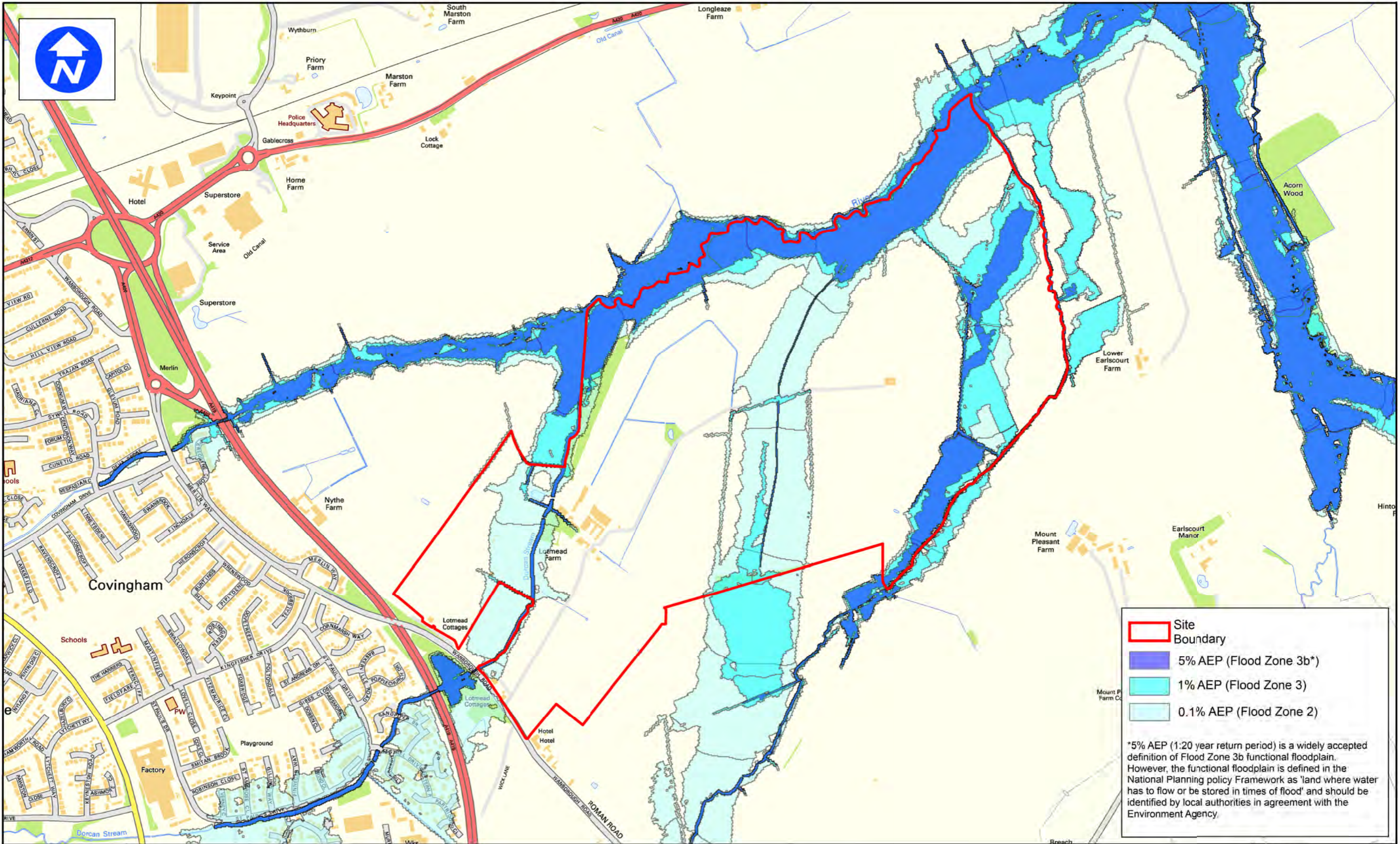


Appendix B Baseline Model Results



Site Boundary
 5% AEP (Flood Zone 3b*)
 1% AEP (Flood Zone 3)
 0.1% AEP (Flood Zone 2)

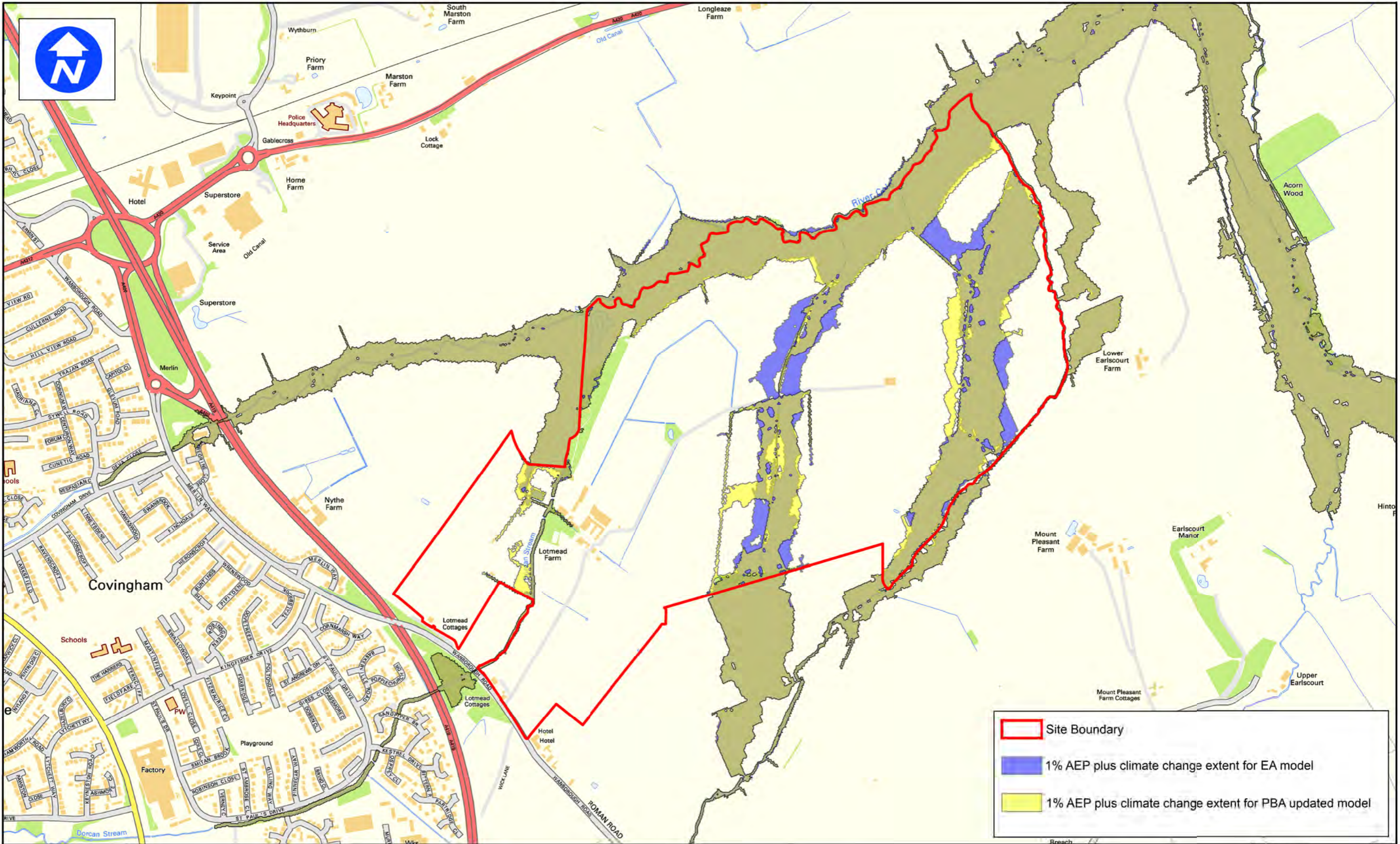
*5% AEP (1:20 year return period) is a widely accepted definition of Flood Zone 3b functional floodplain. However, the functional floodplain is defined in the National Planning policy Framework as 'land where water has to flow or be stored in times of flood' and should be identified by local authorities in agreement with the Environment Agency.




