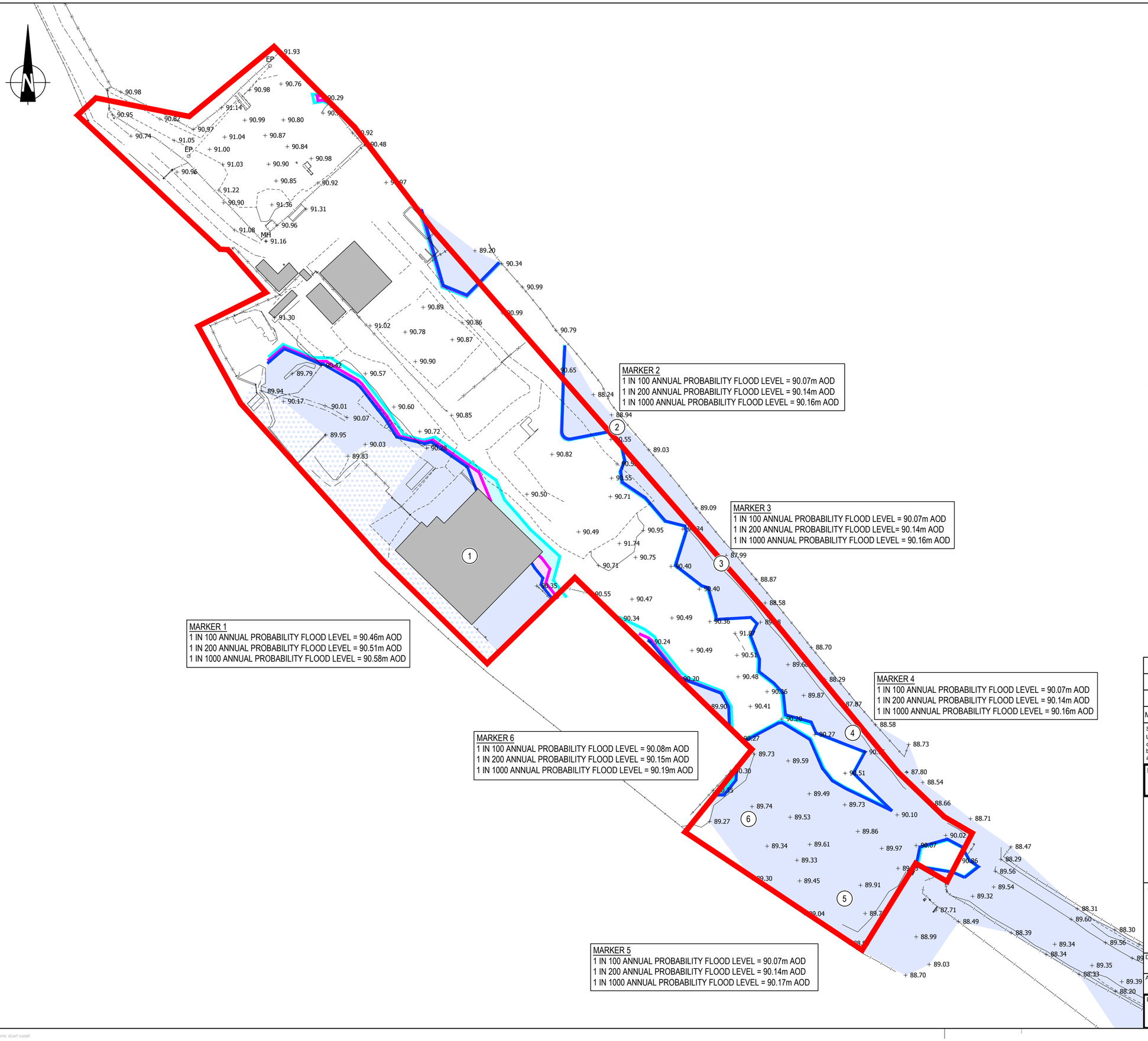



KEY:

- 1 IN 100 (1%) ANNUAL PROBABILITY FLOOD EVENT
- 1 IN 100 (1%) ANNUAL PROBABILITY FLOOD EVENT - ASSUMED AREA OF FLOODING - NO SURVEY AVAILABLE
- 1 IN 200 (0.5%) ANNUAL PROBABILITY FLOOD EVENT
- 1 IN 1000 (0.1%) ANNUAL PROBABILITY FLOOD EVENT
- EXISTING BUILDING FOOTPRINT
- (1) MODELLED LEVEL MARKER
- SITE BOUNDARY (SHOWN INDICATIVELY)

NOTES:

1. TOPOGRAPHIC SURVEY PROVIDED BY GWP DATED FEBRUARY 2013, DRAWING NUMBER BANB1301-1A.
2. MODELLED FLOOD DATA PROVIDED BY ENVIRONMENT AGENCY IN PRODUCT 4 INFORMATION (EA REFERENCE THM_31184, DATED DECEMBER 2016). FURTHER SITE-SPECIFIC LEVELS EXTRACTED FROM EA 'RIVER CHERWELL MODELLING STUDY' (2015) HYDRAULIC MODEL OUTPUTS (PRODUCED FOR THE BANBURY FLOOD ALLEVIATION SCHEME AS-CONSTRUCTED INVESTIGATIONS), PROVIDED BY THE EA AS PRODUCT 6 AND 7 DATA.

| Mark | Revision | Drawn | Date | Chkd |
|---|---|---|---|---|
| | | | | |
| | | | | |
| A | FLOOD LEVELS REVISED TO NEW LEVELS PROVIDED BY EA | smr | 21.09.17 | RF |

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 his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

FOR INFORMATION

# GRUNDON WASTE MANAGEMENT DEPOT, BANBURY

## MODELLED FLOOD EXTENTS - UNDEFENDED SCENARIO

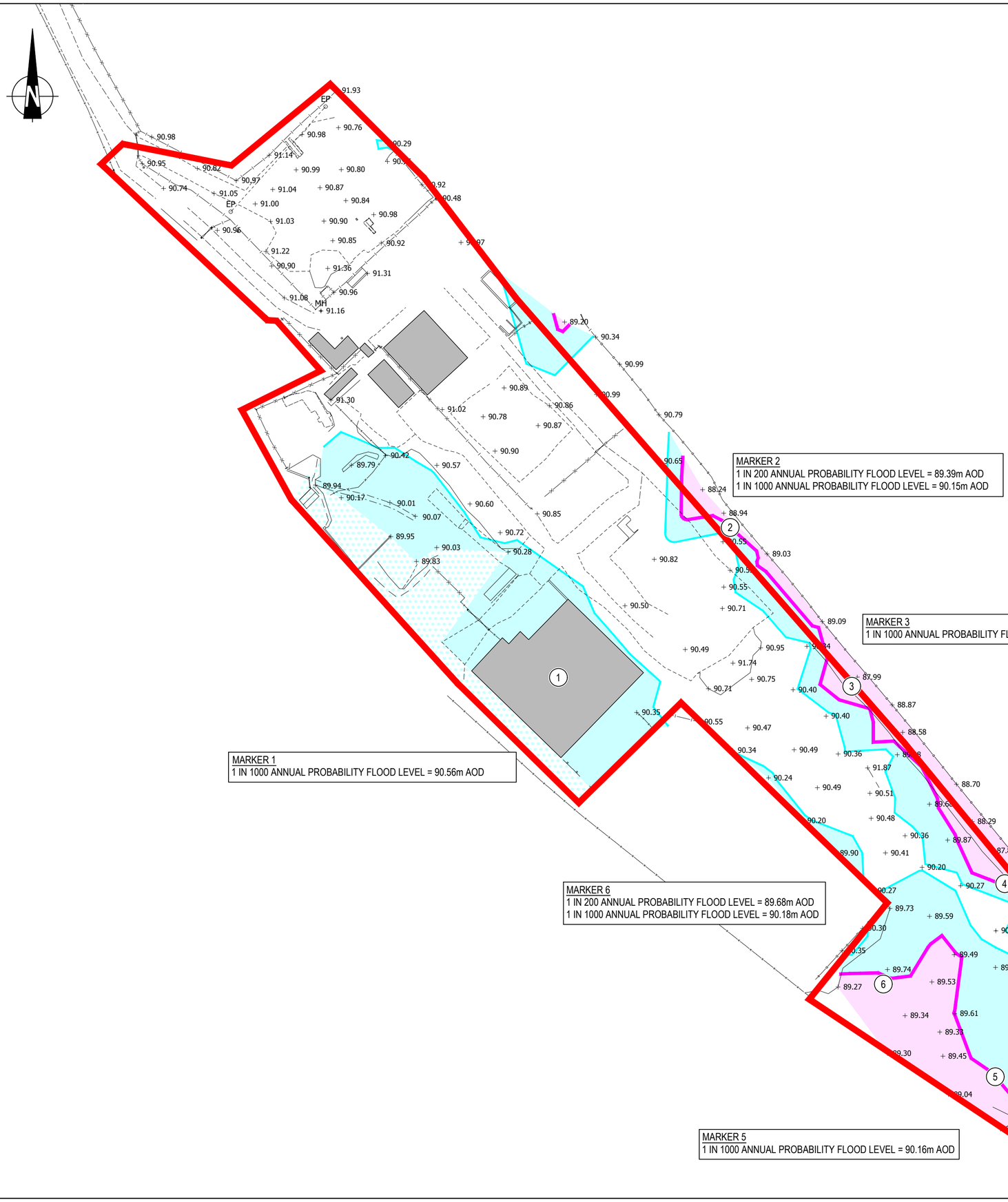
Client: GRUNDON

| | |
|---|---|
| Date of 1st Issue: 16.10.2015 | Drawn by: smr |
| A2 Scale: 1:1000 | Checked by: RF |
| Drawing Number: 33390/4001/001 | Revision: A |


peterbrett
Offices throughout the UK and Europe
www.peterbrett.com



READING
Tel: 0118 950 0761




KEY:

