall shall be finished in formed concrete and the wall shall be finished with a stone or ‘stone-type’ cope.

Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.

Take up the adjacent footpath and kerbs to facilitate construction of the flood defence wall, and replace with a footpath of equivalent width.

Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.

Take down and remove the existing railing along the edge of the existing footpath.

Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.

Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

At chainage WS30-295 or thereby, construct a new pedestrian access over the flood defence wall described in operation WS30-01, connecting Glebe Mill Street to Oliver Park. This shall comprise a 2.5 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and shall be equipped with handrails.

At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.

Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.

Construct a discharge outfall on the wet-side of operation WS30-01 at chainage WS30-255 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.
Work Section 31

The flood protection operations to be carried out in terms of the Scheme at Work Section 31 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0043 and 663475-HP4-CH2-MUL-SO-DR-Z-0044, and are as follows:

WS31-01

- From chainage WS31-000 to WS31-291 or thereby, construct a flood defence embankment up to 1.9 metres or thereby above existing ground level. The flood defence embankment shall have a crest width of 3.5 metres or thereby and a maximum base width of 10.0 metres or thereby. The embankment slopes shall be dressed with topsoil and seeded with grass.
- On the crest of the embankment, construct a 2.5 metre wide shared footpath and cycle path. At chainage WS31-291 or thereby, slope the path at a longitudinal gradient no steeper than 1 in 20 to meet the footpath on the wet side of operation WS32-01.
- Provide an impermeable embankment core and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence embankment to facilitate the conveyance of secondary floodwater into the watercourse.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.
- Construct a 3.0m wide or thereby vehicle access over the embankment to enable maintenance access to land on the river side of the flood defence embankment.

WS31-02

- At chainage WS31-000 or thereby, construct a new pedestrian access over the flood defence embankment described in operation WS31-01, connecting Glebe Mill Street to Oliver Park. This shall comprise a 2.5 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and shall be equipped with handrails.

WS31-03

- At a position on or near the lowest ground level at this work section, construct a buried automatic pumping station and above-ground control kiosk. This shall comprise: reinforced concrete wet well with submersible pump(s), water level sensors, and ground level access cover(s); and a reinforced concrete valve chamber with actuated valves and connecting pipework.
- Construct a high flow capacity gully at the point of lowest suitable ground level near the wet well, with associated below-ground pipework connecting it to the wet well.
- Construct a discharge outfall on the wet-side of operation WS31-01 at chainage WS31-115 or thereby, which shall comprise: reinforced concrete headwall, flap valve, and riverbank erosion protection.
Work Section 32

The flood protection operations to be carried out in terms of the Scheme at Work Section 32 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0045, and are as follows:

**WS32-01**
- From chainage WS32-000 to WS32-213 or thereby, construct a reinforced concrete flood defence wall up to 1.5 metres or thereby above existing ground level (excluding any raling, and measured on the dry side of the wall) with a maximum structural width above ground level of 0.3 metres or thereby (excluding the thickness of any cladding).
- Provide a structural foundation and seepage cut-off to a depth not exceeding 10.0 metres or thereby below existing ground level, which may include driven sheet piles.
- Exposed faces of the flood defence wall shall be finished in formed concrete on the dry side and formed concrete on the wet side. The wall shall be finished with a concrete cope.
- Provide enhanced drainage systems adjacent to and/or integral to the flood defence wall to facilitate the conveyance of secondary floodwater into the watercourse.
- Divert or otherwise protect adjacent street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground in proximity to this operation in accordance with the service providers’ requirements.
- Remove vegetation from the riverbank, as required to facilitate construction of the flood defence wall, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.
- Where required to facilitate construction or access, take up existing allotment gardens and on completion, reinstate with topsoil.

**WS32-02**
- Culvert approximately 130 metres of open channel mill lade, backfill culvert to adjacent ground level, and provide landscaping to match adjacent surface material. The culvert shall pass through operation WS32-01 at chainage WS32-195 or thereby.
- On the outlet of the culvert, construct a reinforced concrete headwall, flap valve, and erosion protection.

**WS32-03**
- At chainage WS32-200 or thereby, construct a new pedestrian access up to A698 Weensland Road. This shall comprise a 2.5 metre wide ramp, and with a longitudinal gradient no steeper than 1 in 20, and shall be equipped with handrails.

Work Section 33

The flood protection operations to be carried out in terms of the Scheme at Work Section 33 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0046, and are as follows:
WS33-01  • From chainage **WS33-000** to **WS32-058** or thereby, take up the existing brickwork open channel and replace with a pipe.

• Make appropriate connections to the existing pipe at the upstream end of the channel and the existing pipe at the downstream end of the channel. This may involve encasement of the joint in concrete and partial or complete removal of the existing headwalls structures.

• Remove existing trash screens at the upstream and downstream headwall structures.

• Provide appropriate resistance to flotation of the new pipe, which may include concrete encasement.

WS33-02  • Carry out works to the existing culvert to ensure that it is watertight to a suitable pressure.

• Intercept all drains which discharge to the existing culvert, block up the discharge points, and divert the flow to the new drain described in WS33-03.

WS33-03  • Construct a new drain to convey existing yard drainage intercepted by WS33-02. The drain shall discharge to the River Teviot via a headwall fitted with a flap valve.

**Work Section 34**

The flood protection operations to be carried out in terms of the Scheme at **Work Section 34** are as generally shown on said plan(s), marked **663475-HP4-CH2-MUL-SO-DR-Z-0047**, and are as follows:

WS34-01  • Raise the existing abutments of Lawson Footbridge by up to **1.0 metre** or thereby, or replace with new abutments which are up to **1.0 metre** or thereby taller than the existing abutments. Set aside and reinstate the existing bridge deck structure at the raised level.

