

- KEY:**
- APPLICATION BOUNDARY
  - AREA ADJOINING APPLICATION AREA IN THE APPLICANT'S OWNERSHIP
  - APPLICANT OWNERSHIP LINE TRUNCATED TO SHOW ONLY THE AREAS ADJACENT TO THE APPLICATION BOUNDARY

PLANNING  
PURPOSES  
ONLY

|       |          |    |      |      |
|-------|----------|----|------|------|
| A     | 12/12/11 | BM | SR   | GB   |
| ISSUE |          |    |      |      |
| Issue | Date     | By | Chkd | Appd |

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Client

**• EDINBURGH •**  
THE CITY OF EDINBURGH COUNCIL

**FLOODPROTECTION**

Job Title  
**WATER OF LEITH  
FLOOD PREVENTION SCHEME**

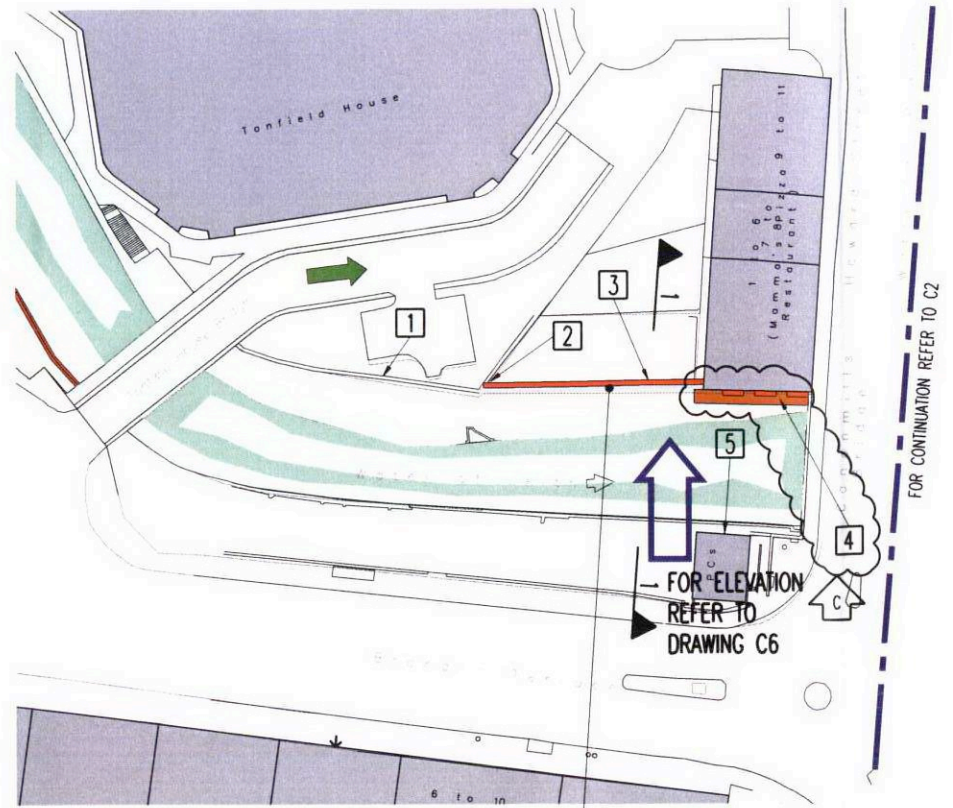
**ACCESS PLATFORM ADJACENT TO  
No.2 HOWARD STREET, WARRISTON  
PLANNING APPLICATION**

Drawing Title  
**PLANNING APPLICATION  
BOUNDARY AND THE AREA  
ADJOINING APPLICATION AREA  
IN THE APPLICANT'S OWNERSHIP**

Scale A1 1:1250, A3 1:2500

|                |               |          |
|----------------|---------------|----------|
| Drawing Status |               |          |
| <b>ISSUE</b>   |               |          |
| Job No         | Drawing No    | Issue    |
| <b>119523</b>  | <b>CO-040</b> | <b>A</b> |





APPROXIMATE WALL HEIGHT 1.7m ABOVE EXISTING GROUND LEVEL  
**SITE PLAN**

- NOTES**
1. THIS DRAWING AND THOSE IT REFERENCES ARE FOR THE PURPOSES OF PLANNING ONLY.
  2. ALL DETAILS SHOWN ARE SUBJECT TO THE APPROVAL OF THE RELEVANT PLANNING AUTHORITY.
  3. WHERE IT HAS BEEN PROPOSED THAT FLOODWALLS ARE CLAD IN STONE, EVERY ATTEMPT WILL BE MADE TO REUSE AS MUCH OF THE EXISTING STONE AS POSSIBLE.
  4. FOR DETAILS OF WALL COPING UNITS REFER TO CROSS SECTION DRAWINGS AND DRAWING TD1.
  5. FOR TYPICAL VIEWS OF FLOOD DEFENCES REFER TO DRAWING No. TD2.