www.peterbrett.com
 Peter Brett Associates LLP
 READING
 Tel: 0118 950 0761 Fax: 0118 959 7498

Client
Ainscough Strategic Land
 Contains Ordnance Survey data © Crown copyright and database right 2010

East Villages Swindon
 EA Flood Zone Map

Date: 27/02/14
 Scale: NTS
 Drawn By: SB Checked By: AH
 Rev: A
 Figure Number
27970_016_M1002



	Site Boundary
	1% AEP plus climate change extent for EA model
	1% AEP plus climate change extent for PBA updated model



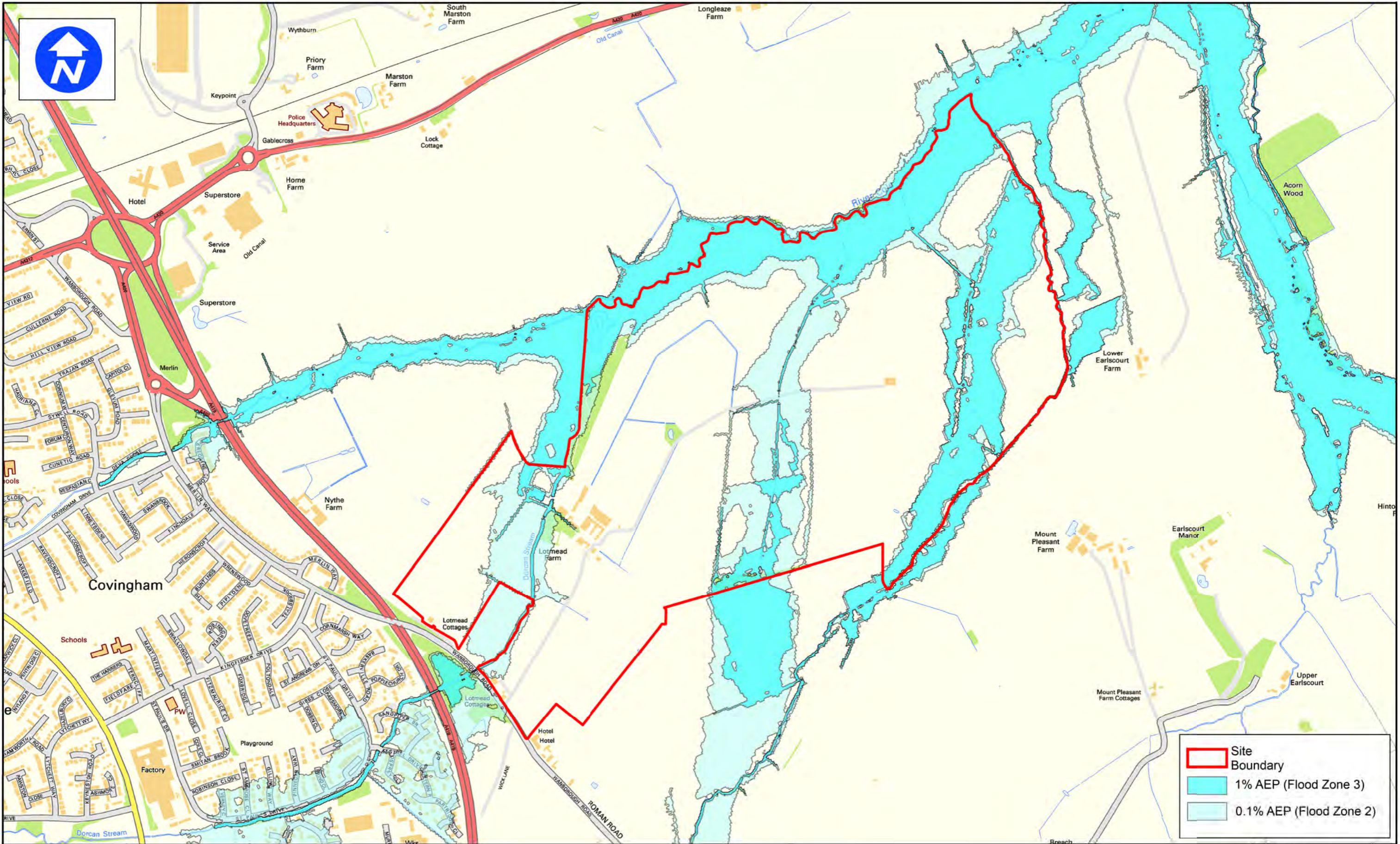
Client
Ainscough Strategic Land

Contains Ordnance Survey data © Crown copyright and database right 2010

East Villages Swindon

Comparison of EA Model to PBA updated EA Model
with updated to site topographic survey and channel survey in Ditch B and addition of Ditch A into Estry model
for 1% AEP plus climate change event

Date: 27/02/14
Scale: NTS
Drawn By: SB Checked By: AH
Rev: -
Figure Number
27970_016_M1003



	Site Boundary
	1% AEP (Flood Zone 3)
	0.1% AEP (Flood Zone 2)

www.peterbrett.com

Peter Brett Associates LLP
READING
Tel: 0118 950 0761 Fax: 0118 959 7498

Client
Ainscough Strategic Land

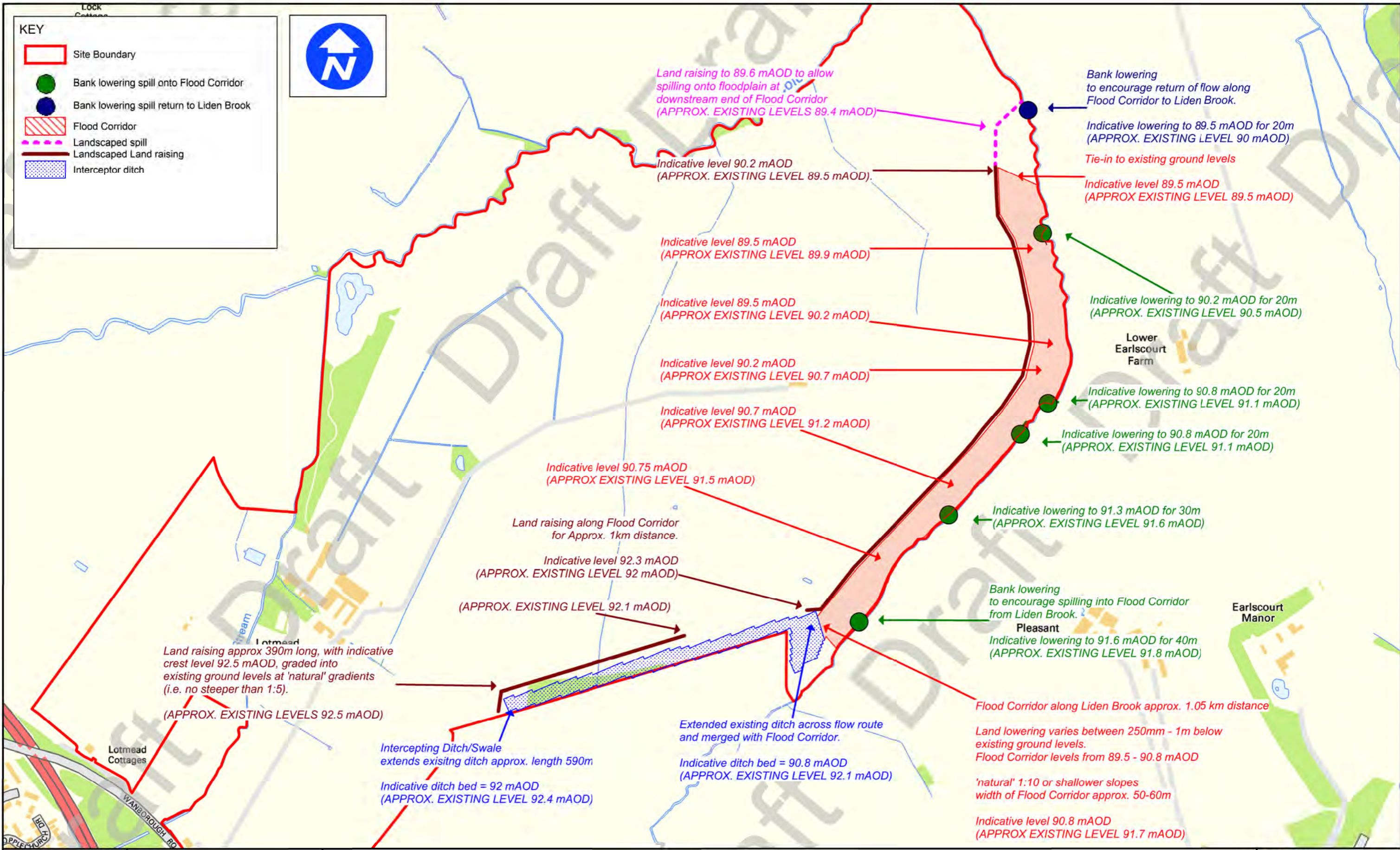
Contains Ordnance Survey data © Crown copyright and database right 2010