- 1 IN 1000 (0.1%) ANNUAL PROBABILITY FLOOD EVENT
- 1 IN 1000 (0.1%) ANNUAL PROBABILITY FLOOD EVENT - ASSUMED AREA OF FLOODING - NO SURVEY AVAILABLE
- 1 IN 200 (0.5%) ANNUAL PROBABILITY FLOOD EVENT (USED AS PROXY FOR 1 IN 100 + 20% ALLOWANCE FOR CLIMATE CHANGE)
- EXISTING BUILDING FOOTPRINT
- (1) MODELLED LEVEL MARKER
- SITE BOUNDARY (SHOWN INDICATIVELY)

NOTES:

1. TOPOGRAPHIC SURVEY PROVIDED BY GWP DATED FEBRUARY 2013, DRAWING NUMBER BANB1301-1A.
2. MODELLED FLOOD DATA PROVIDED BY ENVIRONMENT AGENCY IN PRODUCT 4 INFORMATION (EA REFERENCE THM_31184, DATED DECEMBER 2016). FURTHER SITE-SPECIFIC LEVELS EXTRACTED FROM EA 'RIVER CHERWELL MODELLING STUDY' (2015) HYDRAULIC MODEL OUTPUTS (PRODUCED FOR THE BANBURY FLOOD ALLEVIATION SCHEME AS-CONSTRUCTED INVESTIGATIONS), PROVIDED BY THE EA AS PRODUCT 6 AND 7 DATA.

| Mark | Revision | Drawn | Date | Chkd |
|---|---|---|---|---|
| | | | | |
| | | | | |
| A | FLOOD LEVELS REVISED TO NEW LEVELS PROVIDED BY EA | smr | 21.09.17 | - |

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 his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

FOR INFORMATION

# GRUNDON WASTE MANAGEMENT DEPOT, BANBURY

## MODELLED FLOOD EXTENTS - DEFENDED SCENARIO

Client: GRUNDON

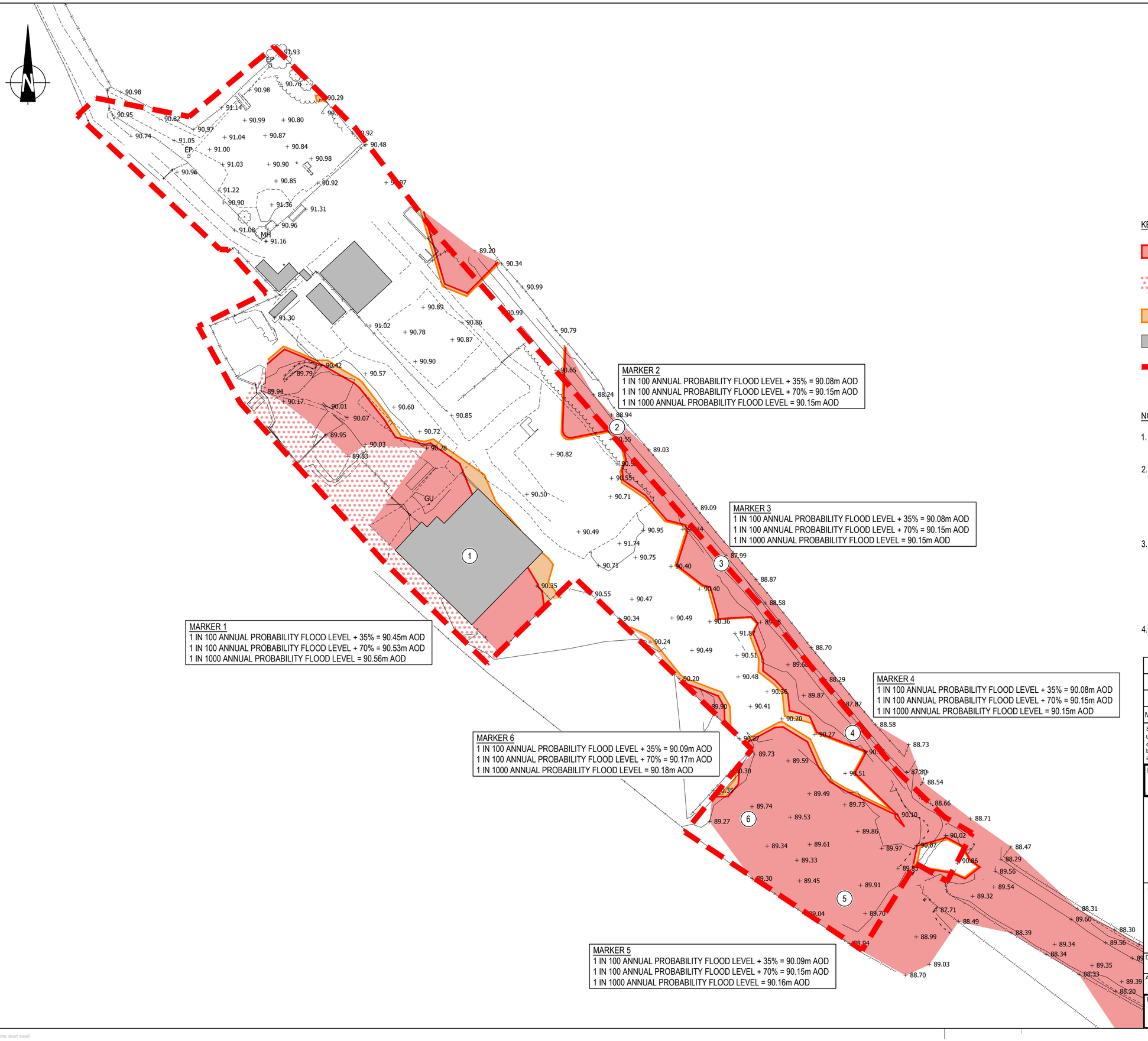
| | |
|---|---|
| Date of 1st Issue: 16.10.2015 | Drawn by: smr |
| A2 Scale: 1:1000 | Checked by: RF |
| Drawing Number: 33390/4001/002 | Revision: A |

peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

READING
Tel: 0118 950 0761



File Location: j:\33390 - grundon depot, banbury\cad\dwgs\33390_4001_002.dwg




KEY:

- 1 in 100 ANNUAL PROBABILITY PLUS 35% ALLOWANCE FOR CLIMATE CHANGE FLOOD EXTENT
- 1 in 100 ANNUAL PROBABILITY PLUS 35% ALLOWANCE FOR CLIMATE CHANGE FLOOD EXTENT - ASSUMED AREA OF FLOODING - NO SURVEY AVAILABLE
- 1 in 100 ANNUAL PROBABILITY PLUS 70% ALLOWANCE FOR CLIMATE CHANGE FLOOD EXTENT
- EXISTING BUILDING OUTLINE
- SITE BOUNDARY (SHOWN INDICATIVELY)
- (1) MODELLED LEVEL MARKER

NOTES:

1. TOPOGRAPHIC SURVEY PROVIDED BY GWP DATED FEBRUARY 2013, DRAWING NUMBER BANB1301-1A.
2. MODELLED FLOOD DATA PROVIDED BY ENVIRONMENT AGENCY IN PRODUCT 4 INFORMATION (EA REFERENCE THM_31184, DATED DECEMBER 2016). FURTHER SITE-SPECIFIC LEVELS EXTRACTED FROM EA 'RIVER CHERWELL MODELLING STUDY' (2015) HYDRAULIC MODEL OUTPUTS (PRODUCED FOR THE BANBURY FLOOD ALLEVIATION SCHEME AS-CONSTRUCTED INVESTIGATIONS), PROVIDED BY THE EA AS PRODUCT 6 AND 7 DATA.
3. EA HYDRAULIC MODEL SUPPLIED AS PRODUCT 6 AND 7 DATA UNDER THE EA CONDITIONAL LICENCE (EA REF: WT19234). EA HYDRAULIC MODEL RE-RUN BY PBA TO GENERATE ASSOCIATED CLIMATE CHANGE ALLOWANCE FLOOD LEVELS BASED ON EA 'FLOOD RISK ASSESSMNETS - CLIMATE CHANGE ALLOWANCES GUIDANCE. MORE VULNERABLE DEVELOPMENT IN FLOOD ZONE 3A, THAMES RIVER BASIN REQUIRES CONSIDERATION OF +35% AND +70%.
4. MODELLED 1 IN 1000 ANNUAL PROBABILITY FLOOD LEVELS PROVIDED FOR INFORMATION (FLOOD EXTENT NOT SHOWN).

