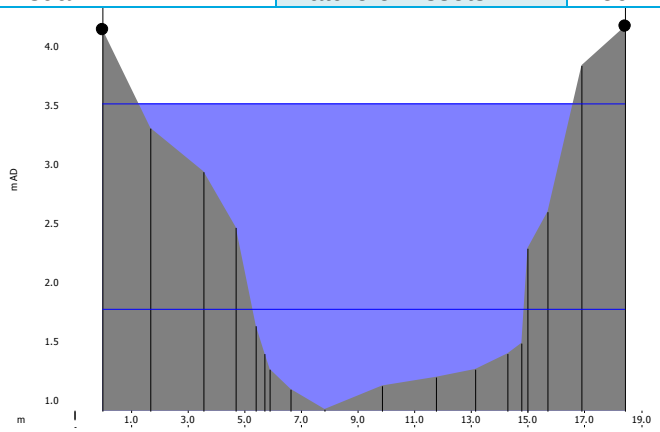
C.7 Summary reports

C.7.1 Glossary

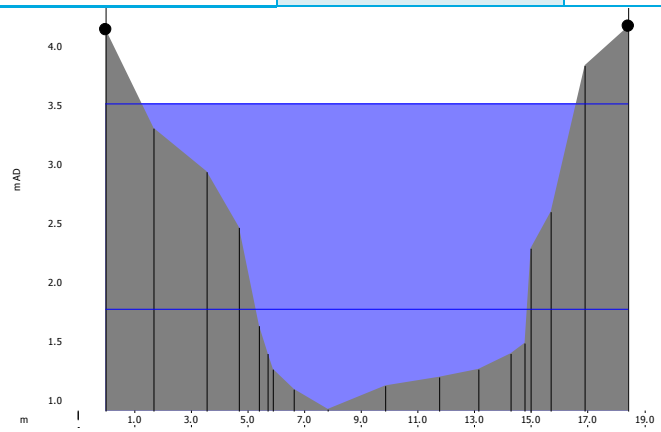
LHB	Left Hand Bank
LS	Left Hand Bank Structure
OS NGR	Ordnance Survey National Grid Reference
RHB	Right Hand Bank
RS	Right Hand Bank Structure
SPT	Standard Penetration Test

C.7.2 Reports

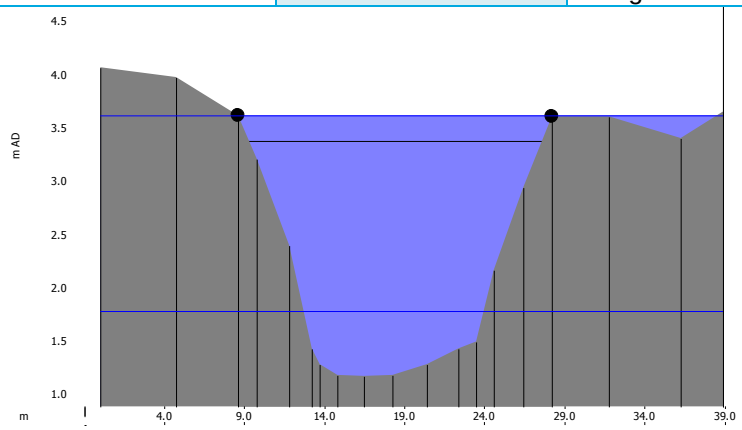
Reference & Chainage[1]	**RS1** **0.000-0.125**	Location	OS NGR 387585,785681
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Rock Revetment
Model cross section showing peak 0.5% AP (200 year) event water level			
Photograph 1: View Looking Upstream		Photograph 2: View Looking Downstream	
			

Description	Rock Revetment provided placed to prevent route of river channel changing, on beach near housing. Embankment approx. 2m high.	
Anticipated Ground Conditions	Loose Sand.	
Potential Ground Investigation	Type	SPT's
	Access	Good
Structural comments	The stones were angular and reasonably well packed. There is no major evidence of settlement or movement in stone. Although it was unclear whether any measures had been taken to prevent fines washing out from behind the stones, it is possible larger stones placed over shingle.	
Design considerations	It is unlikely that any work is required at this point, as this element is not restricting channel capacity.	
General condition	Condition of revetment is good.	
Remedial action required	None	

[1] For locations see Section C.2 below.

Reference & Chainage	**LS1** **0.000-0.125**	Location	OS NGR 387513,785737
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Rock Revetment
Model cross section showing peak 0.5% AP (200 year) event water level			
Photograph 1: View Looking Upstream		Photograph 2: View Looking Downstream	

Description	Rock Revetment provided placed to prevent route of river channel changing, on beach near housing. Embankment approx 2m high.	
Anticipated Ground Conditions	Loose Sand.	
Potential Ground Investigation	Type	SPT's
	Access	Good
Structural comments	The stones were angular and reasonably well packed, varying in size from approx. 0.5-1.5m across. There is no major evidence of settlement or movement in the stone. There is evidence that a geo-membrane has been used to prevent fines washing out from behind the stones. It would also appear that the lower stones are well embedded into the sand at the base of the embankment.	
Design considerations	It is unlikely that any work is required at this point, as this element is not restricting channel capacity.	
General condition	Condition of revetment is good.	
Remedial action required	None	

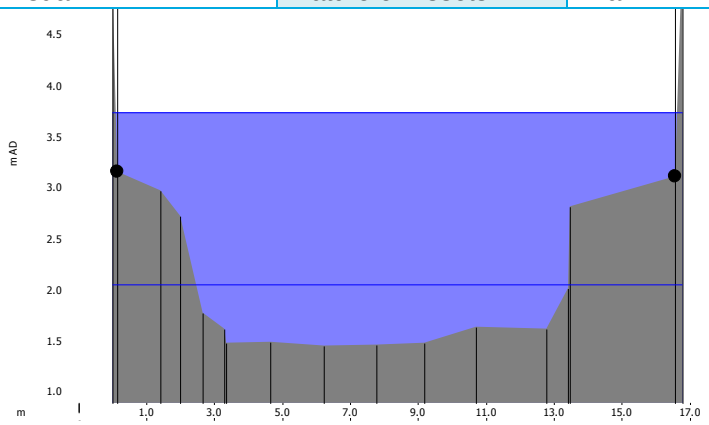
Reference & Chainage	**B1** **0.125**	Location	OS NGR 387585,785681
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bridge
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View of Bridge Looking Upstream

