

**A14**  
**Cambridge to Huntingdon**  
**improvement scheme**  
Development Consent Order Application

HE/A14/EX/239

**TR010018**

HE/A14/EX/239

Flood Risk Assessment Position Statement

November 2015





## **A14 Cambridge to Huntingdon improvement scheme**

Flood Risk Assessment Position Statement  
As of 6 November 2015

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## 1 Introduction

- 1.1.1 This Flood Risk Assessment Position Statement updates and replaces the position statement submitted on 30<sup>th</sup> October at Deadline 13, HE/A14/EX/202.
- 1.1.2 To address the queries raised by the Environment Agency (EA) to the Flood Risk Assessment (FRA) submitted in support of the *Environmental Statement* for the scheme in December 2014 and repeated in their Written Representations, Highways England has been undertaking a programme of additional hydraulic modelling to refine the FRA. The hydraulic models and relevant sections of the FRA have been submitted to the EA periodically for review and agreement. All queries and comments received from the Environment Agency have been addressed and were collated into a single updated FRA submitted at Deadline 13 on 30 October, HE/A14/EX/202.
- 1.1.3 This note summarises the current position of the FRA, responds to representations made by the Environment Agency at deadline 13 and responds to the Rule 17 – Request for Information letter (Ref TR010018) dated 3/11/15 and provides confirmation that the scheme complies with the NPS in respect of matters relating to flood risk management.

## 2 Response to Rule 17 Letter

- 2.1.1 The responses of Highways England to the queries raised by the Examining Authority in the Rule 17 letter are provided in the following sections of this position statement.
- 2.1.2 Amendments to the CoCP have been agreed with the Environment Agency and have been incorporated into the CoCP submitted to the Authority at Deadline 14.
- 2.1.3 The position of the FRA as of Deadline 14 is summarised in Section 5 of this position statement.
- 2.1.4 Highways England does not believe that the additional requirement suggested by the Examining Authority in relation to Oakington Brook is necessary. Since the Environment Agency reported their position in relation to Oakington Brook at Deadline 13, Highways England have made minor modifications to the design of the crossing of the Oakington Brook which removes the previously predicted increase to flood risk in the village of Oakington. There is now no increase in flood risk to property predicted on Oakington Brook. This update was communicated to the Environment Agency on 30 October and Highways England awaits the result of the Environment Agency's review of the hydraulic model.

- 2.1.5 Highways England will continue to discuss the necessity of the additional requirement suggested by the Examining Authority in relation to Oakington Brook with the Environment Agency. If by Deadline 15 the parties have been unable to agree that the requirement is unnecessary (following a review by the Environment Agency of the update referred to above) Highways England will then comment on the Examining Authority's proposed wording of the requirement.

## **3 Landowner Agreement to Predicted Water Levels**

### **3.1 Ellington Brook**

- 3.1.1 The document summarising the predicted change in peak water levels on the Ellington Brook was issued to affected landowners (see below) and the Alconbury and Ellington Internal Drainage Board (part of the Bedford Group of IDB's) on 11 September 2015.
- 3.1.2 Highways England met with the Land Agent representing G B Sewell and Partners on 1 September to discuss the change in predicted peak water levels and is seeking a meeting with the other affected landowners, the Church Commissioners for England, to achieve agreement to the change in predicted peak water levels during examination.
- 3.1.3 The information has been resent via email directly to Mr and Mrs Sewell on 26 October and to the land agent acting on behalf of the Church Commissioners on 28 October. Verbal discussions presenting the information and situation were undertaken ahead of those submissions.
- 3.1.4 The Land Agent representing Mr and Mrs Sewell has informally indicated that the change in predicted peak water levels is likely to be acceptable.
- 3.1.5 Highways England has continued to seek written agreement from both landowners throughout October contacting them via email and telephone on a number of occasions.
- 3.1.6 Highways England continues to liaise with Mr and Mrs Sewell and their Land Agent with a view to confirming their agreement.
- 3.1.7 It has been confirmed that the change in water levels does not impinge upon land owned by Eleanor Disney.

### **3.2 River Great Ouse**

- 3.2.1 The document summarising the predicted peak water levels on the river Great Ouse as a result of the scheme was issued to

landowners and the Bedfordshire Group of Internal Drainage Boards on 11 September 2015.