East Villages Swindon

PBA updated Baseline Flood Zone Map
(new topographic and channel survey and corrected 1000 year flow)

Date: 27/02/14
Scale: NTS
Drawn By: SB Checked By: AH
Rev: -
Figure Number 27970_016_M1008

Appendix C Floodplain Restoration Scheme



KEY

- Site Boundary
- Bank lowering spill onto Flood Corridor
- Bank lowering spill return to Liden Brook
- Flood Corridor
- Landscaped spill
- Landscaped Land raising
- Interceptor ditch



Client
Ainscough Strategic Land

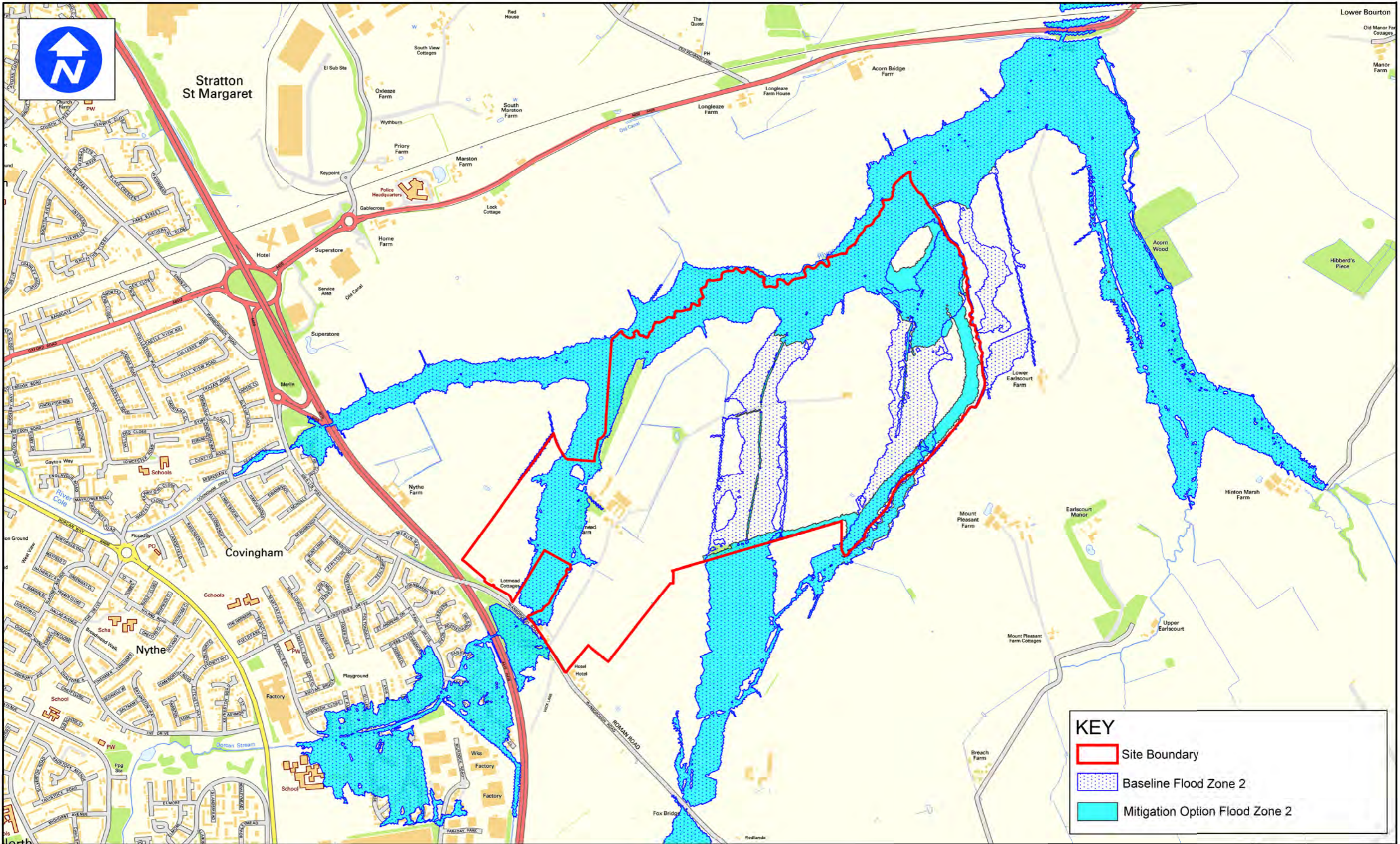
Contains Ordnance Survey data © Crown copyright and database right 2010

Swindon East Villages
Mitigation Options

Liden Flood Corridor and Liden Bank Lowering Work.

Date: 02/12/14
Scale: NTS
Drawn By: SB Checked By: AH
Rev: -
Figure Number 27970_016_MI009

Appendix D Floodplain Restoration Scheme Results



KEY

- Site Boundary
- Baseline Flood Zone 2
- Mitigation Option Flood Zone 2

www.peterbrett.com
Peter Brett Associates LLP
READING
Tel: 0118 950 0761 Fax: 0118 959 7498