- KEY**
- FLOOD DEFENCE WALLS
  - PROPOSED PUMP STATION
  - DEMOUNTABLE DEFENCES
  - EXISTING WALL MAINTAINED
  - POTENTIAL ACCESS ROUTE
  - ELEVATION

PLANNING PURPOSES ONLY

**ADDITIONAL INFORMATION**

| REF | DESCRIPTION  |
|-----|--|
| 1   | REMEDIAL OR STRENGTHENING WORKS MAY BE REQUIRED TO THE EXISTING WALL BETWEEN CHAINAGES 8480-8520   |
| 2   | THE NEW FLOODWALL TIES INTO THE EXISTING WALL  |
| 3   | BETWEEN CHAINAGES 8520-8550, THE EXISTING STONE WALL WILL BE TAKEN DOWN AND REPLACED WITH A NEW FLOOD DEFENCE WALL WHICH WILL TIE INTO THE BUILDING FACADE AT THE DOWNSTREAM END. REFER PLANNING APPLICATION No. 08/04025/FUL            |
| 4   | SHUTTERS OVER THE 3 WINDOWS WILL BE PROVIDED TO BE CLOSED BY THE COUNCIL IN THE EVENT OF A FLOOD. ACCESS BY THE COUNCIL WILL BE IN THE FORM OF A DETACHABLE LADDER FROM THE GARDEN OF 1-2 HOWARD STREET AND A PLATFORM UNDER THE WINDOWS |
| 5   | MINOR REMEDIAL WORKS MAY BE REQUIRED TO THE PUBLIC CONVENIENCES  |

**FLOOD DEFENCE LEVEL**

| CHAINAGE (m) | FLOOD DEFENCE LEVEL (m.A.O.D) |
|--------------|-------------------------------|
| 8480-8565    | 13.03                         |

**CLADDING DETAIL**

| CHAINAGE (m) | CLADDING TYPE                                     |
|--------------|---|
| LEFT BANK    |   |
| 8520-8550    | BOTH SIDES OF THE FLOODWALL WILL BE CLAD IN STONE |

**ENVIRONMENTAL MITIGATIONS AND ENHANCEMENTS**

- APPROPRIATE RIVER RESTORATION OF IN-CHANNEL AND MARGINAL HABITAT.
- FISH LEDGES AND REFUGIA WILL BE INCORPORATED INTO THOSE STRETCHES OF WALL ENDING DIRECTLY INTO THE WATERCOURSE.
- PROVISION OF ARTIFICIAL BIRD NESTING AND PERCHING SITES WITHIN THE WALL AND WITHIN BANK SIDE PLANTING.
- WHEREVER POSSIBLE TREES WILL BE COPPCED AND POLLARDED INSTEAD OF REMOVED TO FACILITATE CONSTRUCTION OF THE FLOOD DEFENCES.
- ALL RIVERBANKS WILL BE FULLY REPAIRED AND REINSTATED SUBSEQUENT TO CONSTRUCTION ACTIVITIES.
- NOTABLE SPECIES OF FLORA AND FAUNA WILL BE PROTECTED OR TRANSLOCATED IF REQUIRED PRIOR TO CONSTRUCTION WORKS STARTING.
- LEDGES THROUGH BRIDGES WILL BE PROVIDED TO ALLOW FOR THE PASSAGE OF OTTERS AT HIGH WATER LEVELS.
- ALL NEW PUBLIC ACCESS RAMPS PROVIDED AS PART OF THE SCHEME WILL BE CONSTRUCTED TO PERMIT DISABLED ACCESS.

|   |          |     |      |      |
|---|----------|-----|------|------|
| C   | 12/12/11 | BM  | SR   | GB   |
| REVISED FOR NEW PLANNING APPLICATION                      |          |     |      |      |
| B   | 06/11/08 | GTH | GB   | GB   |
| REVISED FOR NEW PLANNING APPLICATION REF No. 08/04025/FUL |          |     |      |      |
| A   | 22/10/03 | JU  |      |      |
| TEXT AMENDED  |          |     |      |      |
| P   | 28/5/03  | JU  | RC   | DS   |
| Issue   | Date     | By  | Chkd | Appd |

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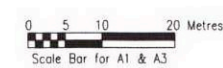
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**EDINBURGH**  
THE CITY OF EDINBURGH COUNCIL  
**FLOOD PROTECTION**