- 3.2.2 A meeting was held with Mr Mann (landowner left/west bank) on 21 September 2015 who indicated that the predicted water levels are likely to be acceptable subject to compensation. Dialogue with Mr Mann and his land agent is ongoing to obtain written agreement, which Highways England expects to obtain before the close of examination.
- 3.2.3 A meeting was held with Mr Marcu (landowner on the east bank of the river Great Ouse) on 16 October where the predicted water levels were presented and he acknowledged receipt of the explanatory document. At that meeting Mr Marcu indicated that the change in water levels is likely to be acceptable. Highways England continues to try and obtain acceptance of the change in water levels in writing which they anticipate obtaining before the close of examination.
- 3.2.4 Highways England have made repeated efforts throughout October and November to obtain written acceptance of the change in predicted peak water levels from both landowners affected on the Great Ouse. Repeated emails and telephone calls have been made to the landowners and their Agents. Highways England will continue to pursue formal confirmation of their agreement.

### **3.3 Beck Brook**

- 3.3.1 The updated hydraulic modelling and assessment of scheme impact has identified an increase to peak water levels on the Beck Brook upstream of the local access road, south of the main A14. This change in peak water levels is limited to farmland and does not affect any properties. Highways England has spoken to the land agent acting on behalf of the affected landowner, The University of Cambridge in mid-October, to seek agreement to the change in peak water levels which indicated the change was likely to be acceptable. A memo summarising the predicted peak water levels was issued to the landowner and their agent on 29 October.
- 3.3.2 Communications with affected landowners (and their agents) on the Ellington Brook, river Great Ouse and Beck Brook have continued since Deadline 13 and Highways England continues to seek written acceptance of the predicted peak water levels before the close of examination. Informal (verbal) confirmation of acceptance of the change in peak water levels has been given by all landowners or their agents with the exception of the Church Commissioners on Ellington Brook, who have yet to express a view.



## 4 Compliance with the NPS

- 4.1.1 Highways England understands that the Environment Agency is now content that compliance with the NPS from a flood risk perspective has been achieved.

Table 4-1: Summary of Changes to Peak Water Levels

Watercourse	Change in Peak 1% AEP Water Level (m)	Summary of Impact	Assessed significance of effect	Landowner agreement	Impact considered Material
Cock Brook	0.1	<ul style="list-style-type: none"> <li>Does not affect property</li> <li>Within land to be permanently acquired</li> <li>Within Flood Zone 3</li> </ul>	Neutral	N/A - Within land to be permanently acquired	No
Alconbury Brook	0.04	<ul style="list-style-type: none"> <li>Does not affect property</li> <li>Within land to be permanently acquired</li> <li>Within Flood Zone 3</li> </ul>	Neutral	N/A - Within land to be permanently acquired	No
Ellington Brook	0.8 (very localised generally up to 0.2m)	<ul style="list-style-type: none"> <li>Does not affect property</li> <li>Within Flood Zone 3</li> </ul>	Slight adverse	Verbal acceptance provided	No
River Great Ouse	0.02	<ul style="list-style-type: none"> <li>Does not affect property</li> <li>Land within Flood Zone 3</li> </ul>	Slight adverse	Verbal acceptance provided	No
West Brook	0.3	<ul style="list-style-type: none"> <li>Very localised peak - generally 0.04m</li> <li>Does not affect property</li> <li>Within land to be</li> </ul>	Slight adverse	N/A - Within land to be permanently acquired	No

Watercourse	Change in Peak 1% AEP Water Level (m)	Summary of Impact	Assessed significance of effect	Landowner agreement	Impact considered Material
		permanently acquired <ul style="list-style-type: none"> <li>• Within Flood Zone 3</li> <li>• Offset by greater area of betterment</li> </ul>			
Uttons Drove Drain	0.16	<ul style="list-style-type: none"> <li>• Water level rise in-bank</li> <li>• Does not affect property</li> <li>• Extends for 30m only</li> <li>• Within land to be permanently acquired</li> <li>• Within Flood Zone 3</li> </ul>	Neutral	N/A - Within land to be permanently acquired	No
Oakington Brook	0.009	<ul style="list-style-type: none"> <li>• Does not affect property</li> <li>• Land within Flood Zone 3</li> <li>• Significance of effect assessed as 'neutral'</li> </ul>	Neutral	N/A – neutral impact	No
Beck Brook	0.4	<ul style="list-style-type: none"> <li>• Peak rise within land to be permanently acquired</li> <li>• Does not affect property</li> </ul>	Slight adverse	Liaison ongoing, verbal acceptance indicated by land agent	No