| Mark | Revision | Drawn | Date | Chkd |
|---|---|---|---|---|
| | | | | |
| | | | | |
| A | MODELLED FLOOD EXTENTS AMENDED | smr | 21.09.17 | - |

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 his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

# FOR INFORMATION

GRUNDON WASTE MANAGEMENT DEPOT, BANBURY

MODELLED FLOOD EXTENTS

+35% AND +70% CLIMATE CHANGE SCENARIOS

(DEFENDED)

Client

GRUNDON

| | |
|---|---|
| Date of 1st Issue: 09.01.2017 | Drawn by: WAC |
| A2 Scale: 1:1000 | Checked by: RF |
| Drawing Number: 33390/4001/003 | Revision: A |


peterbrett

Offices throughout the UK and Europe

www.peterbrett.com





READING
Tel: 0118 950 0761


## FLOOD COMPENSATION ANALYSIS

| DEPTH BELOW FLOOD LEVEL | EXISTING FLOOD STORAGE (m³) | POST DEVELOPMENT FLOOD STORAGE (EXTERNAL TO BUILDINGS) (m³) | POST DEVELOPMENT FLOOD STORAGE (WITHIN UNDERFLOOR VOIDS) (m³) | NET GAIN (m³) |
|---|---|---|---|---|
| 0-100mm | 1011.3 | 953.9 | 205.6 | + 148.2 |
| 100-200mm | 785.1 | 775.5 | 168.6 | + 159 |
| 200-300mm | 597.2 | 639.3 | 83.7 | + 125.8 |
| 300-400mm | 469.1 | 530.1 | 19.9 | + 80.8 |
| 400-500mm | 340.9 | 386.8 | 0 | + 45.9 |
| 500-600mm | 235.1 | 242.3 | 0 | + 7.2 |
| 600-700mm | 174.1 | 175.4 | 0 | + 1.3 |
| 700-800mm | 126.3 | 129.3 | 0 | + 3 |
| 800-900mm | 75.1 | 78.0 | 0 | + 2.9 |
| 900-1000mm | 54.3 | 56.8 | 0 | + 2.5 |
| | | | TOTAL GAIN (m³) | + 576.4 |

KEY:

- PROPOSED BUILDING OUTLINE
- + 90.32 — PROPOSED BUILDING OUTLINE - WITH UNDERFLOOR VOIDS
- EXISTING BUILDING TO BE REMOVED
- PROPOSED GROUND LOWERING
- + 90.32 — PROPOSED GROUND LEVEL
- SITE BOUNDARY (SHOWN INDICATIVELY)

NOTES:

1. FOR THE PURPOSES OF THE FLOOD COMPENSATION CALCULATIONS, ALL BUILDINGS INCORPORATING UNDERFLOOR VOIDS (SHOWN WITH A PROPOSED GROUND LEVEL - SEE KEY) ARE ASSUMED TO HAVE 10% SOLID COLUMNS/SUPPORTS AND 90% VOIDS.

| 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**

# GRUNDON WASTE MANAGEMENT DEPOT, BANBURY

## PROPOSED FLOOD COMPENSATION

Client: GRUNDON

| Date of 1st Issue | Designed | Drawn |
|---|---|---|
| 22.09.2017 | - | smr |
| **A2 Scale** | **Checked** | **Approved** |
| 1:1000 | RF | - |
| **Drawing Number** | | **Revision** |
| 33390/4001/004 | | - |

pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

READING
Tel: 01189 500 761

## CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015 (CDM REGULATIONS 2015)

THE PROPOSED CONCEPTUAL FLOOD RISK MITIGATION MEASURES ARE BASED ON THE FOLLOWING INFORMATION AVAILABLE AT THE TIME:

- TOPOGRAPHIC SURVEY PROVIDED BY GWP, DRAWING No. BANB1301-1A DATED FEBRUARY 2013.
- FLOOD LEVEL DATA PROVIDED BY ENVIRONMENT AGENCY IN PRODUCT 4 INFORMATION (EA REFERENCE THM_31184, DATED DECEMBER 2016). FURTHER SITE-SPECIFIC LEVELS EXTRACTED FROM EA 'RIVER CHERWELL MODELLING STUDY' (2015) HYDRAULIC MODEL OUTPUTS (PRODUCED FOR THE BANBURY FLOOD ALLEVIATION SCHEME AS-CONSTRUCTED INVESTIGATIONS), PROVIDED BY THE EA AS PRODUCT 6 AND 7 DATA.
- PROPOSALS TAKEN FROM JSA, DRAWING No. GMSB PL-115, DATED JANUARY 2017.

AT THIS CONCEPT DESIGN STAGE IT HAS NOT BEEN POSSIBLE TO ELIMINATE ALL THE HEALTH AND SAFETY RISKS AND RESIDUAL RISKS TO THE PROPOSED GROUND WORKS, FOR EXAMPLE, IN RELATION TO THE LOCATION OF UNDERGROUND UTILITIES, GROUND CONDITIONS AND SLOPE STABILITY. SUCH RESIDUAL RISKS NEED TO BE MITIGATED AGAINST BY THE CLIENT AND COMMUNICATED TO FUTURE DESIGN TEAMS SO THAT AN ATTEMPT CAN BE MADE TO DESIGN THEM OUT AS THE DETAILED DESIGN IS PROGRESSED AND SITE CONSTRAINTS ARE FULLY UNDERSTOOD. ANY RISKS THAT ARE NOT DESIGNED OUT DURING THE DETAILED DESIGN STAGE MUST BE COMMUNICATED FURTHER TO THE CONSTRUCTION TEAM AND END USER SO THAT ADEQUATE MITIGATION MEASURES CAN BE PLANNED FOR AND MANAGED.

# TECHNICAL NOTE

**Job Name:** Grundon waste management depot, Banbury

**Job No:** 33390/4002

**Note No:** TN001

**Date:** 02/10/2017

**Prepared by:** S Bari

**Subject:** **Updated Climate Change modelling**

| Item | Subject |
|---|---|
| 1. | **Introduction**<br><br>Peter Brett Associates LLP (PBA) has been commissioned by Grundon Waste Management Ltd. to support a planning application for the redevelopment of their waste management depot, in Banbury, Oxfordshire.<br><br>This note details the updates to the current Environment Agency (EA) hydraulic model to incorporate the EA's updates to climate change allowances for fluvial flow from February 2016. The modelled flood levels from the updated model will be used to inform an update to PBA's Flood Risk Assessment (FRA) for the site from October 2015. |
| 2. | **Site Location**<br><br>The site covers 3.05 Hectares (ha.) and is located on the southeast edge of Banbury, east of the Chiltern mainline railway line and to the immediate south east of Banbury Train Station (Figure 2.1). The railway line lies between the site and the River Cherwell, which flows northwest to southeast and is approximately 230 m to the southwest of the site at its nearest point.<br><br>Parts of the site have been historically used as a gas works and concrete/ cement plant, but the site is currently operated by Grundon as a Refuse and Waste collection depot. The site comprises mainly of hard standing and scrubland but there are also offices, warehouses and workshops on the site. |

**DOCUMENT ISSUE RECORD**

| Technical Note No | Rev | Date | Prepared | Checked | Reviewed (Discipline Lead) | Approved (Project Director) |
|---|---|---|---|---|---|---|
| 33390/4002/TN001 | - | 02/10.17 | S Bari | T. Hughes | R Fisher | |