Job Title  
**WATER OF LEITH  
FLOOD PREVENTION SCHEME**

**PLANNING APPLICATION**  
Drawing Title  
**WARRISTON  
PLAN  
SHEET 1 OF 2**

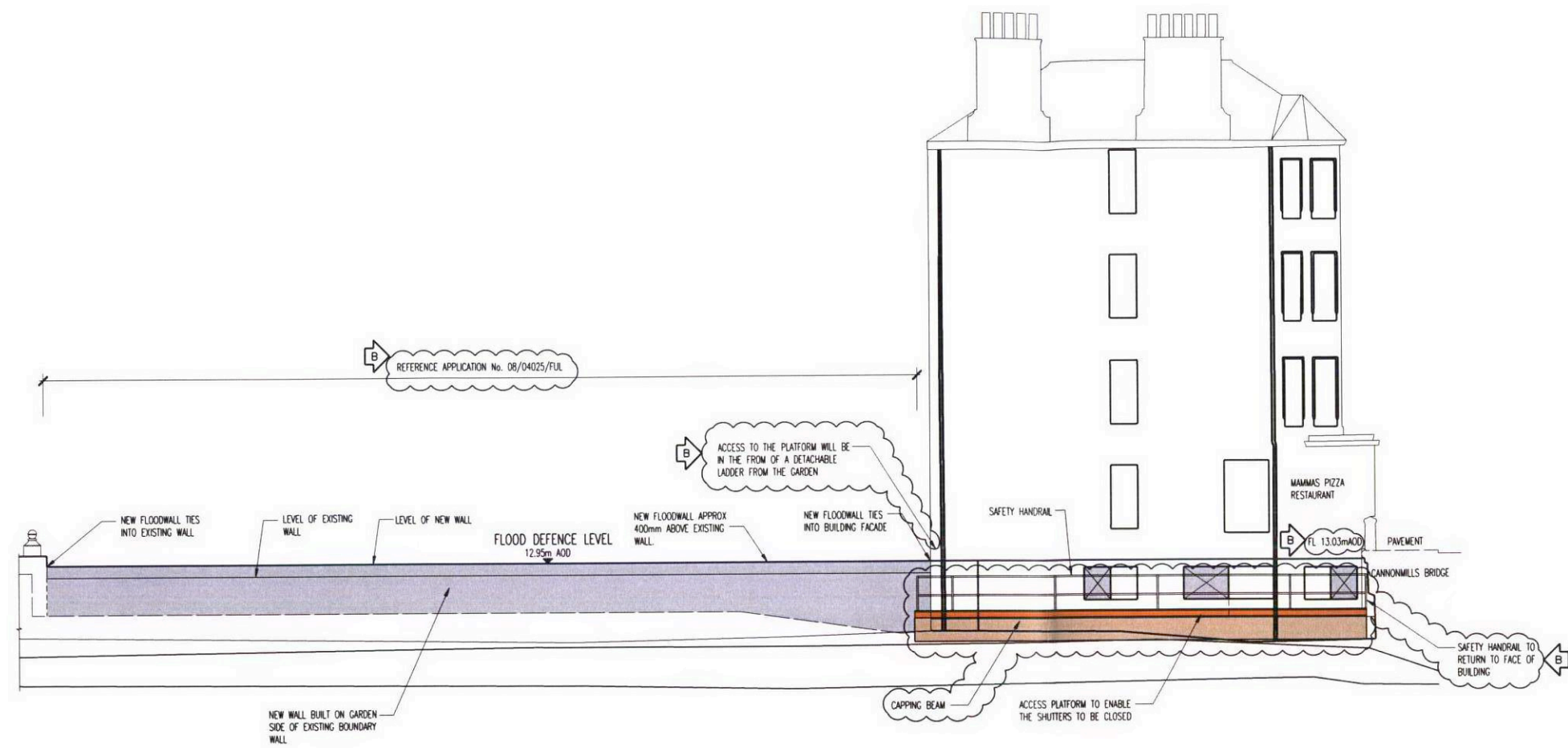
Scale at A1 A1 1:500, A3 1:1000

| Job No | Drawing No | Issue |
|--------|------------|-------|
| 119523 | C1         | C     |