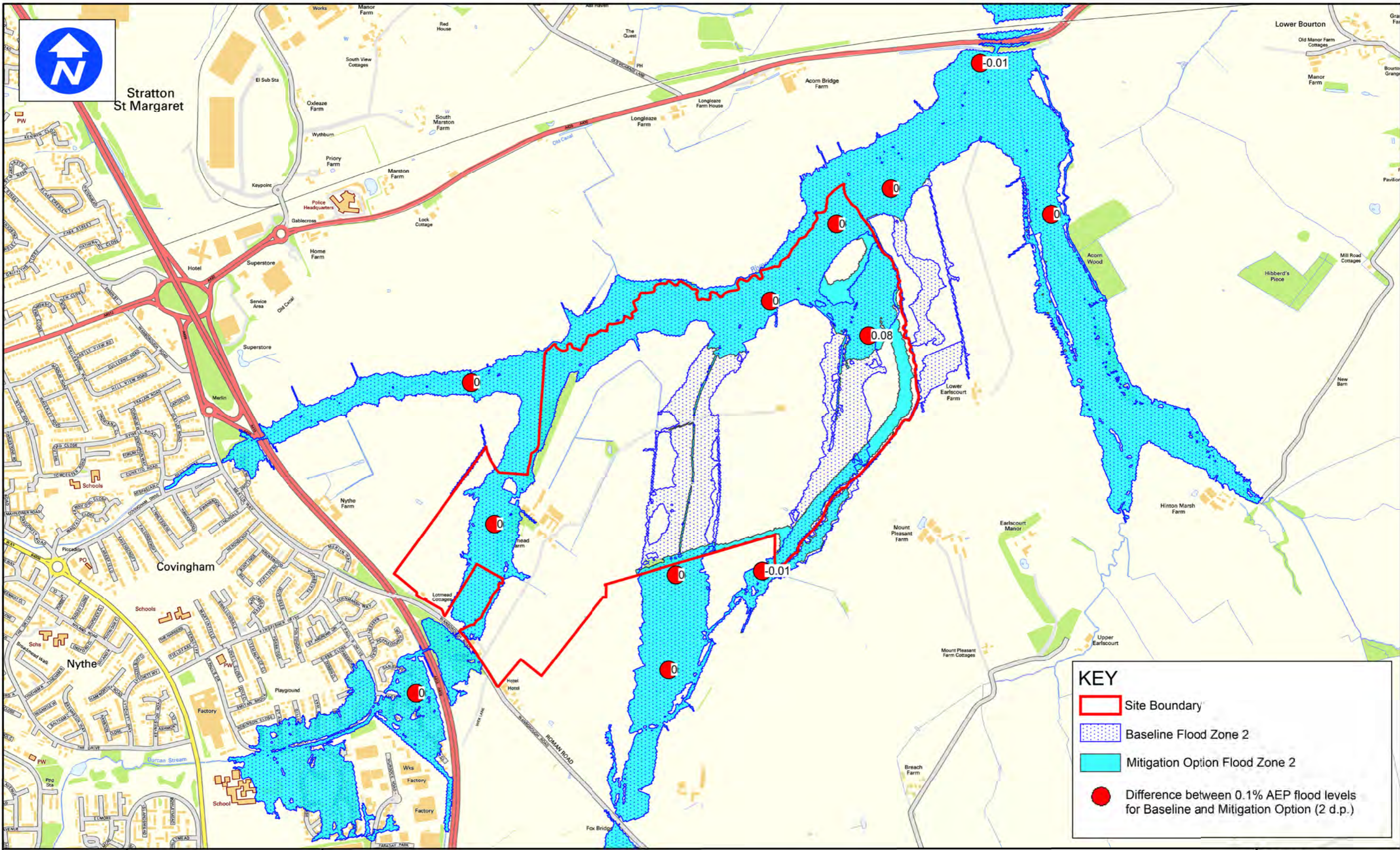
Client
Ainscough Strategic Land

Contains Ordnance Survey data © Crown copyright and database right 2010

East Villages Swindon

Comparison of Existing Flood Zone 2 (0.1% AEP)
and Flood Zone 2 for chosen mitigation option (Flood Corridor and compensation area along Liden Brook)

Date: 02/12/14
Scale: NTS
Drawn By: SB Checked By: PJ
Rev: -
Figure Number
27970_016_MI006b



KEY

- Site Boundary
- Baseline Flood Zone 2
- Mitigation Option Flood Zone 2
- Difference between 0.1% AEP flood levels for Baseline and Mitigation Option (2 d.p.)



Client
Ainscough Strategic Land

Contains Ordnance Survey data © Crown copyright and database right 2010

East Villages Swindon

Comparison of Existing Flood Zone 2 (0.1% AEP) and Flood Zone 2 for chosen mitigation option including difference in flood levels

Date: 02/12/14
Scale: NTS
Drawn By: SB Checked By: AH
Rev: -
Figure Number 27970_016_MI010

TECHNICAL NOTE

Job Name: Lotmead Farm Villages
Job No: 27970
Note No: TN_CC001
Date: 18/04/2017
Prepared By: S Bari
Subject: Updated modelling to consider February 2016 Climate Change Allowances

Item	Subject
1.	<p>Introduction</p> <p>Peter Brett Associates LLP (PBA) previously updated the Environment Agency (EA) hydraulic modelling of the River Cole, Liden Brook, Lenta Brook and Dorcan Stream for the proposed Lotmead Farm Villages development, for Ainscough Strategic Land.</p> <p>The updated hydraulic modelling was used to design and test a floodplain restoration scheme, to be constructed as part of the proposed Lotmead Farm Villages development. The floodplain restoration scheme, restored the existing floodplain along the Liden Brook and locating the Lotmead Farm Villages in Flood Zone 1.</p> <p>PBA's hydraulic modelling was approved by the EA in 2015, and formed part of the Lotmead Farm Villages planning application in February 2016.</p> <p>The EA also released updated climate change allowance guidance in February 2016. This was too late to be incorporated into the hydraulic modelling for original planning submission.</p> <p>PBA has now assessed the proposed floodplain restoration scheme with the updated climate change allowances. This technical note details the results from the updated climate change modelling and shows that the proposed Lotmead Farm Villages are not flooded by the new climate change allowances.</p>

DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
27970/016/TN_CC001	-	18.04.17	S Bari	A Hensler	A Hensler	R Hall

Peter Brett Associates LLP disclaims any responsibility to the Client and others in respect of any matters outside the scope of this report. This report has been prepared with reasonable skill, care and diligence within the terms of the Contract with the Client and generally in accordance with the appropriate ACE Agreement and taking account of the manpower, resources, investigations and testing devoted to it by agreement with the Client. This report is confidential to the Client and Peter Brett Associates LLP accepts no responsibility of whatsoever nature to third parties to whom this report or any part thereof is made known. Any such party relies upon the report at their own risk.

© Peter Brett Associates LLP 2017

Peter Brett Associates LLP Caversham Bridge House Waterman Place, Reading Berkshire RG1 8DN

T: +44 (0)118 950 0761 +44 (0)118 959 7498 E: reading@peterbrett.com



TECHNICAL NOTE

2. Updated Climate Change Allowances

In February 2016 the Environment Agency (EA) released new guidance on the application of climate change allowances in flood risk assessments:

<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>.

The peak river flow (fluvial) climate change allowances within the new guidance replace the single 20% allowance previously applied uniformly across England and Wales. Instead a range of allowances are provided, which take account of the findings from a series of different climate change models. Through a statistical analysis of the climate change impacts from these different models, estimates across a range of fluvial climate change impacts were provided; presented in a series of climate change 'bands' for different geographic river basins.

The new climate change estimates are based on location, timescale, and across three statistical bands; 'central', 'higher central' and 'upper end'.

- The 'central' band represents the 50th percentile of the range of climate change impacts (i.e. this impact covers 50% of the range of climate change impacts).
- The 'higher central' represents the 75th percentile of the range of climate change impacts and;
- The 'upper end' represents the 90th percentile of climate change impacts.

Additionally, a H++ scenario was also considered and represents the extreme worst case climate change scenario.

As well as varying geographically (the river basin district of the site) and for the lifetime of the development or 'epoch' of climate change (2015-2039, 2040-2069 and 2070-2115); the EA guidance for selecting the appropriate climate change band also depends on the current Flood Zone of the site (Flood zones are independent of climate change) and the flood risk vulnerability classification of any proposed development (e.g. more vulnerable use, less vulnerable use etc.)

The Lotmead Farm Villages site is located in the Thames River Basin district, will have a projected lifetime of development of up to 100 years and includes 'more vulnerable' uses.