Photograph 2: LHB Abutment

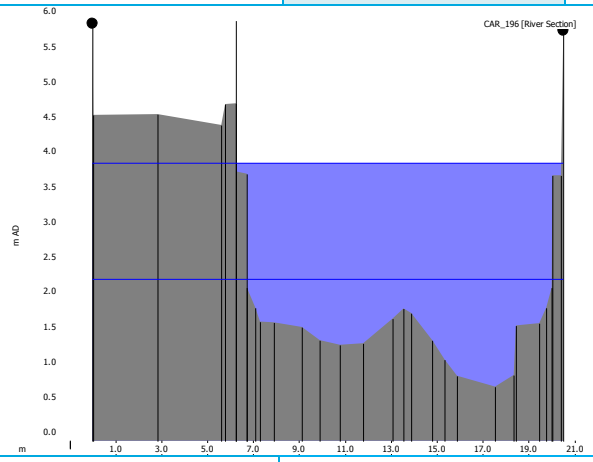
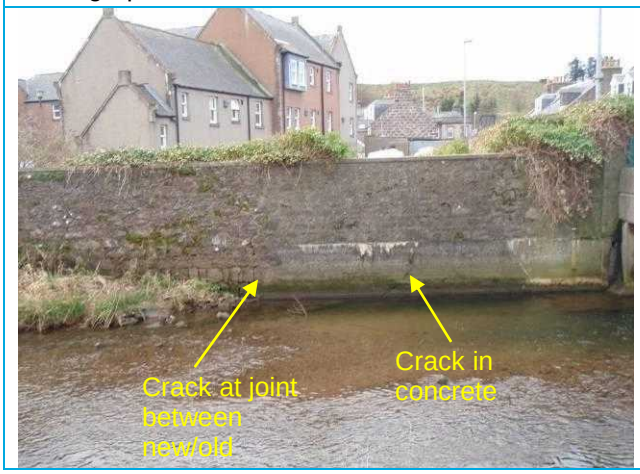
Photograph 3: RHB Abutment, note evidence of previous bridge, below existing beams.

Description	Stressed laminated timber footbridge made of tropical hardwood, fixed together with stainless steel bolts, with mass concrete abutments. It would appear to be a replacement for a previous footbridge, the ends of whose beams remain in the abutments, which have been reused.	
Anticipated Ground Conditions	Loose Sand/Shingle.	
Potential Ground Investigation	Type	SPT's
	Access	Good
Structural comments	There were no major signs of deterioration, although the bearing detail could act as a moisture trap leading to rot. However the timber species used is likely to be durable or very durable.	
Design considerations	Although the beam ends appear partially built in, it should be possible to break out the surrounding concrete to raise the bridge if required.	
General condition	The bridge was in very good condition.	
Remedial action required	None	

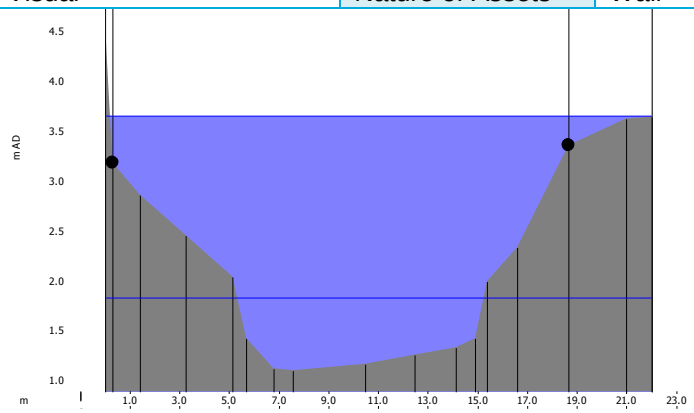
Reference & Chainage	**RS2 0.130-0.189**	Location	OS NGR 387511,785713
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Eastern end of wall and embankment below.	Photograph 2: View of wall looking Upstream, note presence of bank erosion and presence of rock armouring to prevent this.
	
Photograph 3: View of wall looking upstream, note local erosion.	Photograph 4: Western end of wall, note local erosion.
	

Description	Random rubble stone wall, founded on embankment with splayed foundation.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	Hand Dug Trial Pits behind/in front of wall to establish depth of footings. In situ SPT's, Soil grading tests.
	Access	Good along beach. Through walled garden along river.
Structural comments	Wall showed no sign of major structural movement. The wall looks well constructed and would appear to date from a similar period to the older houses, possibly late 19th Century or early 20th Century. Given its age it is in good condition, although much of the pointing was loose or missing. It was also affected by the growth of vegetation in some areas.	
Design considerations		
General condition	The overall condition of wall and embankment is considered fair, although there is the possibility of this deteriorating quite rapidly to poor if no maintenance carried out.	
Remedial action required	The wall will need repointing preferably in a lime based mortar, to match original materials, by suitably qualified craftsmen. Action should be taken to slow erosion at the toe of the embankment.	

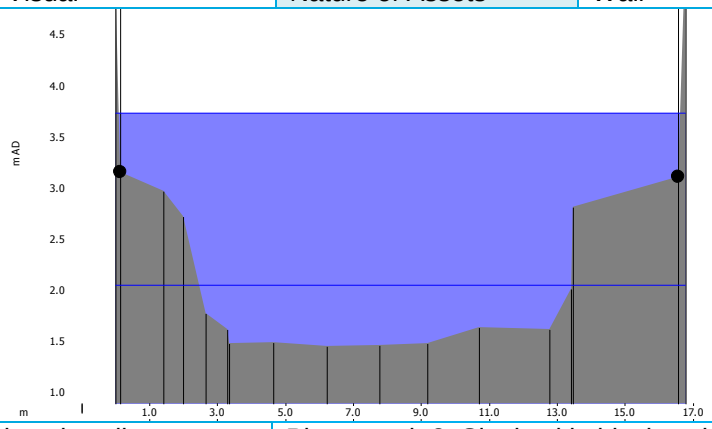
Reference & Chainage	**RS3 0.189-0.197**	Location	OS NGR 387454,785734
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			
Photograph 1: View of wall,			
			

Description	Modern random rubble stone wall, founded on mass concrete base.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	Wall showed no sign of major structural movement. The wall looks well constructed and would appear to date from when the bridge was constructed in the 1970's. Pointing is in reasonable condition. There is a crack where new and old construction meets, and a diagonal crack in the mass concrete, but this is limited in extent. It is not known how far the footings extend into the river bed.	
Design considerations		
General condition	The overall condition of wall and embankment is considered good, although there is the possibility of this deteriorating if no maintenance carried out.	
Remedial action required	The wall will need repointing preferably to match original materials, by suitably qualified craftsmen. An assessment of the likelihood of and depth of scour should be undertaken to ensure the wall is not undermined.	