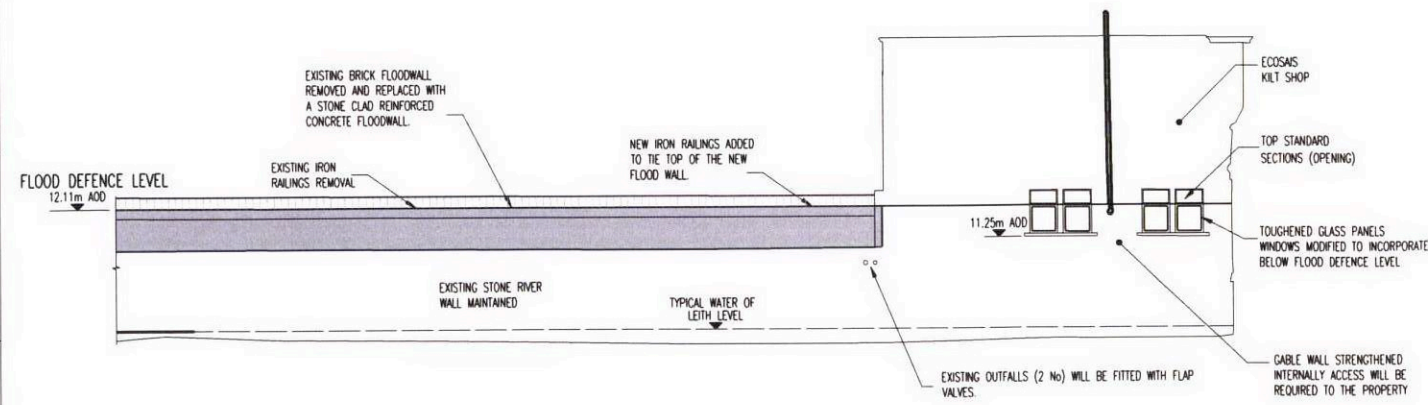


C1



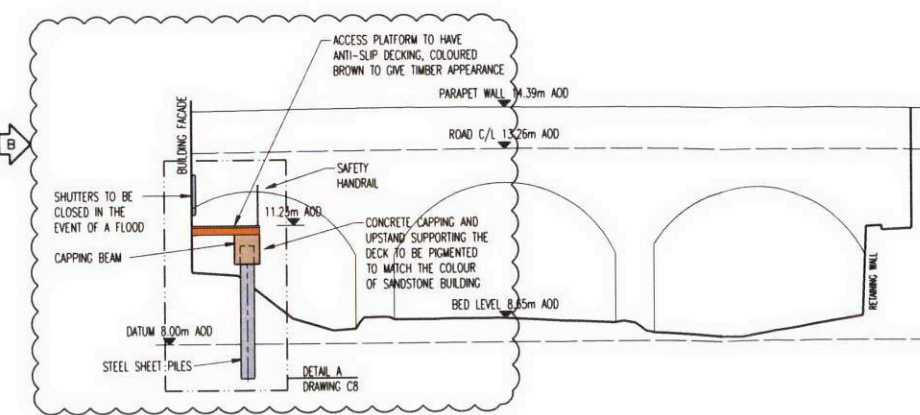


ELEVATION ON HOWARD STREET GABLE END  
SCALE AT 1:100, A3 1:200



ELEVATION ON GABLE WALL OF 3-6 CANNONMILLS  
AND CAR PARK FLOOD WALL  
SCALE AT 1:100, A3 1:200

REFERENCE APPLICATION No. 03/04024/CEC



ELEVATION ON CANNONMILLS BRIDGE  
SCALE AT 1:100, A3 1:200

**NOTES**  
1 VERTICAL DEVIATION OF STRUCTURE WILL BE +100mm ABOVE THE FLOOD DEFENCE LEVEL SHOWN.

**KEY**  
m AOD - METRES ABOVE ORDNANCE DATUM

REFER TO DRAWING C8 FOR FURTHER DETAILS OF ACCESS PLATFORM

PLANNING PURPOSES ONLY

|  |          |    |      |      |
|--|----------|----|------|------|
| B  | 12/12/11 | BM | SR   | GB   |
| ISSUE FOR PLANNING APPLICATION 1 HOWARD STREET |          |    |      |      |
| A  | 22/10/03 | JU |      |      |
| TEXT AMENDED                                   |          |    |      |      |
| P  | 28/5/03  | JU | RC   | DS   |
| Issue  | Date     | By | Chkd | Appd |

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Job Title  
**WATER OF LEITH  
FLOOD PREVENTION SCHEME  
ACCESS PLATFORM ADJACENT TO  
No. 1 HOWARD STREET, WARRISTON**  
Drawing Title  
**PLANNING APPLICATION  
WARRISTON  
DETAILS SHEET 2 OF 3**