Table 1 below, indicates the climate change impacts for the three bands for the Thames River Basin for the different lifetimes of development.

Table 1: Climate Change – Peak River Flow Allowances

River Basin District	Future Timescale	Range of Climate Change Allowances requiring consideration (2070–2115)		
		Central	Higher Central	Upper End
Thames	2015-2039	+10%	+15%	+25%
	2040-2069	+15%	+25%	+35%
	2070-2115	+25%	+35%	+70%

The climate change allowances for future timescales, Flood Zones and vulnerability 'uses' for the River Thames Basin are set out in Table 2. For certain development scenarios, the EA have recommended that multiple bands are considered to assess climate change impacts across a range of allowances.



TECHNICAL NOTE

Table 2: Climate Change – Peak River Flow Allowances for River Thames Basin

River Basin District	Flood Risk Vulnerability Classification	Future Timescale	Range of Climate Change Allowances requiring consideration		
			Flood Zone 2	Flood Zone 3a	Flood Zone 3b
Thames	Essential infrastructure	2015-2039	+15% and +25%	+25%	+25%
		2040-2069	+25% and +35%	+35%	+35%
		2070-2115	+35% and +70%	+70%	+70%
	Highly Vulnerable	2015-2039	+15% and +25%	Not Applicable	Not Applicable
		2040-2069	+25% and +35%		
		2070-2115	35% and +70%		
	More Vulnerable	2015-2039	+10% and +15%	+15% and +25%	Not Applicable
		2040-2069	+15% and +25%	+25% and +35%	
		2070-2115	+25% and +35%	+35% and +70%	
	Less Vulnerable	2015-2039	+10%	+10% and +15%	Not Applicable
		2040-2069	+15%	+15% and +25%	
		2070-2115	+25%	+25% and 35%	
	Water Compatible	2015-2039	No allowance to be made	+10%	+10%
		2040-2069		+15%	+15%
		2070-2115		+25%	+25%

On the basis of the vulnerability use (up to 'more vulnerable' use) and lifetime of development (2115) for the Lotmead Farm Villages site; the appropriate climate change allowances are the 35% and 70% 'Higher Central' and 'Upper End' allowances.

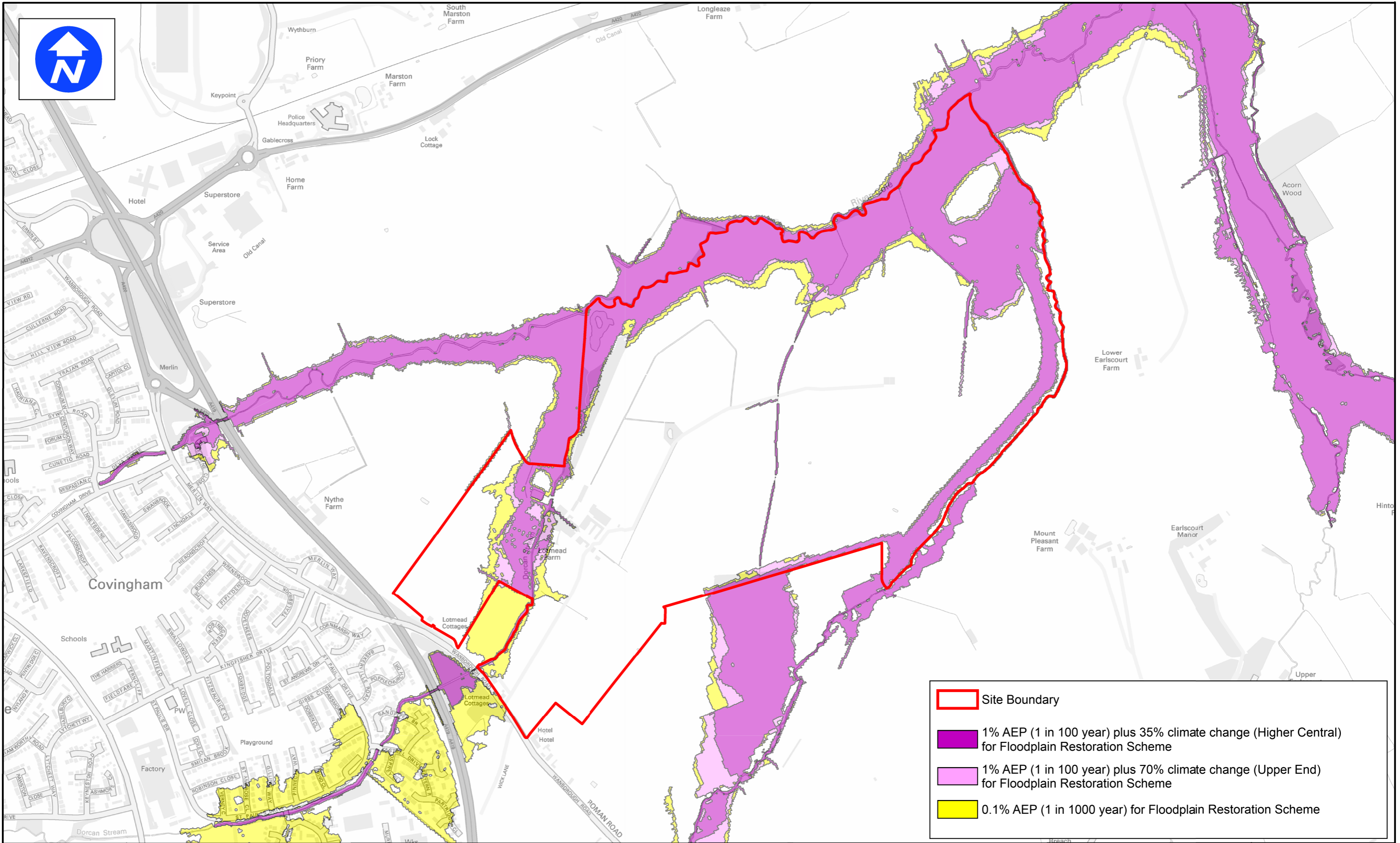
The 35% 'Higher Central' allowance is considered to be the design event appropriate as the basis of informing finished floor levels. The 70% 'Upper End' allowance is a sensitivity test to inform the potential freeboard allowance to be applied to the design level.







