

SD117e

S 3 SFCA

S B
R

J 2012

P
B
B

UNITED
KINGDOM &
IRELAND

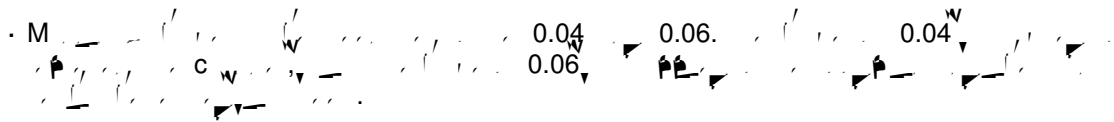
TABLE OF CONTENTS

1	INTRODUCTION	5
1.1	Commission	5
1.2	Background	5
1.3	Site Location	

1.3 Site Location

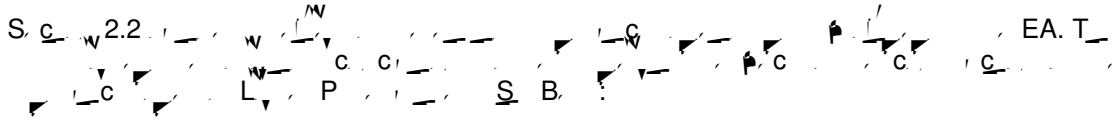
REVIEW OF EXISTING DATA

T, EA A S B, P -F, M S, W H c
2006 B, A 1D ISIS c W E F c B A W F c S
T W c S B OSNGR SO 214 039
A (R c H / M S, W) EA JBA
2009. T W c S B
H c