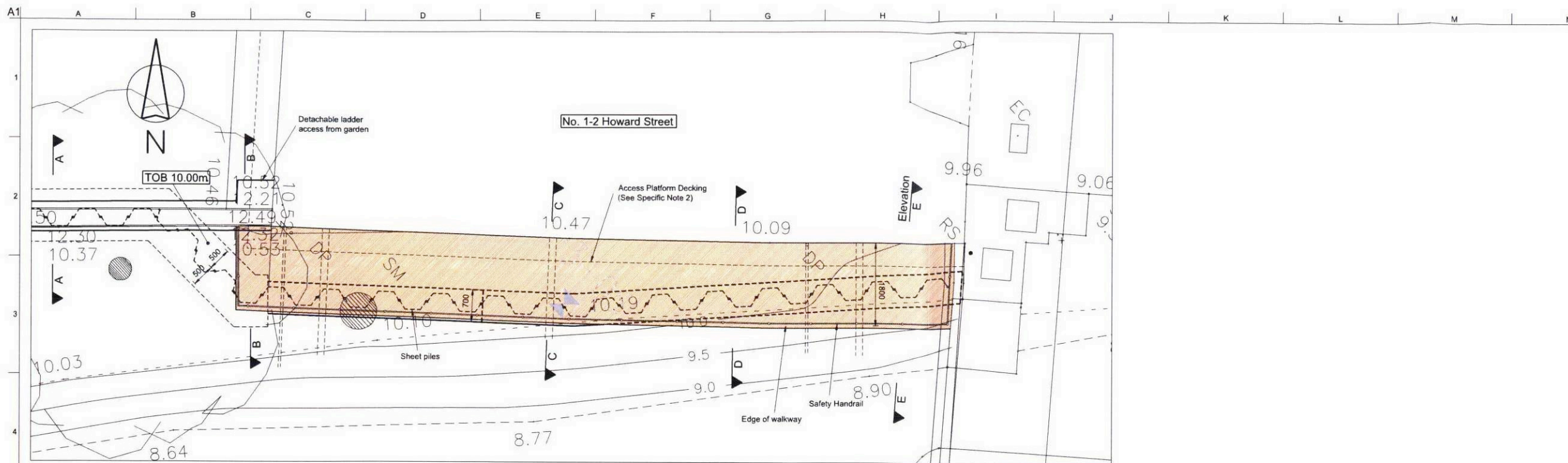
Scale at A1 AS SHOWN

Drawing Status  
**ISSUE**

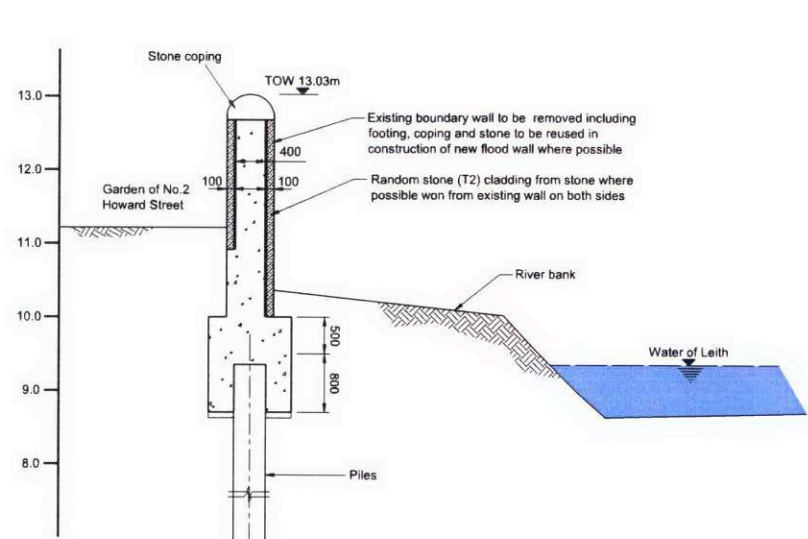
|        |            |       |
|--------|------------|-------|
| Job No | Drawing No | Issue |
| 119523 | C6         | B     |

C6

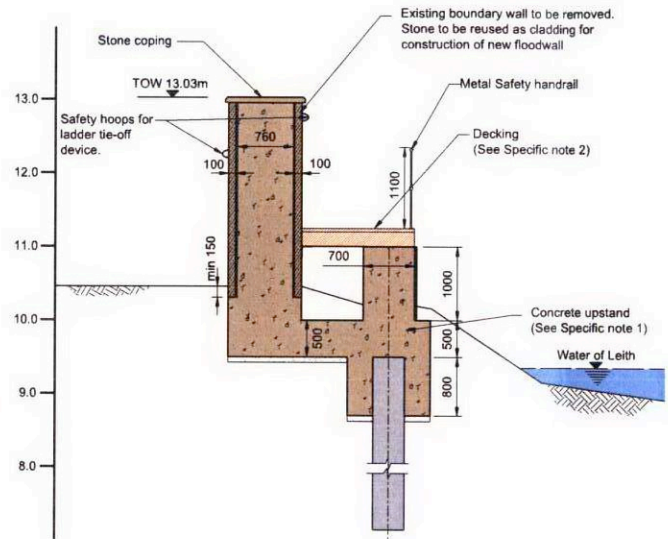




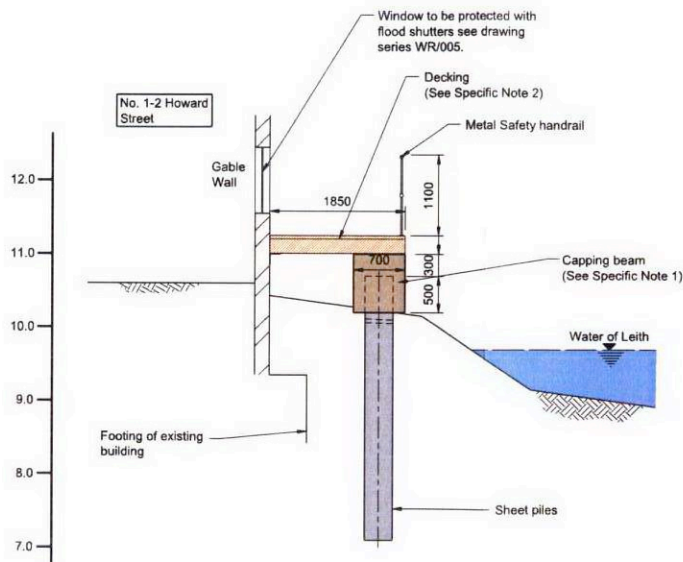
**Detail A - Plan of Access platform**  
Scale 1:50