TECHNICAL NOTE

3.	<p>Updates to hydraulic model</p> <p>PBA's modelling used the same hydrological inflows as the EA baseline model, with the exception of a correction to an inter-catchment inflow along the Liden Brook.</p> <p>The previous EA 1 in 100 Annual Probability (AP) plus 20% climate change modelling used a uniformly applied a 1.2 scaling factor to the 1 in 100 AP event flows. The scaling factor was applied to the 1 in 100 AP hydrographs in the bc_dbase file.</p> <p>For the updated climate change allowances, PBA applied a scaling factor of 1.35 for the plus 35% 'Higher Central' allowance and 1.7 for the plus 70% 'Upper End' allowance.</p> <p>A comparison of the peak flows applied along the River Cole (Stratton, Cole 5a, Cole 6 and Cole 8) for the updated climate change allowances and, the existing EA 1 in 100 AP and 1 in 1000 AP events are shown in Table 3;</p> <p style="text-align: center;">Table 3: peak inflows along River Cole for comparison</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">AP Event</th> <th style="text-align: center;">Stratton</th> <th style="text-align: center;">Cole 5a</th> <th style="text-align: center;">Cole 7</th> <th style="text-align: center;">Cole 8</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1 in 100</td> <td style="text-align: center;">6.85 m³/s</td> <td style="text-align: center;">0.45 m³/s</td> <td style="text-align: center;">0.67 m³/s</td> <td style="text-align: center;">1.08 m³/s</td> </tr> <tr> <td style="text-align: center;">1 in 100 plus 35%</td> <td style="text-align: center;">9.25 m³/s</td> <td style="text-align: center;">0.61 m³/s</td> <td style="text-align: center;">0.90 m³/s</td> <td style="text-align: center;">1.46 m³/s</td> </tr> <tr> <td style="text-align: center;">1 in 100 plus 70%</td> <td style="text-align: center;">11.65 m³/s</td> <td style="text-align: center;">0.77 m³/s</td> <td style="text-align: center;">1.14 m³/s</td> <td style="text-align: center;">1.84 m³/s</td> </tr> <tr> <td style="text-align: center;">1 in 1000</td> <td style="text-align: center;">14.10 m³/s</td> <td style="text-align: center;">0.77 m³/s</td> <td style="text-align: center;">1.39 m³/s</td> <td style="text-align: center;">1.85 m³/s</td> </tr> </tbody> </table> <p>In general, the individual 'Upper end' 1 in 100 AP plus 70% climate change flows are smaller than the 1 in 1000 AP flows from the EA model and the total flow along the River Cole is smaller. This is true for the other modelled watercourses as well.</p>	AP Event	Stratton	Cole 5a	Cole 7	Cole 8	1 in 100	6.85 m ³ /s	0.45 m ³ /s	0.67 m ³ /s	1.08 m ³ /s	1 in 100 plus 35%	9.25 m ³ /s	0.61 m ³ /s	0.90 m ³ /s	1.46 m ³ /s	1 in 100 plus 70%	11.65 m ³ /s	0.77 m ³ /s	1.14 m ³ /s	1.84 m ³ /s	1 in 1000	14.10 m ³ /s	0.77 m ³ /s	1.39 m ³ /s	1.85 m ³ /s
AP Event	Stratton	Cole 5a	Cole 7	Cole 8																						
1 in 100	6.85 m ³ /s	0.45 m ³ /s	0.67 m ³ /s	1.08 m ³ /s																						
1 in 100 plus 35%	9.25 m ³ /s	0.61 m ³ /s	0.90 m ³ /s	1.46 m ³ /s																						
1 in 100 plus 70%	11.65 m ³ /s	0.77 m ³ /s	1.14 m ³ /s	1.84 m ³ /s																						
1 in 1000	14.10 m ³ /s	0.77 m ³ /s	1.39 m ³ /s	1.85 m ³ /s																						
4.	<p>Model Results</p> <p>The modelled flood extents for the updated climate change events are included with this technical note. Figure 27970_016_MI013 shows the modelled climate change flood extents against the 1 in 1000 AP flood extent for the proposed floodplain restoration scheme.</p> <p>This figure shows that flooding remains within the proposed floodplain restoration scheme for the increased climate change allowances. The proposed development will remain in Flood Zone 1, outside the modelled 1 in 1000 AP flood extent.</p>																									





	Site Boundary
	1% AEP (1 in 100 year) plus 35% climate change (Higher Central) for Floodplain Restoration Scheme
	1% AEP (1 in 100 year) plus 70% climate change (Upper End) for Floodplain Restoration Scheme
	0.1% AEP (1 in 1000 year) for Floodplain Restoration Scheme



www.peterbrett.com
Peter Brett Associates LLP
READING
Tel: 0118 950 0761 Fax: 0118 959 7498

Client
Ainscough Strategic Land

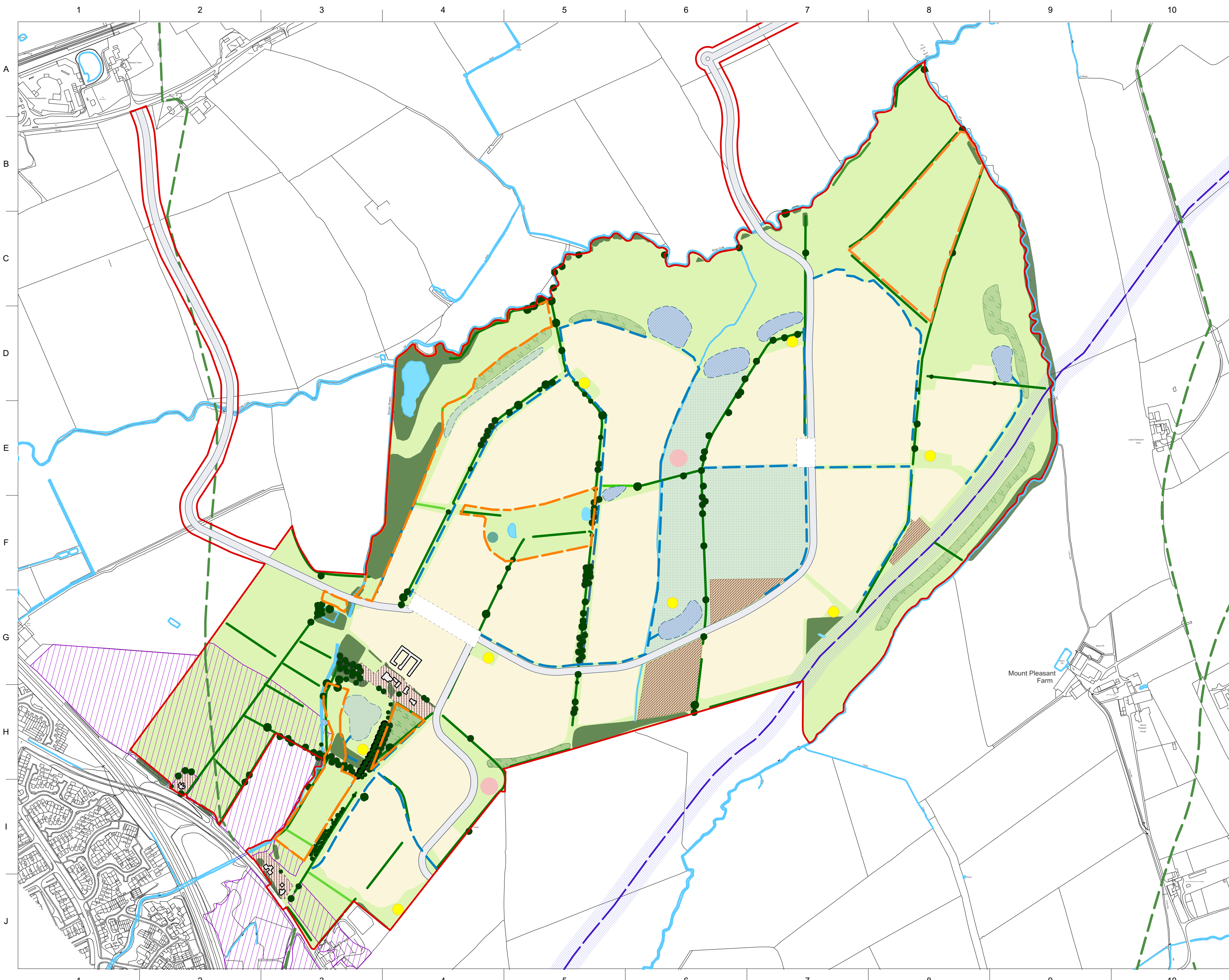
Contains Ordnance Survey data © Crown copyright and database right 2010

Lotmead and Lower Lotmead Villages Swindon
Floodplain Restoration Scheme
Updated EA Climate Change Allowances (February 2016)
Flood Extents

Date: 13/04/2017
Scale: NTS
Drawn By: SB Checked By: AH
Rev: -
Figure Number 27970_016_MI013

Appendix E Parameter Plan

Planit-ie drawing PL1461.1-PLA-00-XX-DR-U-0008-S3-PO4



THIS DRAWING IS COPYRIGHT PROTECTED AND MAY NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN AUTHORITY FROM THE OWNER.