4.1.2 There is no rise in peak water levels on other watercourses.

## 5 Hydraulic modelling and FRA agreement

5.1.1 The Environment Agency provided a representation at Deadline 13 to the Examining Authority summarising their review of the hydraulic models and individual FRA sections submitted to them for review and acceptance by Highways England as of noon on 28 October (REP 13-052).

5.1.2 A summary of the current position of agreement between the two parties is included as Table4-1. The key outstanding issues are summarised in the following sections.

### 5.2 Cock Brook

5.2.1 The assessment of scheme impact upon peak water levels has been revised since the Environment Agency last reviewed the Cock Brook FRA section. A rise in peak water levels has been identified to farmland (but not property) of up to 9mm and generally 2-3mm for the 5% (1 in 20) AEP event.

5.2.2 There is no change to the previous assessment of impact for the 1% (1 in 100) AEP event. This does not change the assessment of significance of effect which remains as 'neutral'.

5.2.3 The revised FRA section for Cock Brook included in the full FRA Deadline 13 submission was issued directly to the Environment Agency for review on 30 October.

### 5.3 West Brook

5.3.1 The scheme does not provide level-for level floodplain compensation on the West Brook. The updated FRA submitted at Deadline 13 reflects this and states that the increase in peak water levels is within land to be permanently acquired for the scheme. There is an area that experiences betterment of water levels as agreed previously with the Environment Agency through their review of an earlier version of the FRA.

5.3.2 The assessment of significance of effect for West Brook therefore remains as 'slight adverse' with the only 'non-neutral' change in peak water levels within land to be permanently acquired by Highways England.

5.3.3 The revised FRA section for West Brook as included in the Deadline 13 submission of the full FRA was issued directly to the Environment Agency for review on 30 October.

## 5.4 Oakington Brook

- 5.4.1 The Environment Agency's representation at Deadline 13 refers to flood risk to property in the village of Oakington downstream (north) of the A14. The Oakington Brook crossing has been amended to address this concern but not in time for the EA to comment ahead of Deadline 13.
- 5.4.2 The dimension of the new culvert extension for the widened A14 was amended (within the Limits of Deviation) on the Oakington Brook to reduce water levels downstream in the village. The result was that there is no predicted increase to flood risk to property in the village. The updated FRA submitted at Deadline 13 reflects this change.
- 5.4.3 The revised FRA section for Oakington Brook was issued to the Environment Agency for review on 30 October.

## 5.5 Beck Brook

- 5.5.1 The Environment Agency's representation at Deadline 13 stated that the model was not acceptable. This was based on a request to confirm the assumption made regarding the downstream boundary of the model and its influence upon water levels upstream. Additional sensitivity testing has been undertaken on the model by Highways England as requested by the Environment Agency. The results of this analysis demonstrate that the assessment of impact of the scheme does not change with the revision of the downstream boundary. This was communicated to the Environment Agency on 30 October.

Table 5-1: Summary of Hydraulic Model Progress as of 7 November 2015

Watercourse	Current Position		Areas to be resolved
	Model	FRA Update	
Alconbury	See Ellington Brook		-
Cock Brook	Accepted	Revised assessment of impact resubmitted to EA on 30/10. Impact still assessed as 'neutral'.	Await EA review of revised FRA submitted on 30/10
Ellington Brook	Accepted	Accepted	-
Brampton Brook	Accepted	Accepted	-