Reference & Chainage	**LS2** **0.135-0.155**	Location	OS NGR 387511,785745
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Single skin masonry wall, on stone wall. Note rock armouring and erosion below.	Photograph 2: View as Photograph 1, from different angle.
	

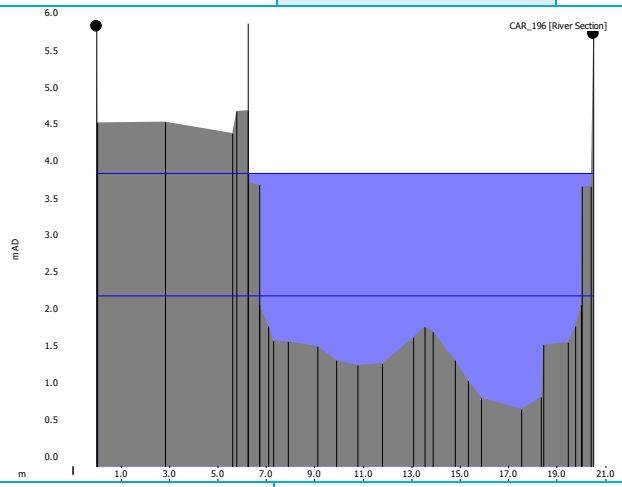
Description	Traditional stone built wall, raised with brick and blockwork	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	Wall shows no sign of major structural movement although the newer raised wall is poorly constructed. There are signs of erosion at the base.	
Design considerations	The wall in its current state is liable to collapse under flood conditions.	
General condition	The overall condition is considered poor, due to possibility of erosion at base.	
Remedial action required	Some form of bank protection will be required, lower part of wall will require repointing to match original materials, and top of garden wall rebuilt.	

Reference & Chainage	**LS3 0.155-0.187**	Location	OS NGR 387490,785745
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

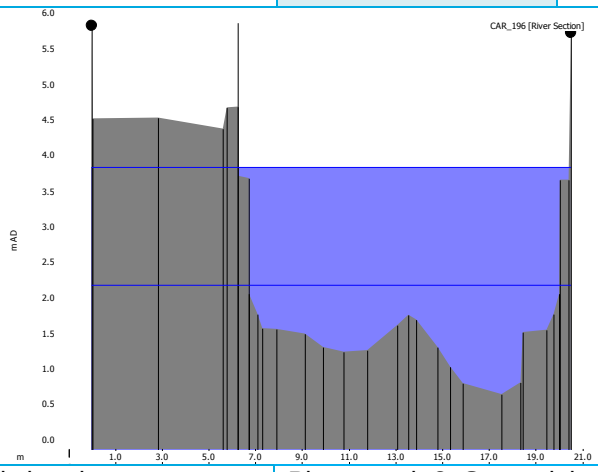
Photograph 1: View along blockwork wall.	Photograph 2: Single skin blockwork wall built off older wall, wall shows some sign of minor cracking at joints.
	
Photograph 3: Note cracking where wall built on older footings.	Photograph 4: Upstream end of wall, note erosion at base.
	

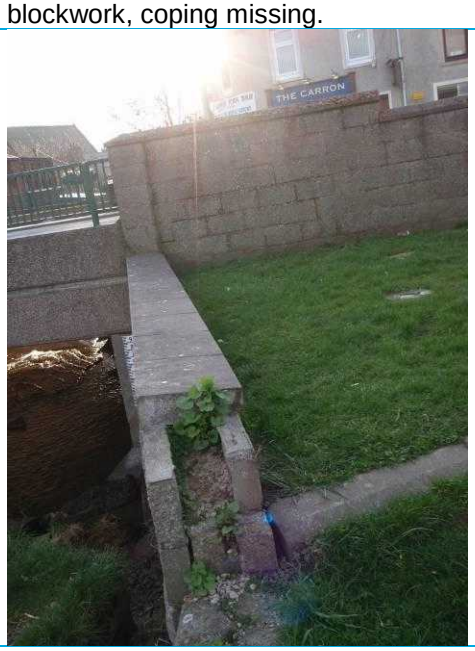
Photograph 5: Cracking showing movement of wall at upstream end.	
	

Description	Blockwork wall built off older stone footings.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Good access through private driveway.
Structural comments	Wall shows signs of structural movement, due to earth pressure behind wall. Wall is poorly constructed. There are signs of erosion at the base.	
Design considerations	The wall in its current state is liable to collapse under flood conditions.	
General condition	The overall condition is considered poor, due to erosion at base.	
Remedial action required	Some form of bank protection will be required; wall is likely to require rebuilding.	

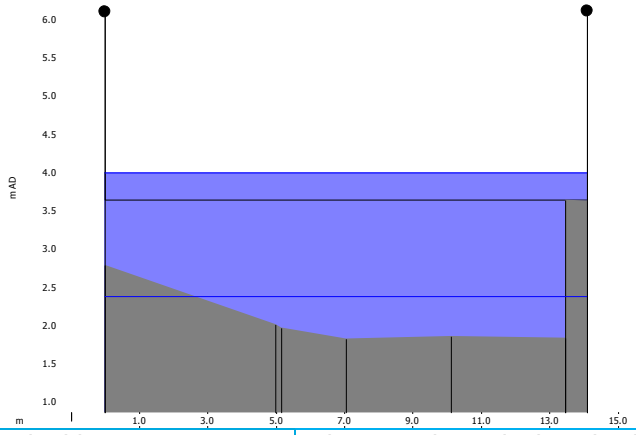
Reference & Chainage	**LS4 0.187-0.191**	Location	OS NGR 387459,785750
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			
Photograph 1: Stone Wall.			
			

Description	Stone Wall	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Good
Structural comments	Wall in poor condition, top stones already collapsed, bank undergoing erosion.	
Design considerations	Wall likely to collapse further.	
General condition	Very poor, partial collapse already occurred	
Remedial action required	New wall required with erosion protection.	