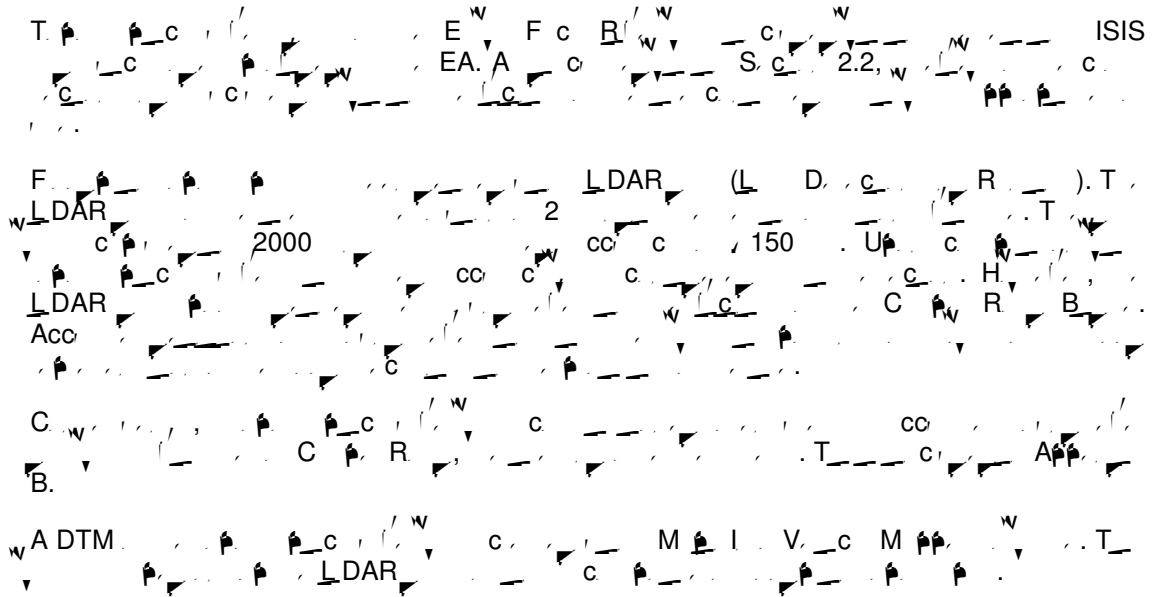


3 FLOOD HYDRAULIC MODELLING

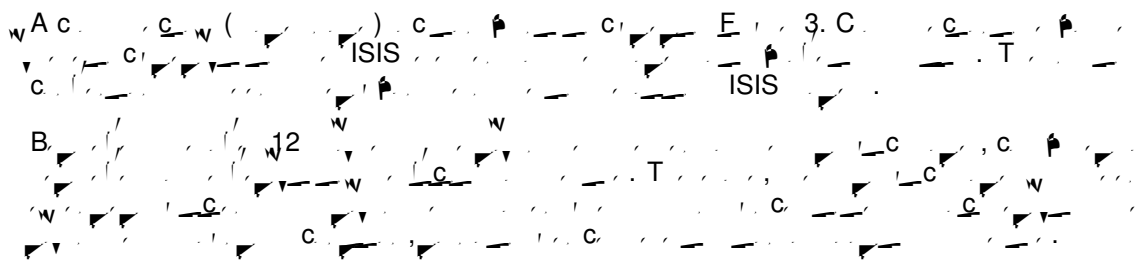
3.1 Background



3.2.3 *Topography*



3.2.4 *Hydraulic Model Extent*



3.2.5 *Structures*

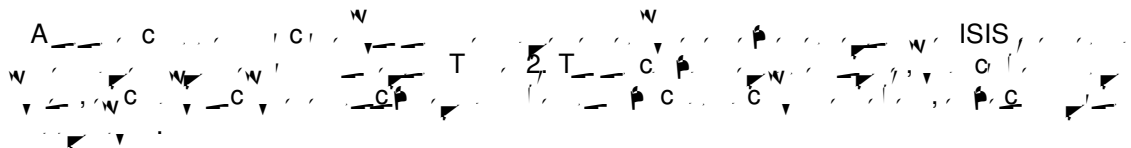





TABLE 2: DESCRIPTION OF INLINE STRUCTURES

Location	Node	Details
C R B	AB27U-1	Op
S B C	AB28U	L
D ^w	AB31 U	W
D ^w	AB35A	C

A 3  c  2D TUFLOW  c

3.3 Review of Baseline Model Results

T... c... A... C... F...

3.3.1 Flood Mechanism - 1 in 100 Year Event

M... E... F... R... C... R... F... c...

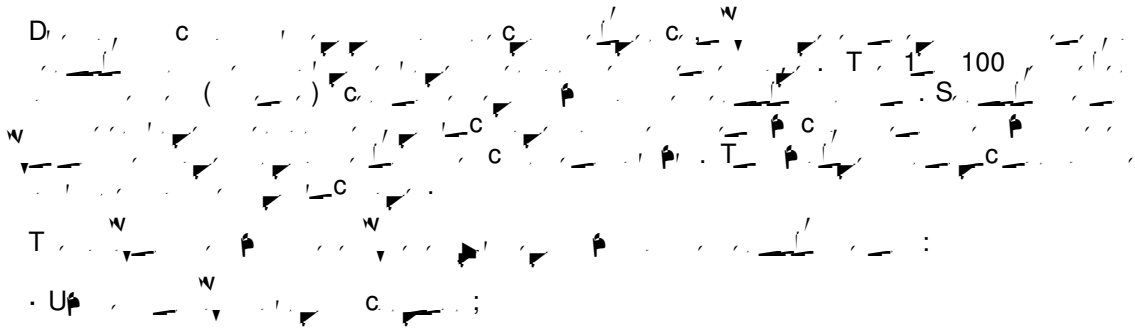
3.3.2 Flood Mechanism - 1 in 100 Year + Climate Change Event

W... C... R... B... S... B... C... P...
A... C... R... I... E... F... R... B... E...
F... R... C... R... B...
F... G... S... A... S... P... 180
AOD... c...