- NOTE:**
1. Do not scale from this drawing. Always work to noted dimensions.
 2. All dimensions are in millimetres unless otherwise stated.
 3. The dimensions of all materials must be checked on site before being laid out.
 4. This drawing must be read with the relevant specification clauses and detail drawings.
 5. Order of construction and setting out to be agreed on site.

KEY

- Green Space - 83.9 ha**
includes: retained green spaces and habitats, new biodiversity zones, open space and general recreation areas, grassland, structural planting and SUDS
- Existing Vegetation**
includes: woodland, hedgerows and trees
- Proposed Vegetation - 3.1 ha**
includes: woodland, hedgerows and trees
- Sports Hub - 10.6 ha**
includes: playing pitches (7.2 ha) and additional formal sports facilities (0.4 ha)
- Proposed SUDS**
includes: attenuation basins and swales
- Allotments - 2.6 ha**
- Scheduled Monument**
- Safeguarded Canal Alignment**
includes 50m buffer zone
- Biodiversity Zones - 15.4 ha**
- Existing Waterbodies**
includes streams, ponds and drainage ditches
- Existing Plot**
to be retained
- Pedestrian Priority Zone**
- Safeguarded Play Space**
- Neighbourhood Equipped Area for Play (NEAP) - indicative location**
- Locally Landscaped Area for Play (LLAP) - indicative location**
- Locally Equipped Area for Play (LEAP) - indicative location**

Overall Green Infrastructure Quantum 97 ha

Issue	Date	Status	Drawn	Apprvd.
P01	28.03.19	Planning	CJ	AR

Planit Intelligent Environments LLP
 E: info@planit-ie.com W: planit-ie.com
MANCHESTER 2 Back Grafton St, Altrincham, WA14 1DY, T: 0161 928 9281
LONDON Unit 6 Waterside, 44-48 Wharf Road, London, N1 7JX, T: 0207 253 5678

Client: Ainscough Strategic Land

Project: PL1461.1 East Swindon Lotmead Villages

Drg Title: Parameter Plan Green Infrastructure

Created on	Created by	Approved by
28.03.19	CJ	AR

Scale	Size	Status
1:5000	A2	Planning

Drg No.	Suitability	Revision
PL1461.1-PLA-00-XX-DR-U-0005	S4	P01

Appendix F Surface Water Management Strategy

HR Wallingford *Greenfield runoff estimation for sites* online tool;

PBA drawing *Surface Water Management Strategy* 27970-4005-001

Source Control Models:

- Basin 1 - 100 year + 40%
- Basin 2 - 100 year + 40%
- Basin 2A - 100 year + 40%
- Basin 3 - 100 year + 40%
- Basin 4 - 100 year + 40%
- Basin 4A - 100 year + 40%
- Basin 5 - 100 year + 40%
- Swale 2 - 100 year + 40%
- Swale 3 - 100 year + 40%
- Swale 4 - 100 year + 40%
- Swale 5 - 100 year + 40%
- Swale 6 - 100 year + 40%
- Swale 7 - 100 year + 40%
- Swale 8 - 100 year + 40%
- Swale 9 - 100 year + 40%
- Swale 10 - 100 year + 40%
- Swale 11 - 100 year + 40%
- Swale 13 - 100 year + 40%
- Swale 14 - 100 year + 40%
- Swale 15 - 100 year + 40%
- Swale 16 - 100 year + 40%
- Swale 17 - 100 year + 40%
- Swale 18 - 100 year + 40%

Calculated by: Robert Pike
 Site name: 27970 Lotmead Villages
 Site location: Swindon

Site coordinates
 Latitude: 51.57206° N
 Longitude: 1.70645° W

This is an estimation of the greenfield runoff rate limits that are needed to meet normal best practice criteria in line with Environment Agency guidance "Preliminary rainfall runoff management for developments", W5-074/A/TR1/1 rev. E (2012) and the SuDS Manual, C753 (Ciria, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Reference: 6440675
 Date: 2018-10-03T14:17:12

Methodology	IH124
-------------	-------

Site characteristics

Total site area (ha)	1
----------------------	---

Methodology

Qbar estimation method	Calculate from SPR and SAAR
SPR estimation method	Calculate from SOIL type

	Default	Edited
SOIL type	4	4
HOST class	---	---
SPR/SPRHOST	0.47	0.47

Hydrological characteristics

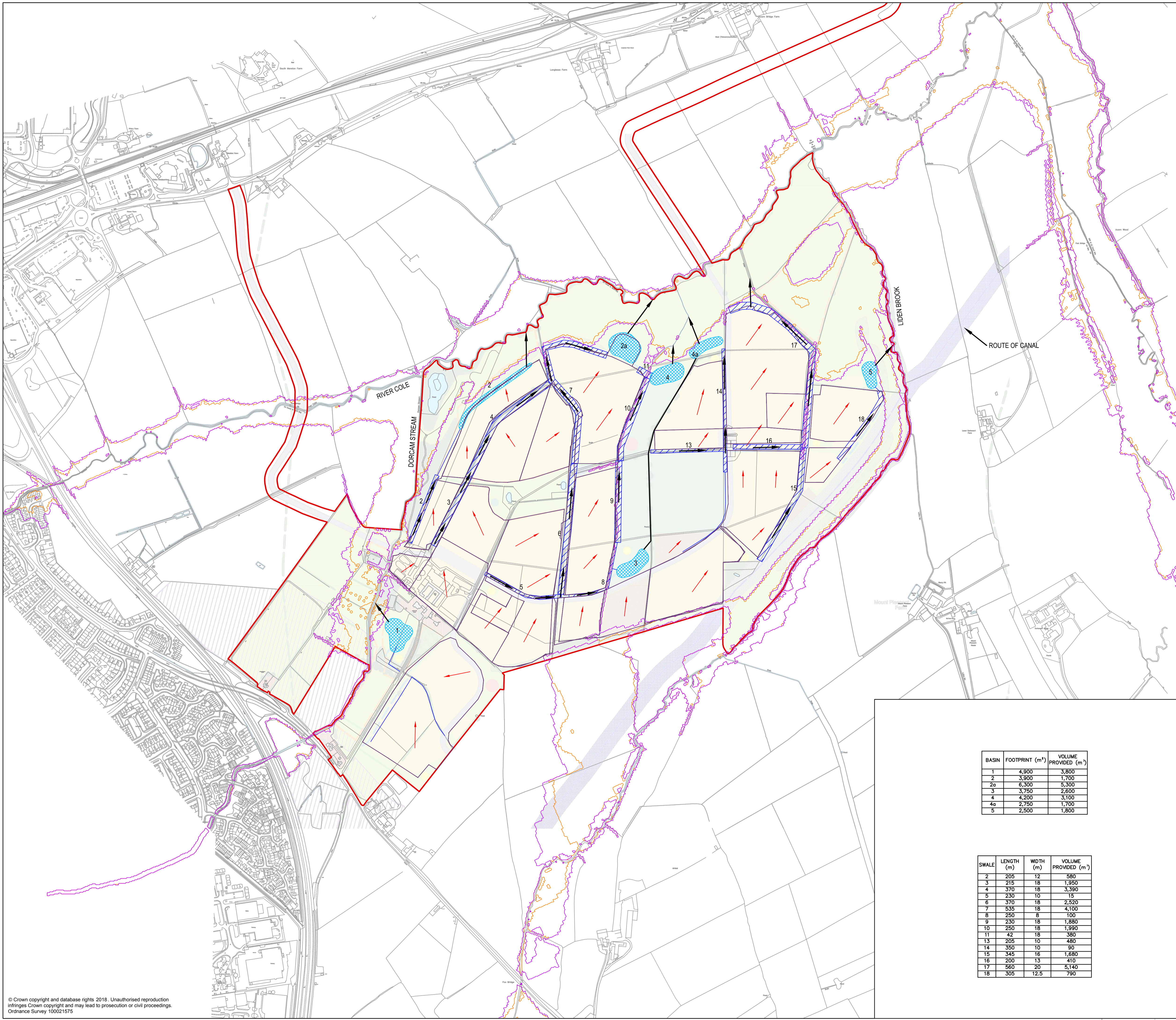
	Default	Edited
SAAR (mm)	680	680
Hydrological region	6	6
Growth curve factor: 1 year	0.85	0.85
Growth curve factor: 30 year	2.3	2.3
Growth curve factor: 100 year	3.19	3.19

Notes:

(1) Is $Q_{BAR} < 2.0$ l/s/ha?
(2) Are flow rates < 5.0 l/s? Where flow rates are less than 5.0 l/s consents are usually set at 5.0l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set in which case blockage work must be addressed by using appropriate drainage elements
(3) Is $SPR/SPRHOST \leq 0.3$?