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

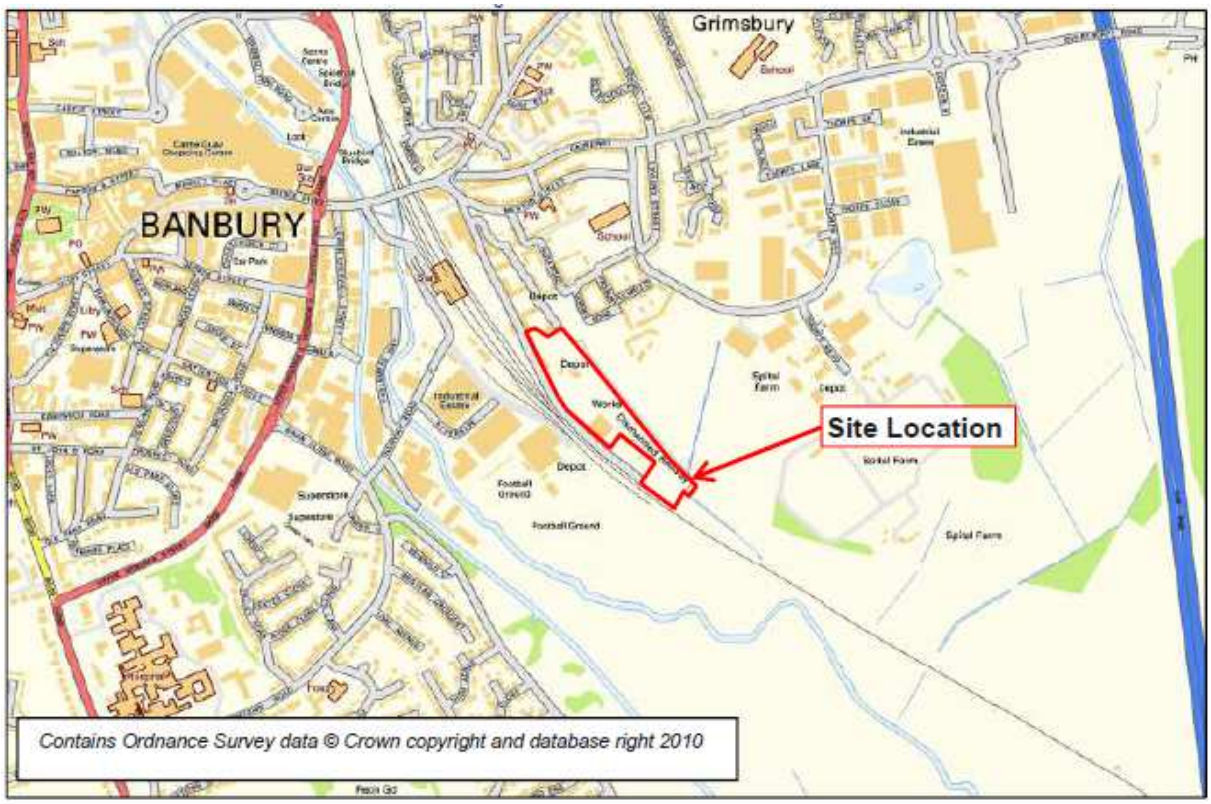



Figure 2.1: Site Location

| | |
|---|---|
| 3. | **Existing EA Data**<br><br>PBA acquired Product 7 data (Calibrated and Verified Model Input Data (CaVMID)) from the EA.<br><br>The Product 7 data included the 2005, 2011 and November 2015 hydraulic models.<br><br>The November 2015 model study was undertaken to update the flood mapping along the River Cherwell to include the Banbury Flood Alleviation Scheme (FAS) and was undertaken for the following events;<br><br>• 1 in 2 (50%) Annual Probability (AP)<br>• 1 in 5 (20%) AP<br>• 1 in 20 (5%) AP<br>• 1 in 30 (3.3%) AP<br>• 1 in 75 (1.3%) AP<br>• 1 in 100 (1%) AP<br>• 1 in 200 (0.5%) AP<br>• 1 in 500 (0.2%) AP<br>• 1 in 1000 (0.1%) AP<br>• 1 in 100 (1%) AP plus 20% fluvial flow for climate change and;<br>• 1 in 200 (0.5%) AP plus 20% fluvial flow for climate change<br><br>For defended and undefended scenarios.<br><br>The undefended scenario removed the following embankments and walls (set to ground levels from LiDAR.<br><br>• Tramways industrial estate embankment<br>• Wildmere industrial estate embankment |

| | |
|---|---|
| | • FSA (Banbury Flood Storage Area) embankment<br>• Print Works Wall (Haslemere Way) and<br>• Hanwell Fields defence<br><br>Control structures on the FSA were also removed (Huscote and Hardwick).<br>Moorfield Pumping Station removed which was described as allowing free flow of water between the River Moorwell and Moorfield.<br><br>The model was not considered suitable for use below the football ground which is located to the southwest of the site on the opposite bank of the River Cherwell. Consequently, it is regarded that the site is within the useable area of the model, and considered suitable for assessing flood risk at the site (Figure 3.1). |

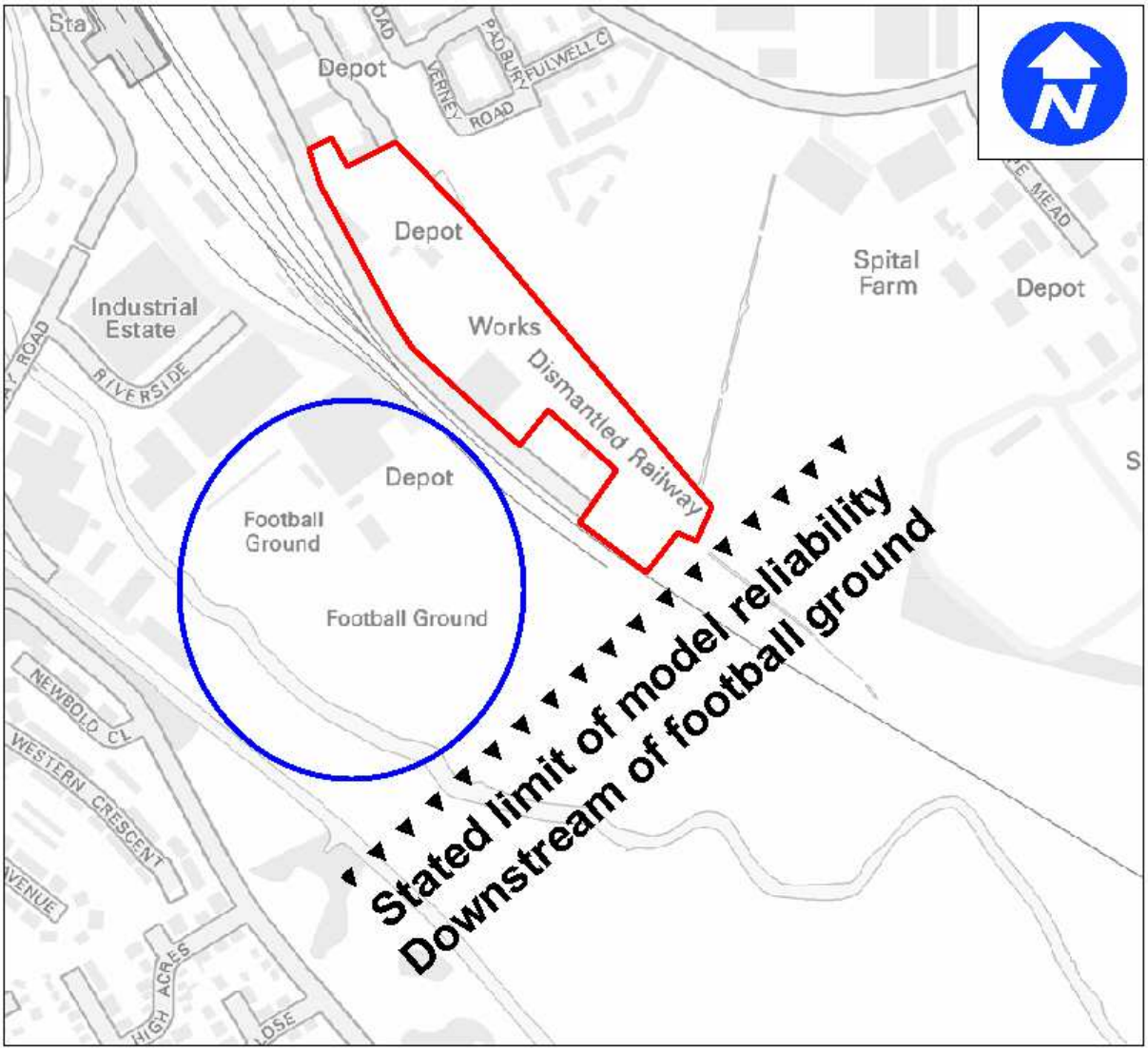





Figure 3.1: Limit of model reliability - downstream of football ground (blue circle)

| | |
|---|---|
| 4. | **Updated Climate Change Guidance**<br><br>The EA River Cherwell (Banbury) model (2015) used a 20% allowance to fluvial flows for climate change, which was the allowance applied nationally at the time the EA modelling was undertaken.<br><br>The EA updated their climate change allowance guidance in February 2016. The new guidance provides a range of allowances (described as 'Central', 'Higher Central' and 'Upper End' categories) which are to be considered. The use of each 'allowance' varies according to location (River Basin District and Flood Zone), proposed vulnerability use and lifetime of development.<br><br>The proposed development at the site is a change of use from the existing 'Less Vulnerable' uses to 'More Vulnerable' uses.<br><br>The site is located in Flood Zone 1 and the River Cherwell is located in the Thames River Basin district.<br><br>The appropriate climate change lifetime for the proposed development is to the year 2115.<br><br>Consequently, the appropriate climate change allowances to consider for the site are 35% ('Higher Central') and 70% ('Upper End'). |
| 5. | **Updates to the EA Model**<br><br>PBA have rerun the EA model with the updated climate change allowances. No changes were made to the model other than updating the inflows to accommodate the new climate change flows.<br><br>The existing EA model is an ISIS-TUFLOW model. The inflows to the model were spread across both the ISIS and TUFLOW models, with four inflows included in the 1d ISIS event files (.ief) and three inflows in the 2d TUFLOW bc_dbase. All the inflows in the model were read in as QT boundaries.<br><br>Figure 5.1 shows the 1d hydrographs from the 1 in 100 AP model.<br><br>Figure 5.2 shows the 2d hydrographs from the 1 in 100 AP model |