3.3.3 Flood Mechanism - 1 in 1000 Year E-11(-59(a)1(n)5((F)-a)1(s)/T1_2 10.0 9.90.9457 09943234 148 486.9

3.5

Sensitivity Testing and Blockage Analysis



has2(p)(c)18own kder68-5(t)o(l)-8ity68-5(v)6(i)-7(n)1(g)-8 the i(68-ug)1()1(k1(a)1(k)-18-8)-v-252(o)1(f)-11

TABLE 6: MODEL INFLOW SENSITIVITY TESTING RESULTS

Node/Cross Section	Q100 Flow Water Level (mAOD)	Q100 +20% Flow Flood Level (mAOD) ²	Q100 -20% Flow Flood Level (mAOD)
SB1	183.53	183.69	183.35
SB3	180.63	180.81	180.47
SB5	179.24	180.04	178.92
AB27U	178.97	179.89	178.67
AB28	178.77	179.68	178.07
AB30	177.30	177.49	177.08
AB33	170.57	170.70	170.42
AB35	167.21	167.56	166.84

T
0.20
C
C
W
C
1
100
C
T

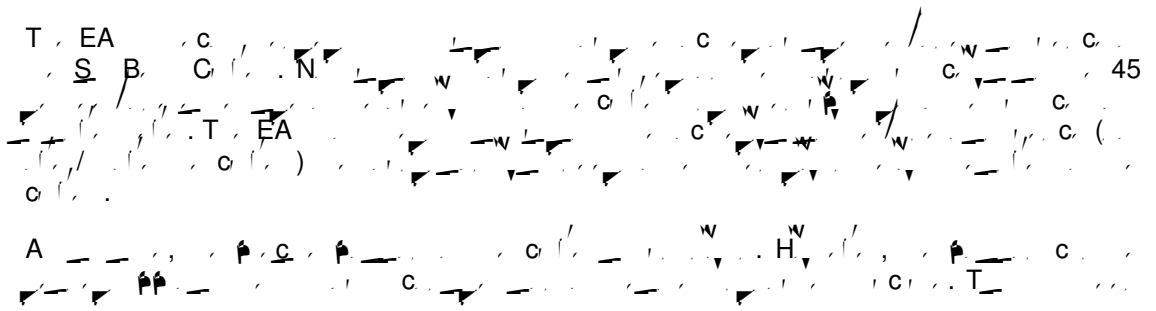
TABLE 8: COEFFICIENT VALUE SENSITIVITY TESTING RESULTS

--

A c
 C R c 2D 50%
 T 95% c c AB27U (C R B) c c
 W c 50% c c 2D T c
 C R c
 H 95% c S B. (-)-5(-)-216 7(B)-1(1(-)-7()6()1(-)-5(1(-)-35()-5(CA
 4 6(-)-484 c 6(-)1(-)-5()6()1(1(-)-19()1(-)5()111()1S)-7()1(-)-184

4 DISCUSSION

4.1 Position of Six Bells Culvert



T w 1 1000
 H c
 R c H c c c 1 1000
 I c c c S B C
 c c cc
 A F C c A (FCA) w c w
 c c T c c c c w
 c T c 1D-2D
 A FCA, cc c w TAN15. T w
 c

APPENDIX A – ENVIRONMENT AGENCY CORRESPONDANCE

Patrick Goodey
Scott Wilson
The Crescent Centre
Temple Back
Bristol
BS1 6EZ

Ein cyf/Our ref: SE/2007/102989/OR-
03/AE1-L01

Eich cyf/Your ref:

Dyddiad/Date: 17 December 2010

Dear Mr Goodey

Blaenau Gwent County Borough Council Strategic Flood Consequences
Assessment Stage 2

Thank you for sending us the following document for review, which we received on
15 November 2010:

- Blaenau Gwent County Borough Council. Strategic Flood Consequence
Assessment Stage 2, Scott Wilson, September 2010 (DRAFT)

We have now reviewed the Stage 2 SFCA and we provide the following advice:

Section 1 Introduction

We note that following your Stage 1 SFCA, a screening exercise has now been undertaken of various candidate sites identified by Blaenau Gwent CBC as part of their emerging LDP for spatial planning purposes. This has resulted in you including nine candidate sites in this Stage 2 SFCA.