Greenfield runoff rates

	Default	Edited
Qbar (l/s)	4.67	4.67
1 in 1 year (l/s)	3.97	3.97
1 in 30 years (l/s)	10.73	10.73
1 in 100 years (l/s)	14.89	14.89



- NOTES:**
- THIS SURFACE WATER MANAGEMENT STRATEGY (SWMS) SETS OUT THE KEY ASSUMPTIONS AND CONSIDERATIONS THAT HAVE BEEN USED IN THE DESIGN AND INTEGRATION OF SUSTAINABLE DRAINAGE SYSTEMS (SUDS) WITHIN THE DEVELOPMENT PROPOSALS.
 - THE FOLLOWING SITE CONSIDERATIONS HAVE BEEN USED TO PROVIDE THIS PRELIMINARY STRATEGY:
 - TOPOGRAPHICAL SURVEY- GREENHATCH GROUP DRAWING 18422_OGL
 - MASTERPLAN - PLANIT - IE LLP DRAWING PL1461.1-PLA-00-XX-DR-U-0008-S3-P03
 - SUDS ARE TO BE PROVIDED IN ACCORDANCE WITH CIRIA C753 AND TO BE LOCATED OUTSIDE OF POST DEVELOPMENT 1% +CC FLOODPLAIN EXTENTS.
 - ADOPTION AND MAINTENANCE TO BE UNDERTAKEN IN LINE WITH THE LONG TERM MANAGEMENT PLAN SET OUT IN THE FRA.
 - THE FOLLOWING ASSUMPTIONS HAVE BEEN USED IN THE SWMS DESIGN
 - EACH DEVELOPMENT PARCEL HAS BEEN ASSUMED TO BE 60% IMPERMEABLE FOR RESIDENTIAL AREAS AND 80% IMPERMEABLE FOR COMMERCIAL AREAS, WITH A TOTAL IMPERMEABLE AREA OF 39.3 HA
 - NO INFILTRATION POTENTIAL AT SITE
 - LIMITING DISCHARGE RATE OF 4.67l/s/ha (MEAN ANNUAL GREENFIELD RUNOFF RATE) FOR ALL EVENTS UP TO 1% AEP + CLIMATE CHANGE EVENT
 - ALL BASINS AND SWALES INDICATED HAVE A MINIMUM OF 300mm FREEBOARD TO ALLOW FOR ANY RESIDUAL RISK RELATED TO BLOCKAGE OR AN EXTREME RAINFALL EVENT (IN EXCESS OF 1% AEP EVENT)
 - PONDS SIZED ASSUMING A MAX DESIGN WATER DEPTH OF 1.0m AND SIDE SLOPES AT 1:5 IN ACCORDANCE WITH BEST PRACTICE.
 - SURFACE WATER CONVEYED TO AND FROM ATTENUATION BASINS THROUGH A COMBINATION OF SWALES AND PIPED DRAINAGE IN ACCORDANCE WITH THE SUDS MANUAL (CIRIA C753).
 - WATER QUALITY ADDRESSED THROUGH USE OF SWALES AND BASINS ONSITE.
 - DESIGN UNDERTAKEN IN ACCORDANCE WITH BEST PRACTICE & NPPF
 - ADDITIONAL ECOLOGICAL & BIODIVERSITY BENEFITS TO BE PROVIDED WITHIN SUDS SUCH AS PLANTING, REED BEDS, OR VARYING PERMANENT WATER DEPTHS WHERE FEASIBLE
 - EXACT DETAIL OF ONSITE DRAINAGE TO BE CONFIRMED THROUGH DETAILED DESIGN. THIS CAN BE ACHIEVED THROUGH PROVISION OF SWALES, DITCHES, PERMEABLE PAVING OR OTHER FORMS OF SUDS AND IN ACCORDANCE WITH THE SUDS VISION FOR NEW EASTERN VILLAGES (NEV) SUPPLEMENTARY PLANNING DOCUMENT (SPD) - FEBRUARY 2017
 - INLINE NON RETURN CHAMBER SHALL BE FITTED TO ALL OUTFALLS POINTS OF THE ATTENUATION BASINS TO PREVENT BACKFLOW INTO THE BASIN.
 - ALL SUDS DESIGNS WITHIN THE DEVELOPMENT SHALL BE BASED ABOVE THE 1:100 YEAR +CC FLOOD LEVEL.
 - THE FOLLOWING BASIN AND SWALE SIZES HAVE BEEN CALCULATED USING WINDES MICRODRAINAGE FOR EACH OF THE DRAINAGE CATCHMENTS, AS INDICATED ON THE DRAWING.

- KEY:**
- SITE BOUNDARY
 - INDICATIVE LOCATION OF PROPOSED OUTFALL TO RECEIVING WATERCOURSE
 - FLOOD PLAIN EXTENTS 1 IN 100 YEAR + 70% CC
 - FLOOD PLAIN EXTENTS 1 IN 100 YEAR + 35% CC
 - PROPOSED CATCHMENT AREAS
 - INDICATIVE OVERLAND FLOW ROUTES
 - SWALES AND DIRECTION OF FLOW
 - ATTENUATION BASIN
- XREFS:**
 x-OS Data
 x-sw_drainage_strategy
 x-red_line_boundary
 x-Site Topo Survey
 x-pba-100yr-35cc-floodplain
 x-pba-100yr-70cc-floodplain
 x-sw_catchments

BASIN	FOOTPRINT (m ²)	VOLUME PROVIDED (m ³)
1	4,900	3,800
2	3,900	1,700
2a	6,300	5,300
3	3,750	2,600
4	4,200	3,100
4a	2,750	1,700
5	2,500	1,800

SWALE	LENGTH (m)	WIDTH (m)	VOLUME PROVIDED (m ³)
2	205	12	580
3	215	18	1,950
4	370	18	3,390
5	230	10	15
6	370	18	2,520
7	535	18	4,700
8	250	8	100
9	230	18	1,680
10	250	18	1,990
11	42	18	360
13	205	10	480
14	350	90	90
15	345	16	1,680
16	200	13	410
17	560	20	5,140
18	305	12.5	790

Mark	Revision	Date	Drawn	Chkd	Appd

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.


Drawing Issue Status

FOR INFORMATION


LOTMEAD FARM VILLAGES, SWINDON

SURFACE WATER MANAGEMENT STRATEGY

Client		
AINSCOUGH STRATEGIC LAND		
Date of 1st Issue	Designed RP	Drawn RP
01.02.19	RP	RP
A1 Scale	Checked ET	Approved ET
1:5000	ET	ET
Drawing Number	Revision	
27970/4005/001	-	



now part of



peterbrett.com
 © Peter Brett Associates LLP
 BIRMINGHAM
 Tel: 0121 633 2900