Reference & Chainage	**LS5 0.191-0.197**	Location	OS NGR 387454,785751
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View of wall and chamber.	Photograph 2: Some delamination of outerskin of blockwork, coping missing.
	

Description	Reinforced blockwork wing wall on concrete footing.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	No major signs of structural movement, some deterioration to top of wall. Depth of foundations not known, although it is likely that a scour assessment has been carried out by the council, as sheet piling toe protection has been installed on the other side.	
Design considerations		
General condition	Very Good	
Remedial action required	Minor repairs to top of wall.	

Reference & Chainage	**B2** **0.197-0.213**	Location	OS NGR 387439,785744
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bridge
Model cross section showing peak 0.5% AP (200 year) event water level			

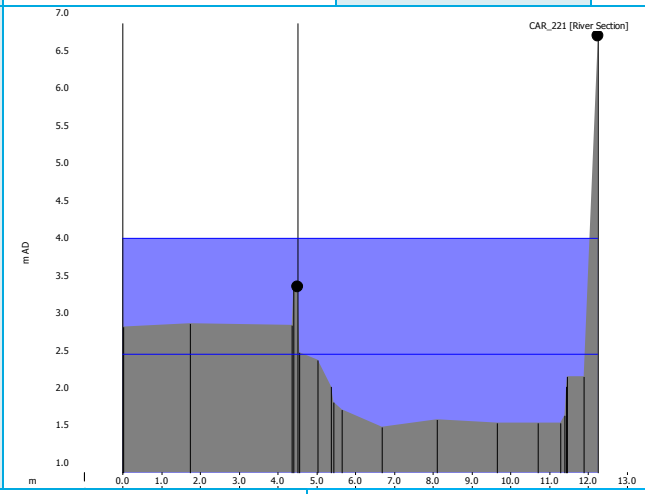
Photograph 1: View of bridge looking upstream.

Photograph 2: Blockwork wing wall showing some signs of settlement.

Photograph 3: RHB abutment, note sheet piling to protect toe.

Photograph 4: LHB abutment.

Description	Bridge, composed of precast concrete beams on concrete abutments, with concrete skirt (partially intact) and sheet pile toe protection.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	N/A
	Access	Good, although services present, and road closure likely to be required. Council likely to have records relating to the construction of the original bridge.
Structural comments	The bridge is generally in good condition. There are some signs of structural movement in a wing wall, probably due to the foundations being shallower than those of the main bridge structure. However the wing wall is not significant in terms of retaining water in the river channel.	
Design considerations	The bridge may be restricting flow through the river channel. It may be possible to raise the bridge, by freeing its ends, jacking it up and building up the abutments. Road surfacing and services etc will need to be relaid over the top. This operation is likely to be extremely disruptive.	
General condition	Good	
Remedial action required	None.	

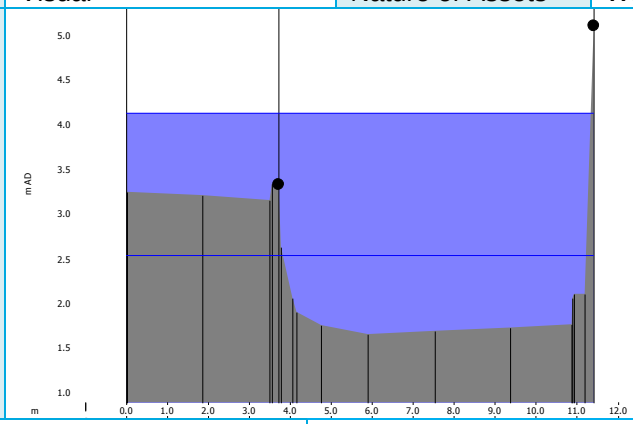
Reference & Chainage	**LS6 0.213-0.240**	Location	OS NGR 387430,785753
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View along wall.

Photograph 2: Downstream end of wall.

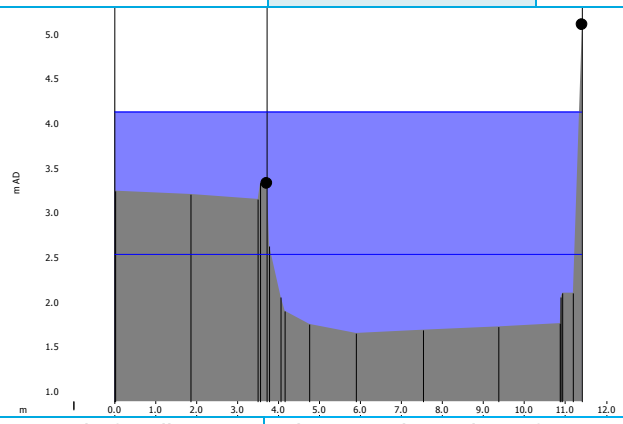
Photograph 3: Upstream end of wall showing collapse of section (believed to have occurred during November 2009 flood event).

Description	Single skin blockwork wall on edge of river channel.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access limited to hand tools. A rig could be lifted with crane from bridge.
Structural comments	Wall partially collapsed large areas of the river bank below footings eroded.	
Environmental considerations		
Design considerations	The wall is not providing any protection to the property to the rear.	
General condition	Very Poor.	
Remedial action required	Toe protection, combined with new wall required, or new wall with sufficiently deep footings required.	

Reference & Chainage	**LS7 0.240-0.255**	Location	OS NGR 387404,785746
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 2: View of wall.	Photograph 1: View of wall, showing diagonal crack.
	

Description	Single skin blockwork wall with timber paling on top.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access restricted to hand tools.
Structural comments	The wall shows some signs of settlement and the bank is being eroded. It is poorly constructed.	
Design considerations	This wall is likely to collapse under flood conditions	
General condition	Poor	
Remedial action required	Toe protection, combined with new wall required, or new wall with sufficiently deep footings required.	