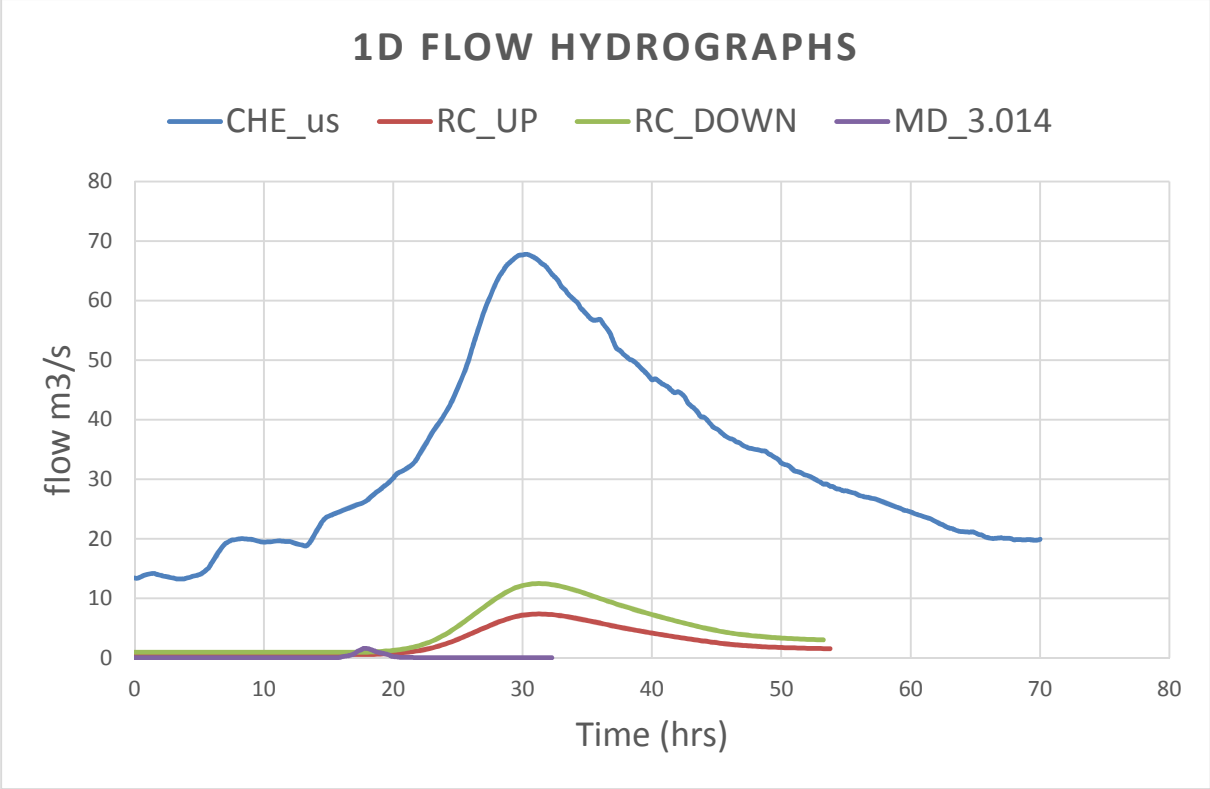



Figure 5.1: 1 in 100 AP 1d hydrographs from EA model

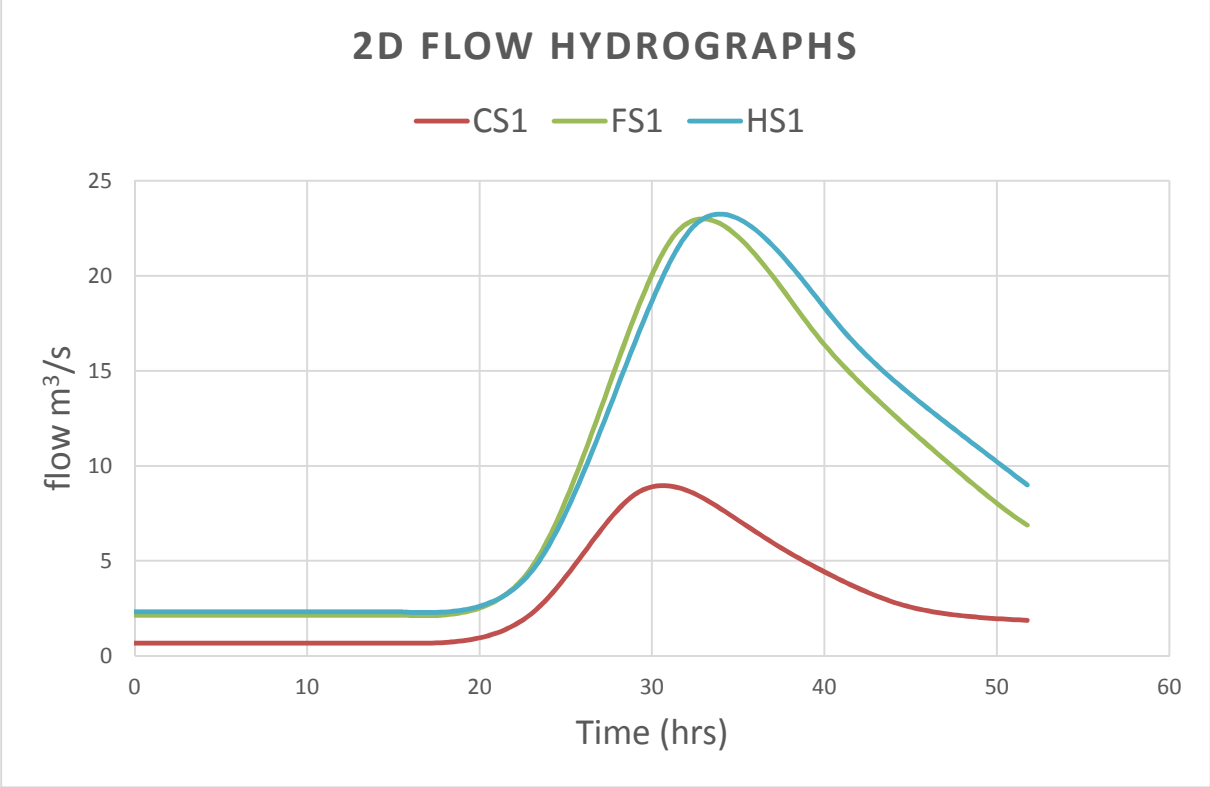



Figure 5.2: 1 in 100 AP 2d hydrographs from EA model

| | |
|---|---|
| | Comparison of the existing EA model runs for the 1 in 100 AP and 1 in 100 AP plus 20% climate change models indicated that the model inflows were scaled linearly and consequently the flows for the 'Higher Central' +35% and 'Upper End' +70%. |

| | |
|---|---|
| | The scaled peak inflows used in the model are in Table 5.1.<br><br>The climate change inflows are all within the range of flows modelled by the EA 1 in 1000 AP event except for inflow MD_3.014 which is 0.43 m3/s smaller than the 1 in 100 AP plus 70% climate change event. The PBA scaled climate change flows are considered consistent with those generated for the EA study. |