Watercourse	Current Position		Areas to be resolved
	Model	FRA Update	
Grafham Road Drain			
River Great Ouse	Accepted	Accepted	-
West Brook	Accepted	Revised assessment of impact resubmitted to EA on 30/10. Impact still assessed as 'neutral'.	Await EA review of revised FRA submitted on 30/10
Oxholme Drain	Accepted	Accepted	-
Covell's Drain	Accepted	Accepted	-
Utton's Drove Drain	Accepted	Accepted	-
Longstanton Brook	Accepted	Accepted	-
Oakington Brook	Accepted following clarification on minor points – provided by HE on 30/10	Revisions to the Oakington Brook culvert address flood risk concerns raised by the EA	Await EA response to resubmitted FRA of 30/10
Beck Brook	Not deemed acceptable	Accepted (subject to acceptance of model)	Await EA response to resubmitted hydraulic model

## 6 Response to representations made at Deadline 13

### 6.1 Environment Agency

6.1.1 Section 1.1 of the Environment Agency's representation states:

*"It is our opinion that the submission of evidence in relation to hydrological and Flood Risk Assessment (FRA) issues should be required prior to the application for any Development Consent Order (DCO). This is in accordance within the National Policy Statement for National Networks, section 5.96 (December 2014)"*

6.1.2 The implication of this statement is that the documentation submitted with the application in December 2014 was insufficient. Highways England's position is that the documentation submitted with the DCO application was sufficient and met the requirements of the National Policy Statement for National Networks and the National Planning Policy framework.

6.1.3 The Flood Risk Assessment was based upon the best information available at the time. Since then the FRA has been updated to reflect new information provided by the EA in August and September 2015, design changes which necessitated re-assessment and also the requests of landowners.

6.1.4 The original FRA took a conservative approach and has been refined by further hydraulic modelling which has resulted in a reduction in the land-take required for flood plain compensation

6.1.5 Section 2.7 of the Environment Agency's representation states:

*Where another drainage authority has a remit over a watercourse, they must be consulted with regards to any changes to the said watercourse. Our approval of the FRA(s) does not supersede any consent required by any relevant drainage authorities.*

6.1.6 Further to the consultation which has been ongoing throughout the scheme and examination period, copies of the updated Flood Risk Assessment have been sent to the following bodies:

- Alconbury and Ellington Internal Drainage Board;
- Swavesey IDB;
- Cambridgeshire County Council;
- Huntingdonshire District Council; and
- Cambridgeshire County Council.

- 6.1.7 Alconbury and Ellington IDB have been consulted on the change to peak water levels on Ellington Brook and have raised no concerns.
- 6.1.8 None of the bodies listed in above have objected to the change in peak water levels.

## 7 Changes to Floodplain Compensation Areas

- 7.1.1 The updated FRA submitted at Deadline 13 identifies changes to a number of floodplain compensation areas previously included in the scheme for mitigation. In some cases refined hydraulic modelling has changed the assessment of scheme impact and these mitigation measures are no longer required for floodplain compensation purposes. These are set out in Table 7-1 below.
- 7.1.2 However, at many locations, the land proposed to be utilised for flood compensation areas has other uses, as identified in the Statement of Reasons (Applicant reference HE/A14/EX/228, PINS reference REP13-048).
- 7.1.3 As a result of this, Highways England has undertaken an exercise to ascertain what areas that are no longer required for flood compensation purposes could be removed from the Scheme at the detailed design stage (if the DCO is made). The results of this exercise are set out in Highways England Deadline 14 Compulsory Acquisition (HE/A14/EX/247)

Table 7-1: Floodplain Compensation Areas No Longer Required

FCA Ref. (DCO)	FpC Ref. (FRA)	Land Plan Ref	Works Plan Ref	General Arrangement Plan Ref	Watercourse
9	4	6,7	5	3,5	Brampton Brook
6	8	5,6	16	3	Brampton Brook
23	19	22	21	17	Longstanton Brook
27	21	22,23	21,22	17,18	Oakington Brook
20	26	17	16	13	Covell's Drain
19	27	17	16	13	Covell's Drain
25	37	22	21	17	Longstanton Brook



FCA Ref. (DCO)	FpC Ref. (FRA)	Land Plan Ref	Works Plan Ref	General Arrangement Plan Ref	Watercourse
29	40	24	23	20	Beck Brook
18	43	16	15	13	Covell's Drain
26	22a	22	21	17	Oakington Brook