• Divert or otherwise protect street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground which crosses the bridge or is in proximity to this operation. All to be done in accordance with the service providers’ requirements.

• Remove vegetation from the riverbank, as required to facilitate raising of the bridge and its abutments, and replace with suitable vegetation where appropriate.

• Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS34-02  • At each end of Lawson footbridge, construct a new pedestrian access to the raised level described in operation WS34-01. This shall comprise a **2.0 metre** wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and an accompanying set of steps. Both shall be equipped with handrails.
Work Section 35

The flood protection operations to be carried out in terms of the Scheme at Work Section 35 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0048, and are as follows:

WS35-01
- Raise the existing abutments of Victoria Footbridge by up to 1.0 metre or thereby, or replace with new abutments which are up to 1.0 metre or thereby taller than the existing abutments. Set aside and reinstate the existing bridge deck structure at the raised level.
- Divert or otherwise protect street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground which crosses the bridge or is in proximity to this operation. All to be done in accordance with the service providers’ requirements.
- Remove vegetation from the riverbank, as required to facilitate raising of the bridge and its abutments, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.

WS35-02
- At each end of Victoria footbridge, construct a new pedestrian access to the raised level described in operation WS35-01. This shall comprise a 2.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and an accompanying set of steps. Both shall be equipped with handrails.

Work Section 36

The flood protection operations to be carried out in terms of the Scheme at Work Section 36 are as generally shown on said plan(s), marked 663475-HP4-CH2-MUL-SO-DR-Z-0049, and are as follows:

WS36-01
- Raise the existing abutments of Mansfield Footbridge by up to 0.4 metre or thereby, or replace with new abutments which are up to 0.4 metre or thereby taller than the existing abutments. Set aside and reinstate the existing bridge deck structure at the raised level.
- Divert or otherwise protect street lighting, electrical, gas, telecommunications, water, sewerage and drainage apparatus and any other service or utility above or below ground which crosses the bridge or is in proximity to this operation. All to be done in accordance with the service providers’ requirements.
- Remove vegetation from the riverbank, as required to facilitate raising of the bridge and its abutments, and replace with suitable vegetation where appropriate.
- Where required to facilitate construction or access, remove trees and replace with at least two for every one removed. Replacement trees shall be planted at a suitable location within the local area, which may differ from the location of those removed, and shall be of an appropriate variety and provenance for the replacement location.
WS36-02

- At each end of Mansfield footbridge, construct a new pedestrian access to the raised level described in operation WS36-01. This shall comprise a 2.0 metre wide ramp, with handrails, and with a longitudinal gradient no steeper than 1 in 20, and an accompanying set of steps. Both shall be equipped with handrails.
Benefits and Costs of the Operations

The benefits of the Scheme are as follows:

Flood Cell 1
The benefits of the operations contained within flood cell 1, shown on plan 663475-HP4-CH2-MUL-SO-DR-Z-0001 and comprising Work Sections 16 to 22, are:

- To protect approximately 84 residential and commercial properties from the effects of flooding up to and including the 1 in 75 year flood event on the River Teviot and Slitrig Water.

Flood Cell 2
The benefits of the operations contained within flood cell 2, shown on plan 663475-HP4-CH2-MUL-SO-DR-Z-0002 and comprising Work Sections 1 to 8, are:

- To protect approximately 79 residential and commercial properties from the effects of flooding up to and including the 1 in 75 year flood event on the River Teviot.

Flood Cell 3
The benefits of the operations contained within flood cell 3, shown on plan 663475-HP4-CH2-MUL-SO-DR-Z-0003 and comprising Work Sections 23 to 28, are:

- To protect approximately 108 residential and commercial properties from the effects of flooding up to and including the 1 in 75 year flood event on the River Teviot and Slitrig Water.

Flood Cell 4
The benefits of the operations contained within flood cell 4, shown on plan 663475-HP4-CH2-MUL-SO-DR-Z-0004 and comprising Work Sections 29 to 30, are:

- To protect approximately 228 residential and commercial properties from the effects of flooding up to and including the 1 in 75 year flood event on the River Teviot.

Flood Cell 5
The benefits of the operations contained within flood cell 5, shown on plans 663475-HP4-CH2-MUL-SO-DR-Z-0005 and HP4-CH2-MUL-SO-DR-Z-0006, and comprising Work Sections 9 to 15 and 33, are:

- To protect approximately 219 residential and commercial properties from the effects of flooding up to and including the 1 in 75 year flood event on the River Teviot.

Flood Cell 6
The benefits of the operations contained within flood cell 6, shown on plan 663475-HP4-CH2-MUL-SO-DR-Z-0007 and comprising Work Sections 31 to 32, are:

- To protect approximately 6 residential and commercial properties from the effects of flooding up to and including the 1 in 75 year flood event on the River Teviot.

Work sections 34 to 36 comprise bridge raising works and contribute to the benefits of multiple flood cells described above.

The total whole life cost of the Scheme is estimated as follows:
<table>
<thead>
<tr>
<th>Flood Cell</th>
<th>Present Value Cost (Capital) (£)</th>
<th>Present Value Cost (Maintenance) (£)</th>
<th>Present Value Benefit (£)</th>
<th>Net Present Value (£)</th>
<th>Benefit-Cost Ratio</th>
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<td>£ 212,360</td>
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<td>£ 1,861,004</td>
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Appendix A – Flood Protection Operations Drawings