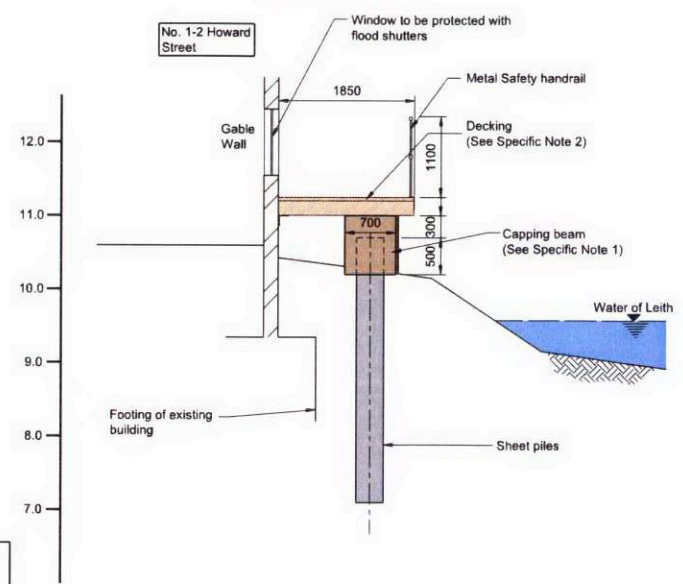
**Cross Section A - A**  
REFERENCE APPLICATION No. 08/04025/FUL  
Scale 1:50



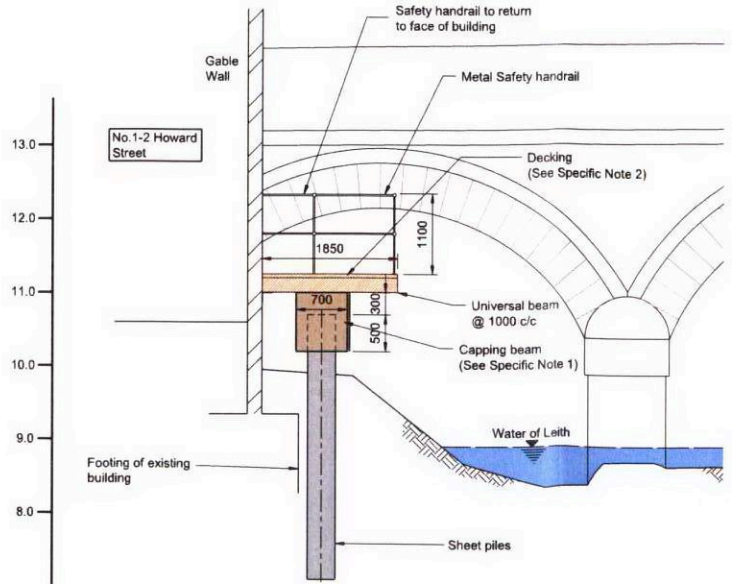
**Cross Section B - B**  
Scale 1:50



**Cross Section C - C**  
Scale 1:50



**Cross Section D - D**  
Scale 1:50



**Elevation E - E**  
Scale 1:50

- General Notes**
- Refer to 119523 C1 rev C and 119523 C6 rev B.
- Specific Notes**
- Concrete to capping beam and upstand supporting the decking to be pigmented to match the colour of the sandstone building, and textured on riverward side.
  - Decking to be Fibre Grid Ltd deck grid 30 mm thick fibre glass decking or similar approved laid to fallaway from the building.
  - Aluminium portable ladder, length 3.5m to allow access to the platform over the flood wall from the garden of No.02 Howard Street.

- References**
- Refer to WR/002/001.

**Key**  
TOW - Top of Wall  
TOB - Top of Base

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|       |          |    |      |      |
|-------|----------|----|------|------|
| A     | 12/12/11 | BM | SR   | GB   |
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Job Title  
**WATER OF LEITH  
FLOOD PREVENTION SCHEME  
ACCESS PLATFORM ADJACENT TO  
No. 1 HOWARD STREET, WARRISTON**

Drawing Title  
**PLANNING APPLICATION  
WARRISTON  
CONSTRUCTION DETAILS**

Scale at A1 AS SHOWN

Drawing Status  
**ISSUE**

|        |            |       |
|--------|------------|-------|
| Job No | Drawing No | Issue |
| 119523 | C8         | A     |

C8

**Appendix B**

Extract from Original Planning  
Application 2003 & 2009  
Modifications (08/04025/FUL)

At the downstream end of the site, the new floodwall ties into the abutment of St Mark's Bridge.

#### **Drawing B2**

Downstream of St Mark's Bridge, on the left bank, approximately 60m of reinforced concrete floodwall will be constructed around the garden boundary of 15 Warriston Road, tying into St Mark's Bridge at the upstream end, and into high ground at the downstream end. The floodwall will follow the line of the existing fence. The wall has an average height of approximately 0.5m above the level of the garden of 15 Warriston Road.