Reference & Chainage	**LS8 0.240-0.255**	Location	OS NGR 387390,785746
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

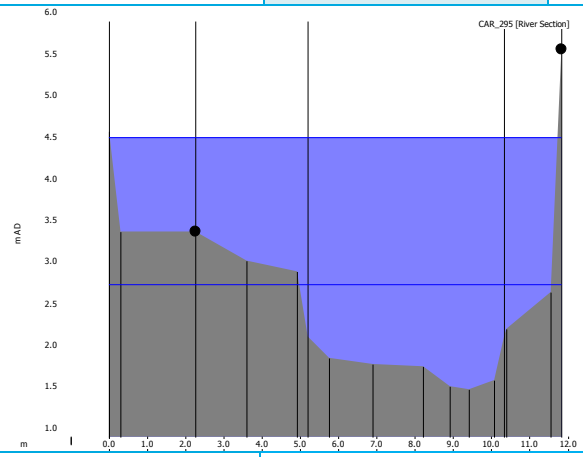
Photograph 1: View of upstream end of wall, showing loose/partially collapsed stones.

Photograph 2: View of upstream end of wall (cont), showing loose/partially collapsed stones.

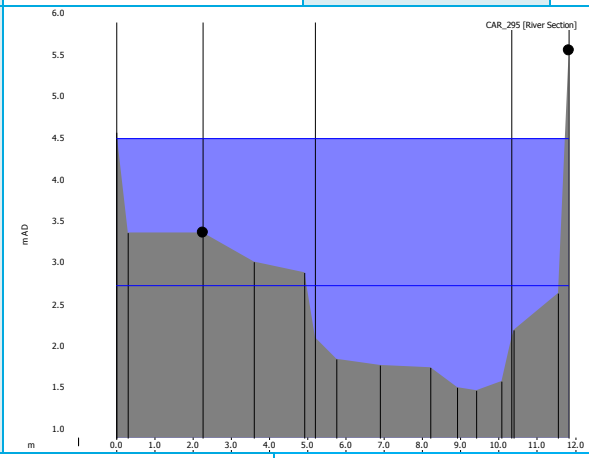
Photograph 3: View of middle of wall, wall possibly partially collapsed and bank vegetated.

Photograph 4: View of downstream end of wall, wall possibly partially collapsed and bank vegetated.

Description	Stone wall extended with brickwork at upstream end.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	This wall appears to be gradually collapsing into the river. However, due to the size of stones used they are still proving some protection to the toe of the bank.	
Design considerations	The wall would not provide any protection from flooding.	
General condition	Poor	
Remedial action required	Toe protection, combined with new wall required, or new wall with sufficiently deep footings required.	

Reference & Chainage	**LS9** **0.275-0.291**	Location	OS NGR 387369,785747
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			
Photograph 1: Downstream end of wall.		Photograph 2: View looking upstream.	
			
Photograph 3: Upstream end of wall.			
			

Description	Single skin blockwork wall on mass concrete foundation.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	Although the wall has been poorly constructed, with open joints etc. there is little sign of structural movement. However the riverbank is being eroded to some extent and it is unclear how deep the mass concrete footings extend.	
Design considerations	The wall would not provide any protection against flooding	
General condition	Fair	
Remedial action required	Toe protection, combined with new/strengthened wall required, or new wall with sufficiently deep footings required.	

Reference & Chainage	**LS10 0.291-0.345**	Location	OS NGR 387354,785749
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bank & Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View upstream towards timber decking, note erosion river bank.

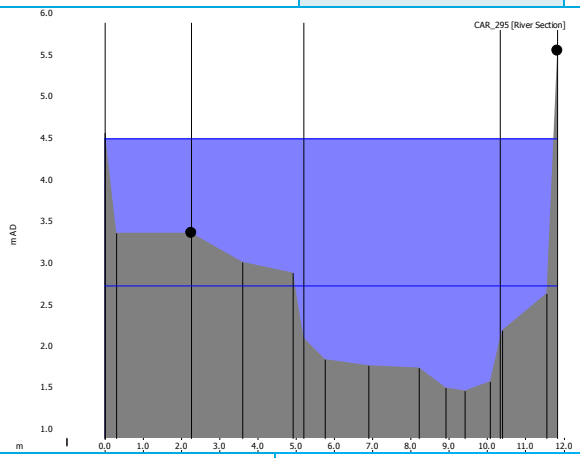
Photograph 2: Random stones providing small degree edge protection.

Photograph 3: Foundations to pier supporting decking being undermined.

Photograph 4: Blockwork wall upstream of decking.

Photograph 5: Mass Concrete and Stonework wall.	
	

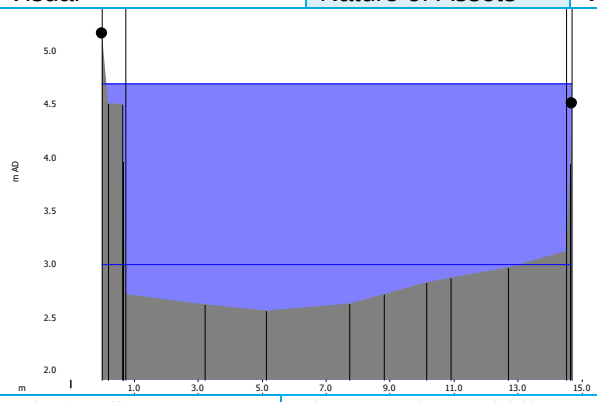
Description	Assorted walls and bank protection.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading.
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	River bank is being eroded, despite 'nominal' edge protection. The timber decking is likely to collapse in a flood. The upstream sections of wall look stable at present, although the depth of foundations is not known.	
Design considerations		
General condition	Poor	
Remedial action required	The upstream sections of wall may require toe protection and repointing. Elsewhere toe protection, combined with new/strengthened wall will be required.	

Reference & Chainage	**RS4** **0.213-0.304**	Location	OS NGR 387425,785737
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View looking upstream along wall.	Photograph 2: View looking downstream, showing where wall has been built up in brickwork, and incorporated into property. Note concrete toe protection.
	
Photograph 3: View of wall showing open joints.	Photograph 4: View of wall showing moss, vegetation and open joints.
	

Photograph 5: View looking upstream along wall.	Photograph 6: View looking upstream along wall.
	
Photograph 7: View middle section of wall.	Photograph 8: View looking upstream.
	

Description	Traditionally built random rubble stone wall, comprising variety of different sections.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through walled garden, possibly accessible for terrier rig.
Structural comments	There were no signs of significant structural movement. Toe protection was generally present and intact, although the depth of this is not known. There were areas of loose stone, and open joints.	
Design considerations		
General condition	The general condition of the wall is considered fair.	
Remedial action required	Consolidation and repointing of stonework in materials to match original construction.	