Table 5.1: Scaled inflows

| | 1 in 100 AP (EA) | 1 in 100 AP plus 20% (EA) | Scale factor | 1 in 100 AP plus 35% (PBA) | Scale factor | 1 in 100 AP plus 70% (PBA) | Scale factor | 1 in 1000 AP (EA) |
|---|---|---|---|---|---|---|---|---|
| CHE_us | 67.84 | 81.41 | 1.2 | 91.58 | 1.35 | 115.33 | 1.7 | 136.2 |
| RC_UP | 7.38 | 8.86 | 1.2 | 9.96 | 1.35 | 12.55 | 1.7 | 12.70 |
| RC_DOWN | 12.5 | 15 | 1.2 | 16.88 | 1.35 | 21.25 | 1.7 | 21.86 |
| MD_3.014 | 1.61 | 1.93 | 1.2 | 2.17 | 1.35 | 2.74 | 1.7 | 2.31 |
| CS1 | 8.97 | 10.76 | 1.2 | 12.11 | 1.35 | 15.25 | 1.7 | 18 |
| FS1 | 23 | 27.6 | 1.2 | 31.05 | 1.35 | 39.1 | 1.7 | 59.75 |
| HS1 | 23.26 | 27.91 | 1.2 | 31.40 | 1.35 | 39.54 | 1.7 | 63.5 |

| | |
|---|---|
| | No other changes were made to the EA model files by PBA. |
| 6. | **Model Runs**<br><br>The PBA models were run using ISIS version 3.7.1 the original EA models were run in version 3.6.5. this change in ISIS version is considered to have a negligible impact to the model.<br><br>The PBA model used TUFLOW version 2013-12-AD-iSP-w64 which is the same as the EA 2015 model.<br><br>The 1d ISIS model convergence plots indicated that the ISIS model demonstrated good convergence throughout most of the model run (Figures 6.1).<br><br>Figure 6.2 shows the convergence plots from the EA 1 in 100 AP plus 20% and 1 in 1000 AP events. The new climate change convergence plots are comparable to the EA plots and are considered stable. |

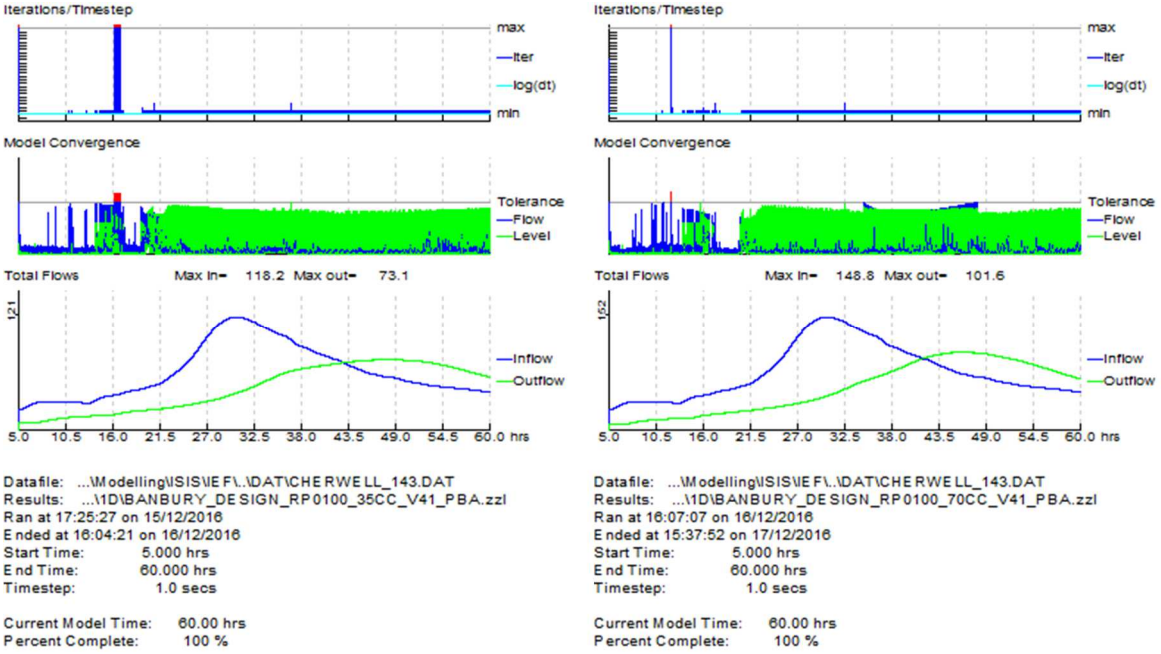



Figure 6.1: ISIS convergence plots for 1 in 100 AP plus 35% (left) and 70% (right) climate change runs

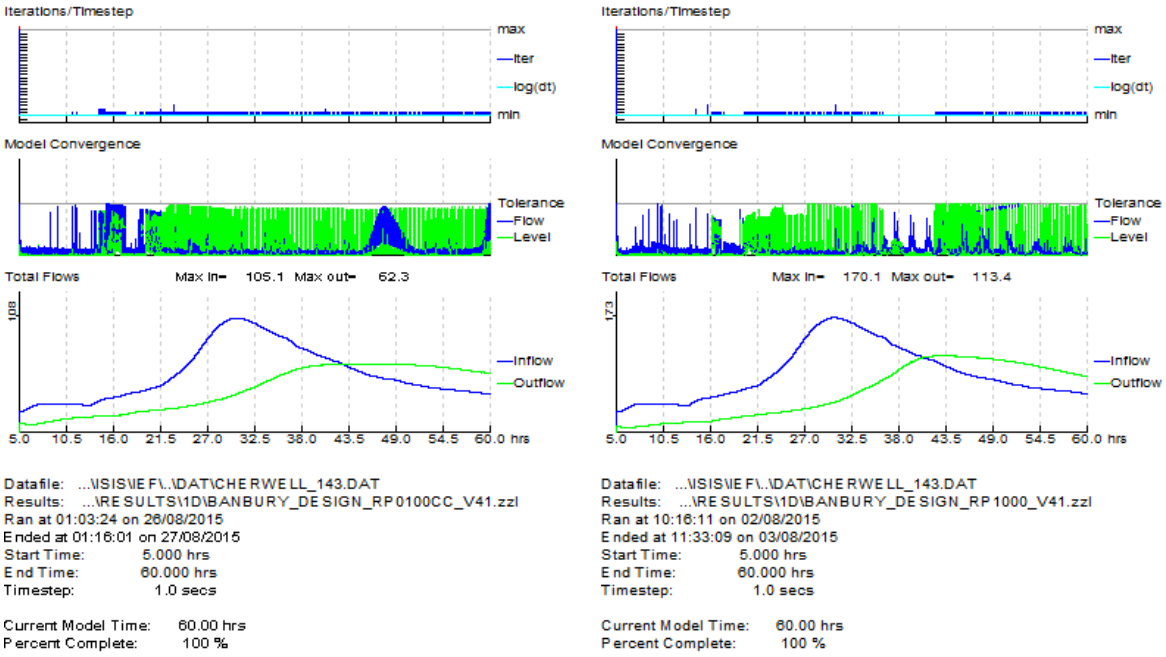



Figure 6.2: ISIS convergence plots for EA 1 in 100 AP plus 20% (left) and 1 in 1000 AP (right) runs

| | |
|---|---|
| | The 2d TUFLOW Mass Balance in the model was also within the +/- 1% tolerance for an acceptable model (Figure 6.2).<br><br>Figure 6.3 shows the EA model Mass Balance plots for the 1 in 100 AP plus 20% and 1 in 1000 AP events. The Mass Balance plots are comparable with the PBA model. |