Along the right bank, downstream of St. Mark's Bridge, between chainage 9160 and 9260 a new flood wall approximately 0.5m high will be constructed on the same alignment as the existing close boarded timber fence. The fence will be reconstructed on top of the floodwall. It is proposed that the wall will be finished in smooth concrete on both sides. This would reflect the modern light red and beige brick apartments on the landward side of the wall.

Between chainages 9350 and 9420 the new wall, varying in height from 0m to 1.3m above existing ground levels, will be constructed on the alignment of the existing fence. The wall will be finished in smooth concrete on both sides.

#### **Environmental Enhancements**

Environmental enhancement measures would be provided throughout this stretch of the proposed scheme. This is to enhance and protect the existing wildlife corridor. Environmental enhancement measures include bird nesting holes and fish habitat enhancement on both riverbanks: cobble deflectors on the left bank and ledges on sections of the right bank.

### **5.4 Warriston**

The Warriston section covers the stretch of river from the disused Warriston Viaduct upstream to the access bridge to Tanfield House. The river flows under Canonmills Bridge at the upstream end of the section. Flood defences are proposed on both sides of the river. The right bank is bounded by Warriston Road and Brandon Terrace. Between Warriston Viaduct and Canonmills Bridge, the left bank is bounded by the gardens to the rear of the properties on Warriston Crescent. Upstream of Canonmills Bridge the left bank is bounded by the gable end wall and garden wall of the building on Howard Street. Although the area is predominantly residential, there are retail and restaurant premises on and adjacent to Canonmills Bridge.

The properties on Warriston Crescent are Category A listed and the stone from the existing garden boundary walls would be used to clad the new wall to maintain the existing appearance.

#### **Drawing C1**

On the left bank looking downstream, from chainages 8490 to 8520 the existing stone wall may require remedial/strengthening works.

On the upstream side of Canonmills Bridge on the left bank, between chainages 8520 and 8550 the existing stonewall will be retained in its current condition. A new flood wall which is approximately 0.5m higher than the existing wall will be constructed on the garden side of the existing wall. This new wall will tie into the building façade of No. 2 Howard Street. The new wall will be finished on both sides in stone and will be fitted with a flush fitting, domed coping stone. The top of the existing wall will be modified to accommodate a new coping detail.

The gable end of the basement property at 2 Howard Street will be strengthened internally provide the flood defence. However it is proposed to provide flood shutters to the window

openings as detailed on Planning Drawings C1 and C6. The middle window has a lower sill level than the two smaller windows at either side and it is proposed that this sill be raised to the same level as the smaller windows. A walkway to allow City of Edinburgh Council operatives to operate the flood shutters will be constructed. This walkway would be accessed from the bridge via a locked gate installed in the bridge parapet and ladder access to a platform.

## **Drawing C2**

### **Left bank**

On the left bank of the Water of Leith in front of Warriston Crescent, the existing stone boundary wall will be replaced over its entire length with a new floodwall. It is proposed that the new wall will be constructed on the same alignment as the existing boundary wall.

In front of No 2 – 8 Warriston Crescent the new flood wall is only 200mm higher than the existing boundary wall. Between No.8 and 25 Warriston Crescent the new floodwall is up to 600mm higher than the existing boundary wall. There is a localised low spot between properties 26 – 29 where the new flood wall is 1.3 m higher than the existing wall.

The new flood wall will tie into Canonmills Bridge at its upstream end and into Warriston viaduct at the downstream extent of the site. It is proposed that the new flood wall will be finished in stone on both sides and fitted with a flush fitting natural stone coping unit. As much stone as possible will be re-used from the existing boundary wall.

### **Right bank**

On the right bank, the façade of Ecosais Kilt shop will be strengthened from the inside and the windows will be replaced with those made from toughened glass. The existing red brick wall which runs between chainage 8590 and 8620 is to be replaced with a new floodwall that will be clad on both sides with stone to enhance the appearance of this section and to introduce more consistency through this visually attractive and historically important section of the Water of Leith. The new wall is approximately 200mm higher than the existing wall.

Due to the narrow river width through Warriston, the flood defence level along Warriston Road reaches a height of approximately 2.5m above the existing footpath level. Obviously if a wall of this height was built all the way along Warriston Road it would provide a barrier preventing any link between the public and the Water of Leith. This was deemed to be unacceptable from an environmental perspective and different solutions were sought. The preferred option is to provide new flood defence walls between chainages 8620 to 8715 and from 8865 to 8880m. Between Boat Green and the viaduct (chainages 8715 and 8865) it is proposed to keep the existing stone parapet wall in place, at its current height. This will mean that views of the water of Leith through this important wildlife corridor are maintained.

This existing length of parapet wall is significantly lower than the flood defence level, so during a large flood event water will overtop the wall and spill into Warriston Road. To contain this floodwater and prevent it running along the entire length of Warriston Road it is proposed that Warriston Road would be closed during a flood event by shutting floodgates as detailed on the Planning Application Drawings C2 and C7. The scheme has been designed so that access can still be gained to the properties of Boat Green even when there is a flood event and the floodgates are closed.