Reference & Chainage	**RS5** **0.304-0.345**	Location	OS NGR 387340,785741
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Downstream end of wall.

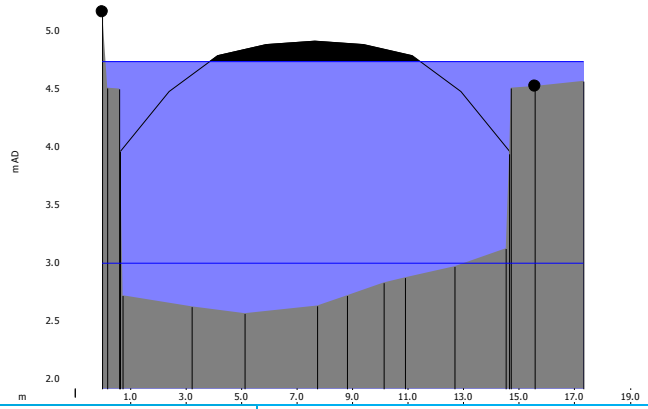
Photograph 2: Middle section of wall.

Photograph 3: Upstream end of wall.

Photograph 4: Crack in wall, likely to be due to thermal and/or moisture movement.

Photograph 5: View looking downstream along wall.	
	

Description	Concrete boundary wall, incorporating gable wall of property.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access through garden, although hedge may be damaged.
Structural comments	Wall shows little sign of structural movement. Some stones have been placed at foot of wall, and are vegetated. Bank looks reasonably stable.	
Design considerations		
General condition	Good.	
Remedial action required	Crack should be sealed using flexible joint filler.	

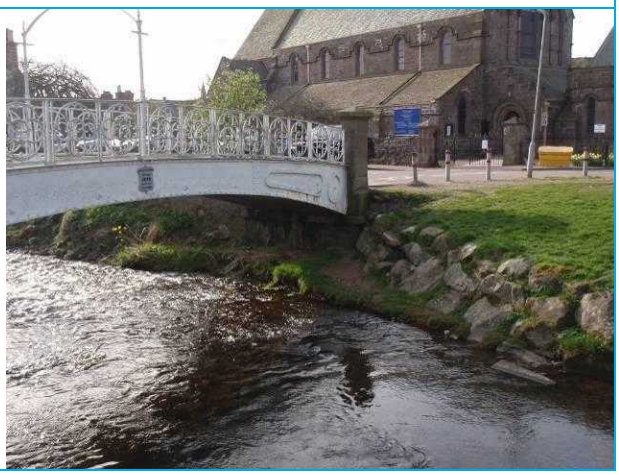
Reference & Chainage	**B3** **0.345**	Location	OS NGR 387301,785758
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bridge
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View of bridge looking downstream.

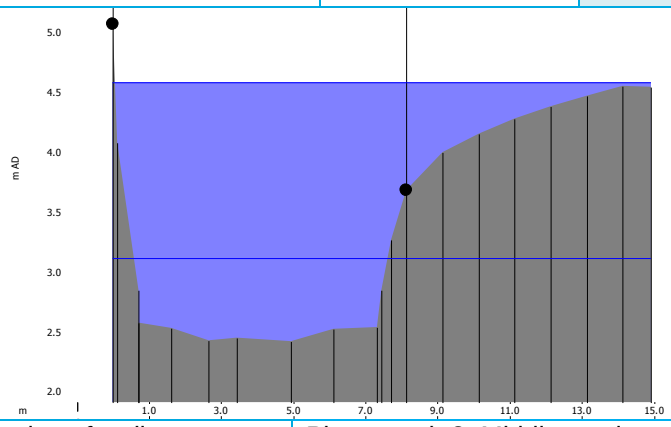
Photograph 2: View of LHB abutment.

Photograph 3: View of RHB abutment.

Photograph 4: View underneath bridge.

Photograph 5: Close up LHB abutment.	Photograph 6: View on top of bridge looking south.
	
Photograph 7: View looking along road on LHB.	Photograph 8: View of RHB abutment looking downstream.
	

Description	Steel riveted plate girder bridge, with filler joist deck. A bridge of relative architectural merit.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Good access
Structural comments	There appears to be no significant movement of abutments. Some rusting appears on the steelwork. The stone abutments seem reasonably intact, founded on the edge of the channel; it would appear they are not subjected to erosion from high velocity water. The beams are built into the abutments, which could be acting as a moisture trap causing potential corrosion to the ends of the beams.	
Design considerations	The bridge could be acting to restrict the flow of water in the river channel. To raise this bridge the stone piers would need to be dismantled, the ends freed and the bridge jacked up. The abutments may be raised with stonework, and the stone piers rebuilt. This should prove to be relatively easy.	
General condition	Although there is some evidence of rusting bridge appears in good condition.	
Remedial action required	None, although repainting will be required in 5-10 years time.	

Reference & Chainage	**LS11 0.345-0.409**	Location	OS NGR 387297,785762
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Upstream section of wall.

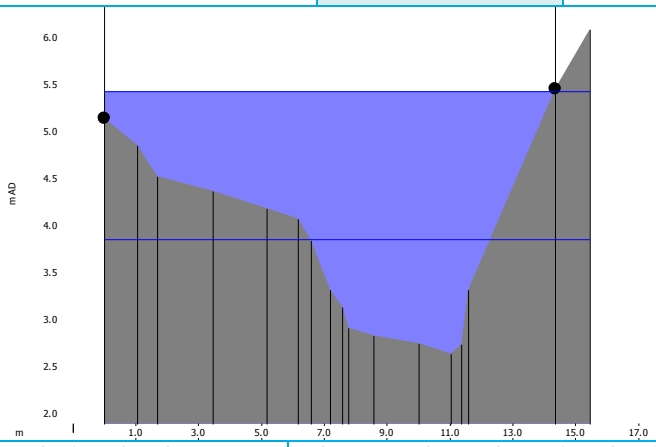
Photograph 2: Middle section of wall.

Photograph 3: Middle section of wall (cont).

Photograph 4: Downstream end of wall.

Photograph 6: View showing loose stonework at base of wall.	Photograph 7: View looking along road on top of embankment.
	