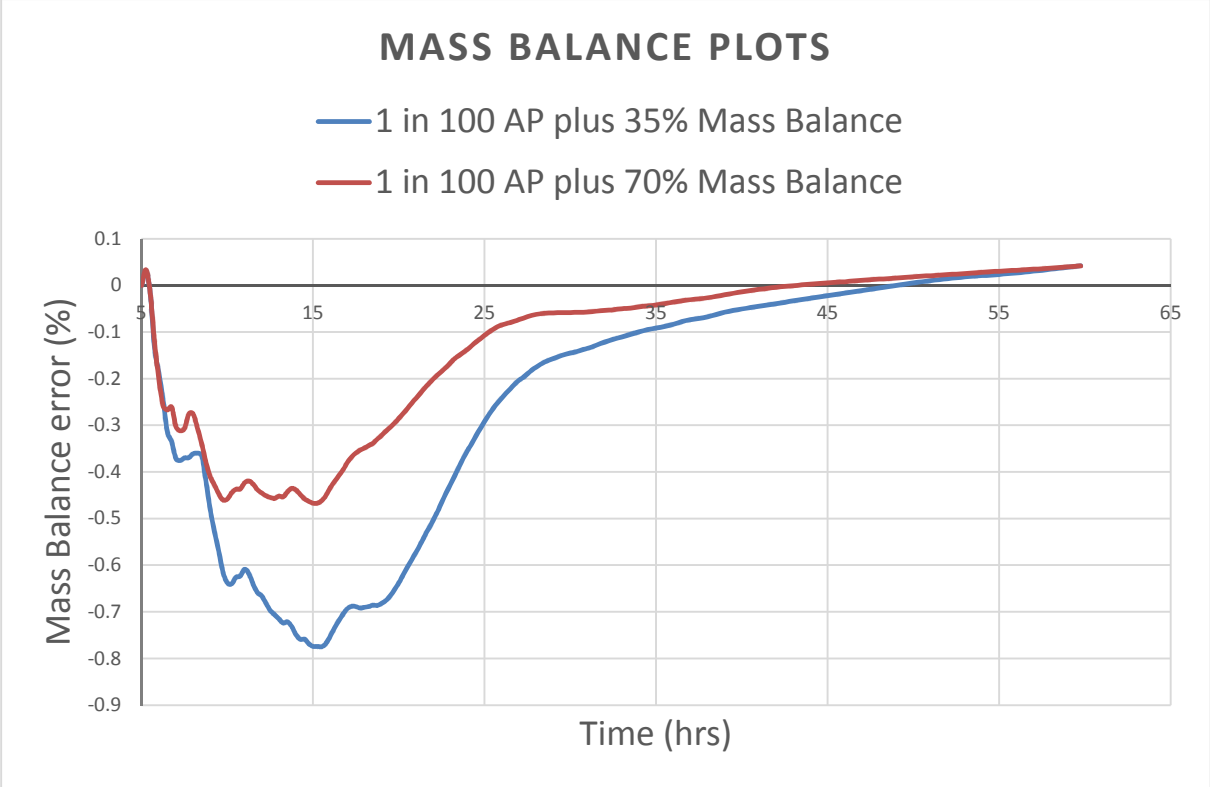



Figure 6.2: PBA Mass Balance plots

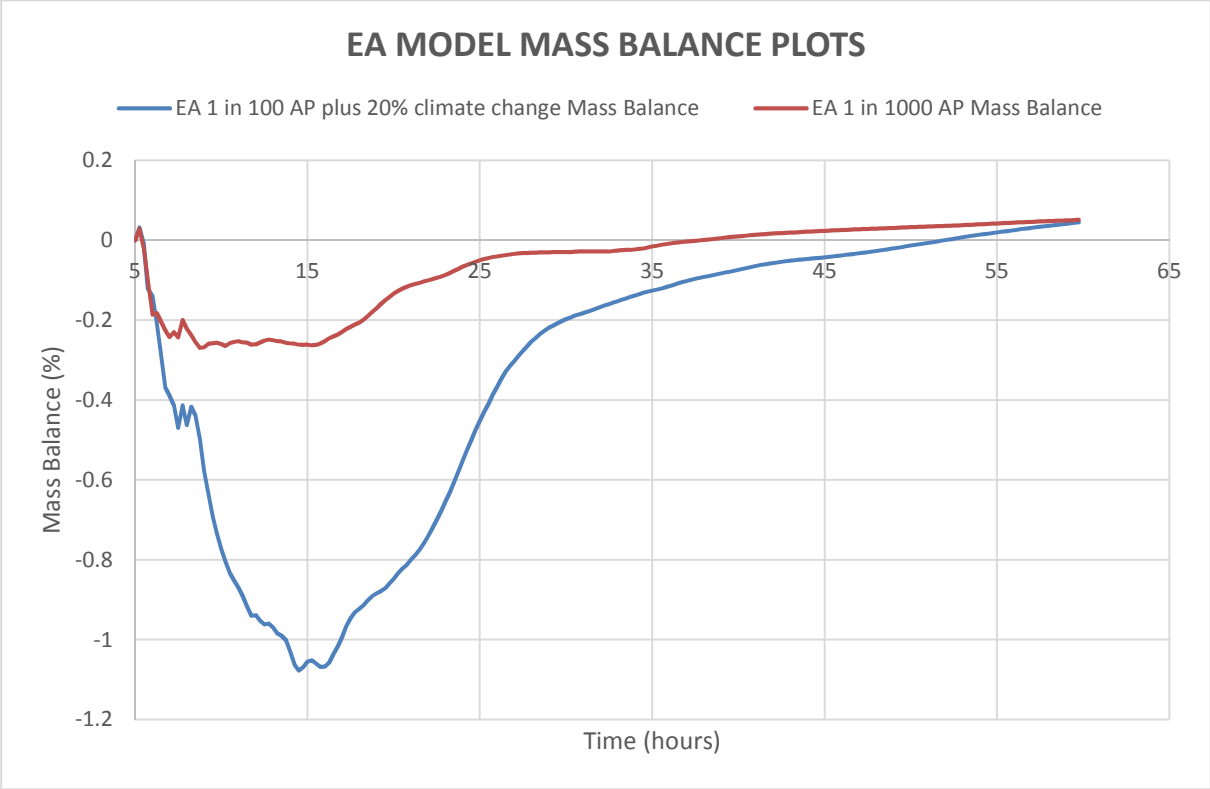



Figure 6.3: EA Mass Balance plots

| | |
|---|---|
| 7. | **Results**<br><br>the modelled flood extents for the 1 in 100 AP plus 35% and 70% climate change |