The new flood defence walls on the right bank through Warriston will be finished in the same materials as the existing walls are finished in. Textured concrete on the riverward side of the wall and stone on the Warriston Road side. The walls will be topped with a flush fitting stone coping unit.

The floodgates would only be in the closed position for a short duration during a flood event.

### **3 Consultation Process**

#### **3.1 Overview**

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Consultation has been undertaken four times during recent years:

- Promotion of the Flood Prevention Order in April 2003
- Planning Application of November 2003 (Planning Application Ref 03/04204/CEC)
- Modified Flood Scheme consultation in September 2005
- Confirmed Scheme (Flood Prevention Order) in March 2007

The modifications now proposed at No. 2 Howard Street do not change the principles of flood defence height and position of the flood defence on plan and, as such, no new Flood Prevention Order need be promoted in parallel with this Planning Application.

#### **3.2 Neighbour Notifications**

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Notification of the Planning Application has been given to owners of land within the application area as well as neighbours of the proposed scheme, in accordance with the Town and Country Planning (General Development Procedure, Scotland) Order 1992.

The affected parties have been identified from the previous Planning Application list including updates both from the Public Local Inquiry and the Scottish Executive consultation of the modified Flood Scheme under the Flood Prevention Act in September 2005.

The neighbour notification certificates for the area local to the additional works are contained within this application.

### **4 Scheme Description**

#### **4.1 Main Scheme**

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The proposed flood prevention scheme for the whole river comprises a range of flood preventative measures, including flood defence walls, flood defence embankments and flood gates. An overview of the scheme is provided in the main scheme planning supporting statement dated November 2003.

#### **4.2 Overview of Flood Defences at No. 2 Howard Street**

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In the original November 2003 planning application it was proposed that flood defences along the left bank consist of a reinforced concrete gravity wall, stone clad, constructed on the landward side of the existing masonry wall, which was to be retained.

Further design has highlighted the need for changes to the previous proposals. The existing masonry wall will be taken down and replaced with a reinforced concrete wall, constructed on the same line as the existing wall, stone clad on both sides and founded on sheetpile foundations.

Details of the proposed changes can be found on the revised drawings in Appendix A.

#### **4.3 Planning Application Text**

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Reference Appendix B for original Planning Application text for this section of wall. A copy of previous planning drawings 69240 – C1, C3, C5 (all rev A) are also included in this appendix for reference.

#### **Drawing 69240 – C1 revision A**

(The principal changes from the 2003 text are underlined)



On the left bank looking downstream, from chainages 8490 to 8520 the existing stone wall may require remedial/strengthening works.

On the upstream side of Canonmills Bridge on the left bank, between chainages 8520 and 8550 the existing stonewall will be taken down and replaced with a new reinforced concrete flood wall with sheetpile foundations. This new wall will be constructed on the same line as the existing wall. The new wall will be finished on both sides in stone re-used from the existing wall (where possible) and will be fitted with a flush fitting, domed coping stone. The gable end of the basement property at 2 Howard Street will be strengthened internally to provide the flood defence, however it is proposed to provide flood shutters to the window openings as detailed on Planning Drawings C1 and C6. The middle window has a lower sill level than the two smaller windows at either side and it is proposed that this sill be raised to the same level as the smaller windows. A walkway to allow City of Edinburgh Council operatives to operate the flood shutters will be constructed. This walkway would be accessed from the bridge via a locked gate installed in the bridge parapet and ladder access to a platform.

#### **4.4 Construction Arrangements**

The November 2003 Planning Application was accompanied by an Environmental Statement (ES) which assessed the impact of the scheme on a number of receptors.

In March 2007, the Scottish Executive confirmed the Water of Leith Flood Prevention Scheme including modifications to the original 2003 proposals. The impacts of these modifications to the scheme on all receptors identified in the original Environmental Statement have been reviewed and an Environmental Statement Addendum prepared. This Addendum is intended to be read with the original ES and should not be interpreted as a stand alone document. It includes an assessment of the affects of the construction stage on the range of environmental issues considered and mitigation measures are proposed in the assessment to minimise negative impacts of the construction works.

In addition, an Environmental Action Plan (EAP) has been developed. The EAP has evolved from Mitigation Measures set out in Table 24.2 of the Environmental Statement; it will be used to identify the requirements of the contractor to ensure minimal environmental implications of construction. These requirements will be contained in the contract for the appointed contractor. The roles and responsibilities of the contractor and the Council will also be set out in the EAP.

#### **4.5 Environmental Protection and Enhancement**

The Environmental Statement provides a detailed description and assessment of the environmental impacts of the proposed works including measures to enhance the environment where the works are proposed as well as measures to mitigate against the impacts of the proposed scheme. It addresses a wide range of environmental issues including:

- ecology
- water quality
- landscape and visual impacts
- noise
- vibration
- air quality

These issues are in accordance with the scoping opinion provided by City of Edinburgh Council by way of letter dated 21/2/2002.