Description	Drystone retaining wall	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Good, although services likely to be present and partial road closure req.
Structural comments	Wall appears stable, with little sign of significant structural movement. Extensively vegetated, areas of loose stone present. Some areas at base appear to be subject to erosion.	
Design considerations		
General condition	Fair, although this could rapidly deteriorate to poor if no maintenance work carried out.	
Remedial action required	Wall may be consolidated using traditional dry-stone wall techniques. Additional toe erosion to be considered, and methods of water proofing behind wall, will need to be investigated.	

Reference & Chainage	**LS12 0.409-0.577**	Location	OS NGR 387237,785750
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bank/Revetment
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Downstream end of embankment, note loose stones and presence of voids at base. Note, wall ends at steps reducing level of defence.

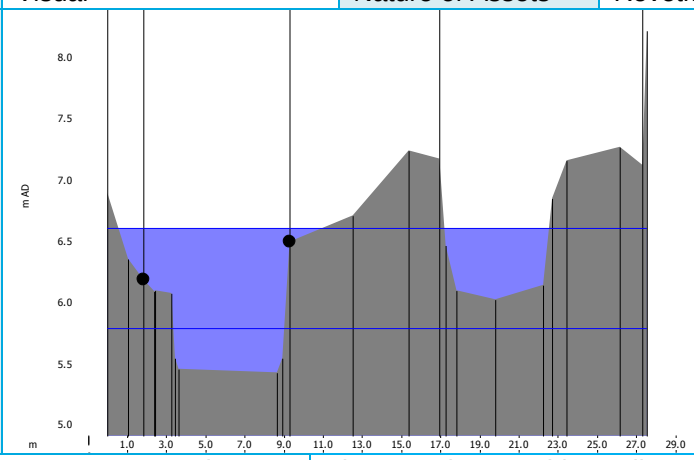
Photograph 2: View of embankment looking downstream.

Photograph 3: View of embankment looking upstream.

Photograph 4: View showing heavily vegetated embankment.

Photograph 5: Vegetated stone bank showing signs of past erosion.	Photograph 6: Area of bank recently consolidated using large boulders.
	

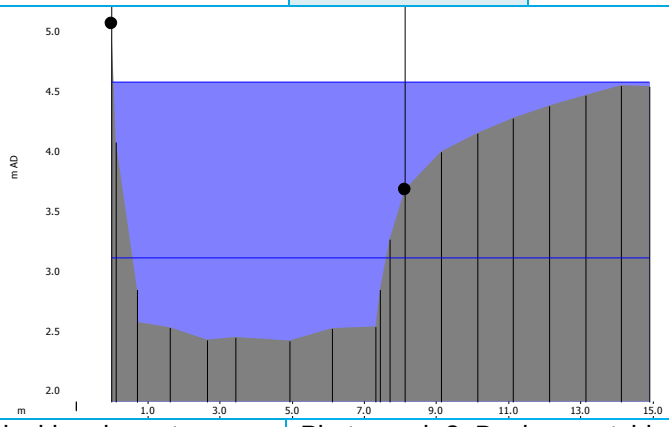
Description	Vegetated stone and earth embankment.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Good at top of embankment, although services likely to be present and partial road closure req.
Structural comments	Some loose areas and evidence of erosion.	
Design considerations	Any flood defence wall should be built on top of embankment. This may involve narrowing road locally.	
General condition	Fair	
Remedial action required	Consolidation of loose areas, and additional toe protection added as required.	

Reference & Chainage	**LS13** **0.577-0.643**	Location	OS NGR 387096,785665
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Revetment
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View looking upstream at weir structure.

Photograph 2: Boulder walls to sides of weir.

Description	Stone embankment.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Good at top of embankment, although services likely to be present and partial road closure req.
Structural comments	No sign of significant movement in structures. Stones of large size do not appear to be affected by erosion of soil.	
Design considerations	Any flood defence wall should be built on top of embankment.	
General condition	Good	
Remedial action required	None	

Reference & Chainage	**RS6 0.345-0.577**	Location	OS NGR 387296,785749
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bank/Revetment/Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View of bank looking downstream.

Photograph 2: Bank on outside of bend generally shallow & well vegetated.

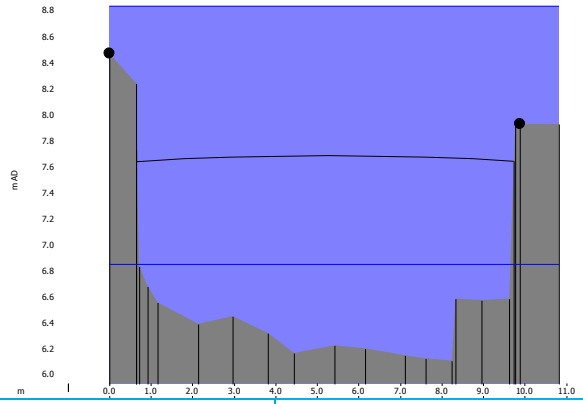
Photograph 3: View looking upstream.

Photograph 4: Dry stone wall at toe of embankment.

Photograph 5: Drystone wall built on mass concrete wall, note loose stones and tree growth.	Photograph 6: Dry stone wall built up on embankment.
	
Photograph 7: Dry stone wall built up on embankment.	Photograph 8: View showing localised erosion.
	
Photograph 9: Close up view showing localised erosion.	Photograph 10: Local erosion.
	

Photograph 11: Outfall structure at CH 0.550.	Photograph 12: Rock revetment along fish pass.
	
Photograph 13: View looking down fish pass.	
	

Description	Stone and earth embankment with sections of mass concrete and drystone wall. Stone outfall structure.	
Anticipated Ground Conditions	Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Generally good, although some areas will be restricted.
Structural comments	Erosion of banks and structures on inside of bend. Some evidence of erosion around outfall structure. Stone embankment either side fish pass in good condition.	
Design considerations	Flood defence walls may be constructed at top of embankment.	
General condition	Fair	
Remedial action required	Consolidation of areas of loose stone required, together with toe protection as necessary.	