| | |
|---|---|
| | events are shown in Figures 7.1 and 7.2. |

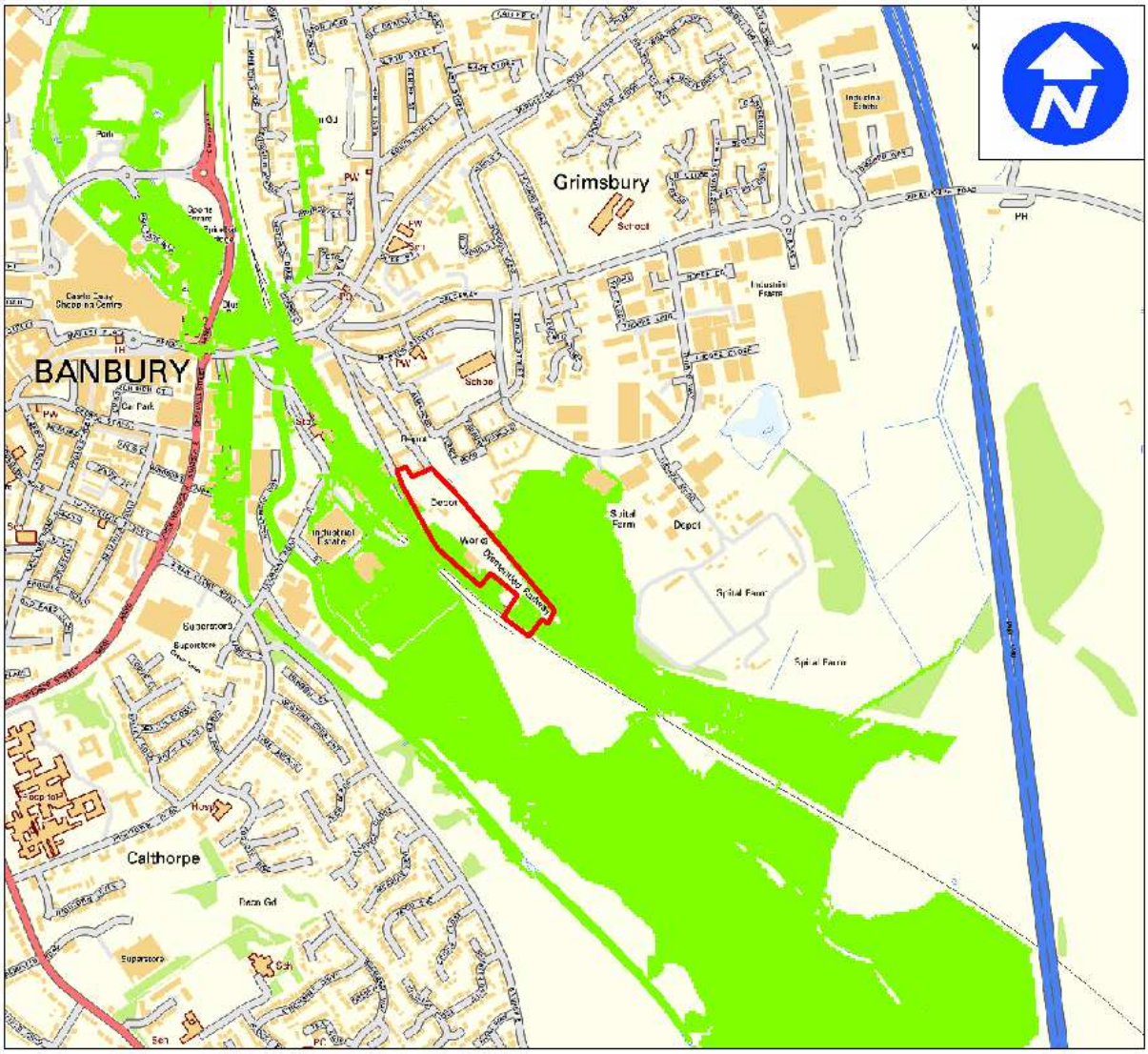





Figure 7.1: 1 in 100 AP plus 35% flood extent

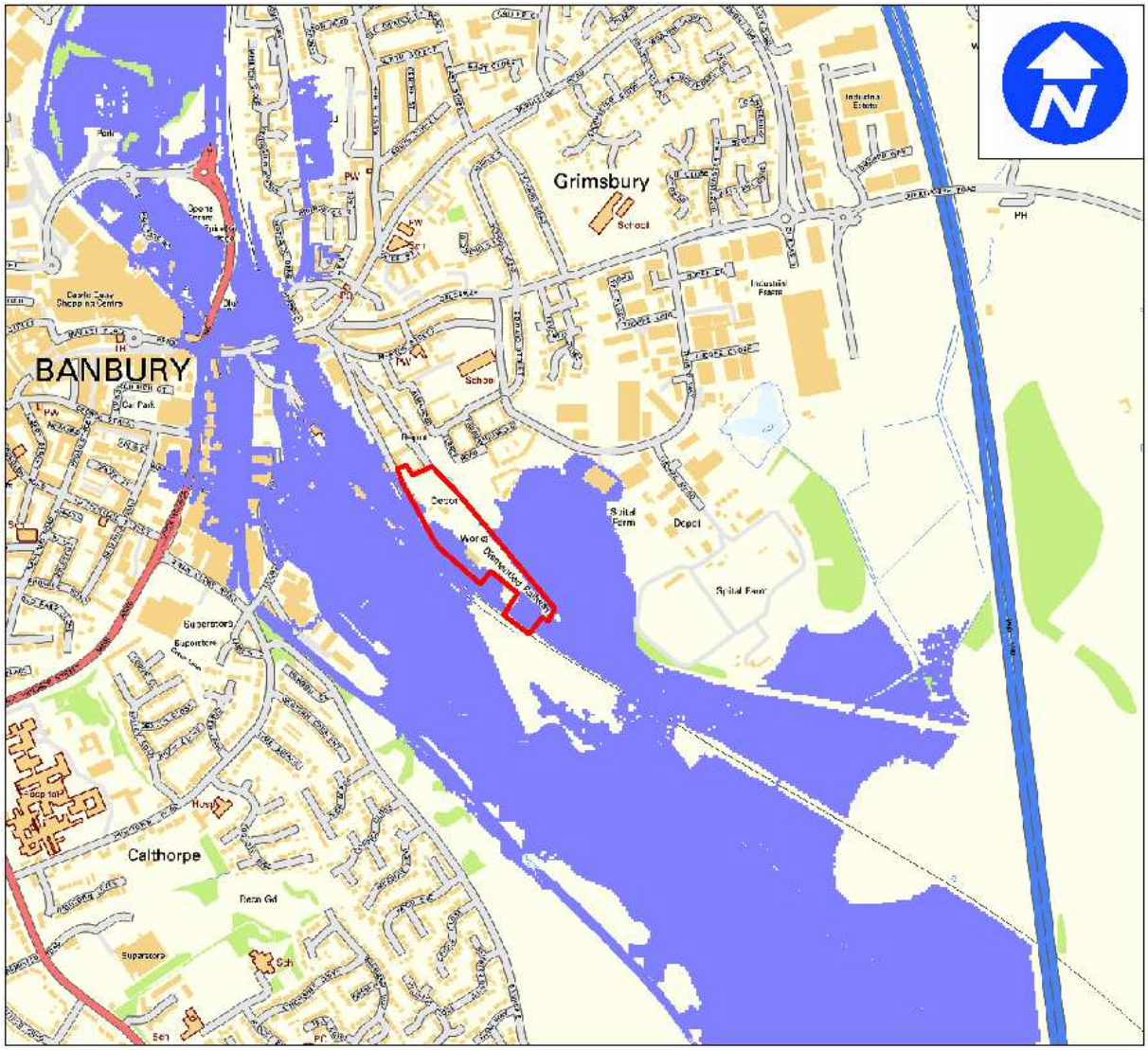
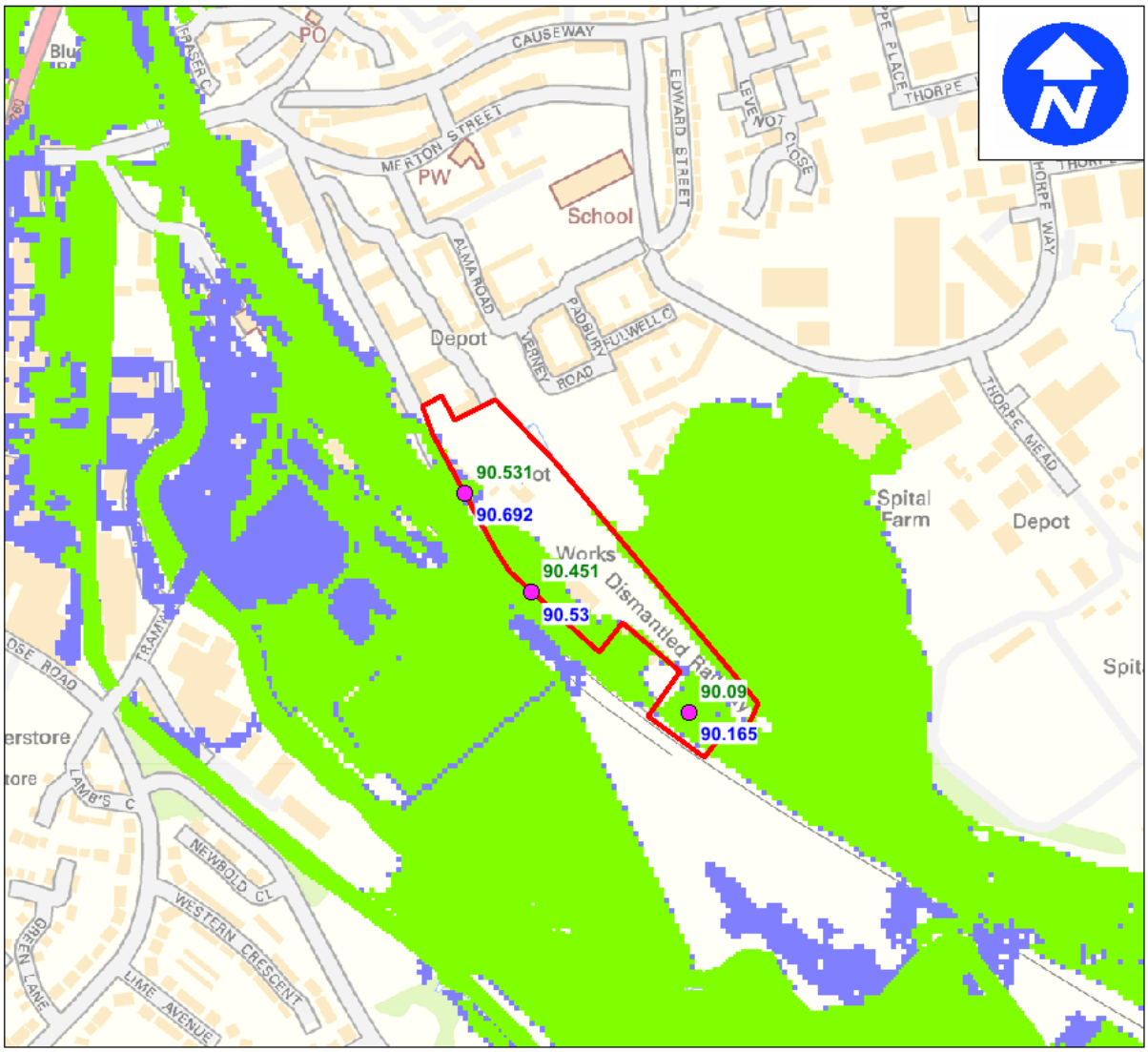





Figure 7.2: 1 in 100 AP plus 70% flood extent

| | |
|---|---|
| | Flood levels were extracted at various locations for use in updating the existing PBA Flood Risk Assessment (October 2015), these are shown in Figure 7.3. |




Contains Ordnance Survey data © Crown copyright and database right 2010

Figure 7.3: PBA modelled spot levels for 1in 100 AP plus 35% (green) and 70% (blue)

| | |
|---|---|
| 8. | **Summary**<br><br>PBA has updated the EA model of the River Cherwell (2015) to include the impacts of the updated EA climate change guidance from February 2016.<br><br>Only changes to the base EA model are the updates to the model hydrology to include the 'Higher Central' (35%) and 'Upper End' (70%) climate change allowances to 2115.<br><br>PBA linearly scaled the model inflows for the 1 in 100 AP event by 1.35 and 1.7 to obtain the 35% and 70% climate change events. This method is in line with the existing EA model which scaled the1 in 100 AP by 1.2 to obtain the inflows for the 1 in 100 AP plus 20% event included in the existing EA model.<br><br>The model was run using an updated version of ISIS but the change in version is considered to have a negligible impact to the model results.<br><br>The model used the same version of TUFLOW as changes in the TUFLOW version |

| | |
|---|---|
| | can result in large differences between models.<br><br>Flood extents and levels were extracted from the model for the Grundon Waste Management site in Banbury for use in an update to the original Flood Risk Assessment for the site. |