Section 2 Study area

We note that in paragraph 2.1.3 you state that the Castle Street, Abertillery has been removed from the LDP process and that the site will not be assessed as part of the Stage 2 report. However, we note that paragraph 5.1.1 in your Summary lists Castle Street, Abertillery as being a site that requires further investigation. Given that this site has been removed from the LDP process, we assume that its inclusion in paragraph 5.1.1 is in error. Furthermore, Roseheyworth Business Park is included in paragraph 2.1.1, but does not feature in paragraph 5.1.1. You may wish to clarify or amend this.

Assuming the above, we note the majority of candidate sites assessed are situated within Zone A/Flood Zone 1 apart from:

Asiantaeth yr Amgylchedd Cymru/Environment Agency Wales
St Mellons Business Park, Fortran Road,, St Mellons,, Cardiff, CF03 0EY.
Llinell gwasanaethau cwsmeriaid/Customer services line: 08708 506 506
E-bost/Email: enquiries@environment-agency.gov.uk

www.environment-agency.gov.uk

Cont/d..

- Lower Plateau, Six Bells Colliery Site, Lower Ebbw Fach

This sites has been identified to require further study for the Stage 3 SFCA, with the 9 remaining sites, if allocated, requiring varying levels of site specific FCAs. This approach appears a reasonable way forward.

Section 3 Methodology

Section 3.2 You should amend this heading to state “Areas Susceptible to Surface Water Flooding “ (not management).

We note that you have used our Areas Susceptible to Surface Water Flooding (AStSWF) maps to consider the risk of flooding from surface water (paragraph 3.2.1). Please be aware we recently sent all Local Authorities our Surface Water Flooding Maps, which supplement the AStSWF maps. You may wish to consider these Surface Water Flooding maps in any future SFCA stages.

We also seek clarification on whether you have sought information from Blaenau Gwent’s drainage engineers. The Local Authority may have additional information on surface water flooding, which the SFCA should consider. You should explain whether you have done this (or why it has been omitted) in your Methodology.

Section 4 Candidate Site Assessment

We note the approach you have taken, and agree that it seems sensible for site specific FCAs to be undertaken for the sites you have suggested.

Section 4.8 North Rising Sun Industrial Estate: We note that the potential access to this site lies within Flood Zones 2 and 3. The SFCA may wish to flag up that any future FCA should consider whether operation access/ egress to the site can be achieved during a flood event.

Section 4.8 Lower Plateau, Six Bells Colliery : We agree that it is appropriate to undertake a Stage 3 SFCA for the Six Bells Colliery Site. We note how a culvert runs under this site. It appears likely that the culvert would convey much of the flow in the event of a flood event. Hence, mitigation for the flood risk appears likely to be possible.

We would be happy to discuss further with you the scope of the Stage 3 SFCA for this site. It may be possible to assess the flood risk without hydraulic modelling, as you may be able to do a coarse assessment of the flood risk, without the need for modelling. Whether this method is appropriate is partially dependent on the size of the culvert. We also advise that your Stage 3 SFCA assess whether mitigation in the form of opening up the culvert would be possible to create a more natural watercourse. It may be that this is not possible, due to the depth of the culvert underground, but we advise that the SFCA should explore the possibility. We would be pleased to provide further advice on the scope of the Stage 3 SFCA further with you; please contact us, should you wish to do so.

Section 5 Summary

We advise that you remove the reference to Castle Street, Abertillery to the list in paragraph 5.1.1 and include Roseheyworth Business Park, as discussed above.

Additional issues: Compliance with tender brief

Your tender brief (dated December 2009) set out the points to be covered by the Stage 2 SFCA in paragraphs 3.1.2 and 3.2.5. It may be useful to ensure to state how the SFCA has addressed these points, and if it has not, give explanation for this. With reference to paragraph 3.1.2 of your Tender Brief, we seek clarity on how the SFCA has addressed the following points (in italics):

- Assess the residual risk posed to potential sites following failure, breach or

APPENDIX B – TOPOGRAPHIC SURVEY