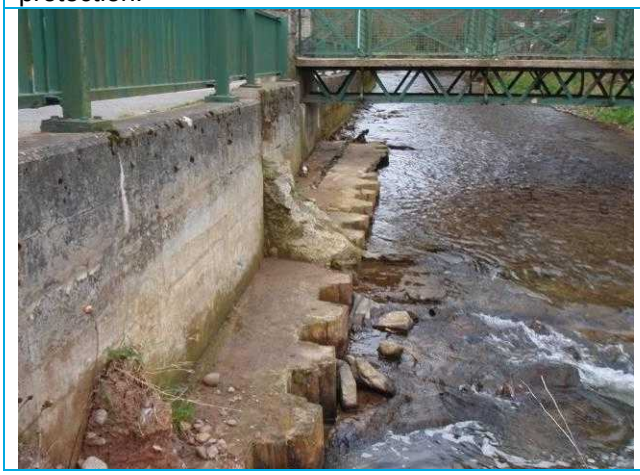
Reference & Chainage	**B4** **0.634**	Location	OS NGR 387047,785640
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bridge
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Elevation of bridge looking upstream.

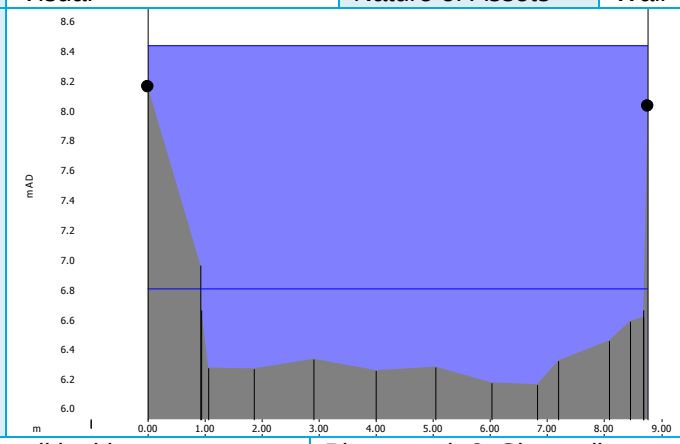
Photograph 2: RHB abutment, note built in beam acting as moisture trap.

Photograph 3: LHB Abutment.

Photograph 4: Beam bearing LHB.

Photograph 5: Photo showing sheet pile toe protection.	
	

Description	Steel truss bridge supporting concrete deck	
Anticipated Ground Conditions	Fill over Sand & Gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access good, although services likely to be present & partial road closure may be required.
Structural comments	Steelwork showing some signs of corrosion.	
Design considerations	The bridge may be acting as a choke point. To raise this bridge the ends would need to be freed and the bridge jacked up. The abutments may be raised with concrete. This should be relatively easy to do.	
General condition	Good	
Remedial action required	Repainting required in next 5 years.	

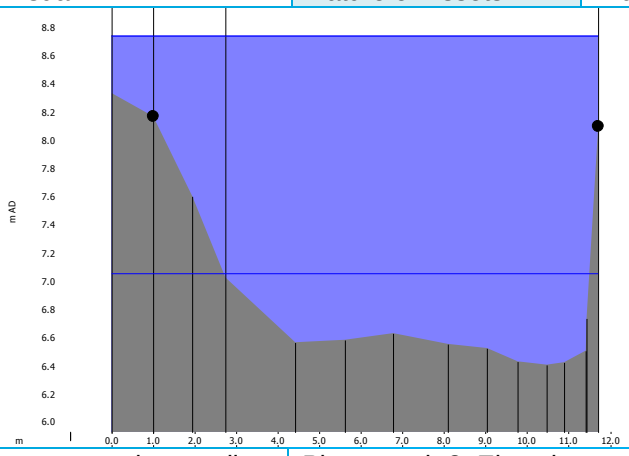
Reference & Chainage	**RS7** **0.591-0.634**	Location	OS NGR 387095,785625
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: View along wall looking downstream.

Photograph 2: Sheet pile protection.

Photograph 3: Spalling to top of concrete wall.

Description	Concrete retaining wall	
Anticipated Ground Conditions	Fill above sands & gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access good, although services likely to be present & partial road closure may be required.
Structural comments	No signs of movement. Protected adequately from erosion at base. Some spalling to top of wall.	
Design considerations	The height of the wall may be raised by casting a new section of wall on top of the existing.	
General condition	Good.	
Remedial action required	None required.	

Reference & Chainage	**RS8** **0.634-0.696**	Location	OS NGR 387043,785634
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Wall
Model cross section showing peak 0.5% AP (200 year) event water level			

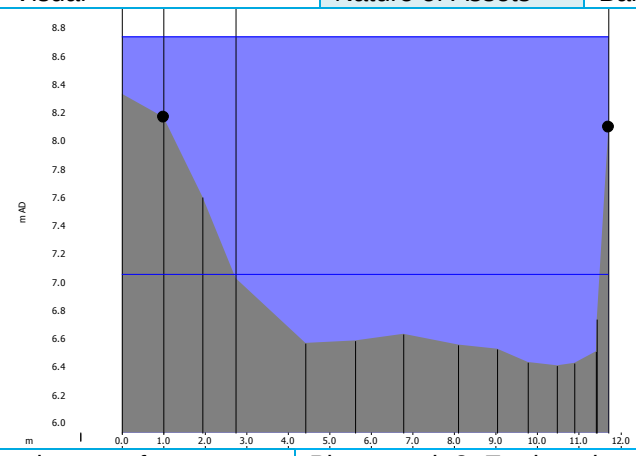
Photograph 1: View looking upstream along wall.

Photograph 2: Elevation wall.

Photograph 3: Middle section wall.

Photograph 4: Upstream end of wall.

Description	Concrete retaining wall	
Anticipated Ground Conditions	Fill above sands & gravels.	
Potential Ground Investigation	Type	In situ SPT's, Soil grading
	Access	Access good, although services likely to be present & partial road closure may be required.
Structural comments	No signs of movement. Unclear how deep footings go, although there are no signs of wall being undermined.	
Design considerations	The height of the wall may be raised by casting a new section of wall on top of the existing.	
General condition	Good.	
Remedial action required	None required.	

Reference & Chainage	**LS14** **0.634-0.705**	Location	OS NGR 387042,785645
Date of Inspection	7 April 2010	Inspector(s)	Stephen Farrar
Nature of Inspection	Visual	Nature of Assets	Bank
Model cross section showing peak 0.5% AP (200 year) event water level			

Photograph 1: Look along road at top of embankment.

Photograph 2: Earth embankment with mature trees looks relatively stable.

Photograph 3: Earth embankment with mature trees looks relatively stable.

Photograph 4: Sandbag walls around garage.