

# Technical Note

<b>Job Ref:</b>	01C500376	<b>Client:</b>	Jelson Homes Limited
<b>Site:</b>	Sherborne Road, Burbage, Leicestershire	<b>Site Visit:</b>	Not applicable
<b>Prepared by:</b>	David Hoppe BSc MCIWEM C.WEM FRGS MEPS Director – Flood Risk	<b>Date of Note:</b>	30/06/2025
<b>Reviewed and Authorised by:</b>	Geraldine Horner BEng CEng MICE Director – Engineer		

## INTRODUCTION

This Technical Note provides a technical response required to satisfy Condition 19 of planning application ref: 23/00673/OUT which is summarised below.

## CONDITION 19

Condition 19 (Flood Risk Modelling) – No approval of reserved matters shall take place until such time as the following details have been submitted to, and approved in writing by the Local Planning Authority. Any subsequent design must be carried out in accordance with these approved details:

- *Modelling updated to reflect upper end climate change allowance for both the proposed and existing scenarios.*
- *Full details of flood compensation areas supported by revised modelling, unless modelling/layout demonstrates that compensation is not required*
- *Details demonstrating finished floor levels are set at least 300mm above the modelled 1 in 100 year plus upper end climate change allowance.*
- *Full consideration of source control SuDS*

## BACKGROUND

Avison Young produced a full Flood Risk Assessment and Drainage Strategy to support the planning application ref: 23/00673/OUT in June 2023 (report reference 01C000075). JBA Consulting provided the supporting hydraulic flood modelling.

To satisfy Condition 19, JBA Consulting were appointed in April 2025 to undertake the necessary flood modelling works required to satisfy the condition. A full copy of their report is appended to this letter. However, we have summarised their findings below.

## MODELLING RESULTS

JBA Consulting has undertaken the flood modelling which confirms that Condition 19 has been satisfied.

CONDITION 19	Response
<ul style="list-style-type: none"> <li><i>Modelling updated to reflect upper end climate change allowance for both the proposed and existing scenarios.</i></li> </ul>	<p>Baseline and post development modelling up to and including the 1% AEP plus climate change (60%) event concludes that, with additional proposed measures of raised banks to the existing watercourse and a flood storage area, the flood risk to the proposed development area where dwellings are proposed has been removed. The 60% climate change figure reflects the upper end allowance as required by the condition.</p>
<ul style="list-style-type: none"> <li><i>Full details of flood compensation areas supported by revised modelling, unless modelling/layout demonstrates that compensation is not required</i></li> </ul>	<p>A full engineering design for the raised banks and flood storage area has been completed to support the hydraulic modelling for the site and these drawings are provided in Appendix B. The post development modelling shows that the water is now contained within the flood storage area during the 1% AEP plus climate change (60%) event. Further compensation is not required as there is no loss in floodplain capacity and the impact assessment shows betterment to third-party flood risk.</p>
<ul style="list-style-type: none"> <li><i>Details demonstrating finished floor levels (ffl) are set at least 300mm above the modelled 1 in 100 year plus upper end climate change allowance</i></li> </ul>	<p>Maximum water levels during the 1% AEP plus climate change (60%) event for the post-developed scenario are detailed within this technical note. Finished floor levels should be set 300mm above these levels. Please see JBA's Technical Note, Appendix B, Post Developed Engineering Drawings.</p>
<ul style="list-style-type: none"> <li><i>Full consideration of source control</i></li> </ul>	<p>Introduction of permeable paving to all private roadways and shared driveways. Proposals already in place for Hydrobrake, flow control units to be installed downstream of all detention basins and attenuation ponds. These measures combined will ensure source control of surface water runoff from the proposed development.</p>

A copy of JBA Consulting's technical note with a full engineering design for the raised banks and flood storage area are provided in **Appendix A**.

## CONCLUSION

To satisfy Condition 19 of planning application 23/00673/OUT, JBA Consulting were commissioned by Jelson Homes Limited to update their hydraulic flood model and address the specific details of the condition.

The hydraulic modelling has been updated and a full engineering design for the raised banks and flood storage areas has been completed. Finished floor levels should be set 300mm above the 1 in 100-year plus 60% climate change post development scenario as presented in the supporting technical drawings appended to this note. The proposed scheme has given full consideration to source control including the introduction of permeable paving to all private roadways and shared driveways.

We consider the above works satisfy the requirements of Condition 19.

## **Appendix I**

JBA Consulting Technical Note and Supporting Drawings

JBA Project Code	2025s0355
Contract	Sherborne Rd Burbage Condition 19
Client	Jelson Homes Ltd
Day, Date and Time	26 June 2025
Author	Gwyn Jones
Reviewer / Sign off	John Panesar BEng (Hons) CEng MICE
Subject	Hydraulic Modelling Technical Note

## 1 Terms of Reference

JBA Consulting (JBA) were commissioned by Jelson Homes Ltd to provide flood risk support in relation to the discharge of planning Condition 19 at Sherborne Road, Burbage, Leicestershire (hereafter referred to as 'the site').

JBA provided hydraulic modelling support to the original planning application for the site in 2021, in which Option 4 was taken forward and supported the planning application submission (ref: 23/00673/OUT). The modelling was approved in July 2023 and planning approval was granted by Hinckley and Bosworth Borough Council.

The following planning condition was attached to the planning approval and this document provides further information to discharge this condition:

Condition 19 (Flood Risk Modelling) – No approval of reserved matters shall take place until such time as the following details have been submitted to, and approved in writing by the Local Planning Authority. Any subsequent design must be carried out in accordance with these approved details:

- a) Modelling updated to reflect upper end climate change allowance for both the proposed and existing scenarios.
- b) Full details of flood compensation areas supported by revised modelling, unless modelling/layout demonstrates that compensation is not required
- c) Details demonstrating finished floor levels are set at least 300mm above the modelled 1 in 100 year plus upper end climate change allowance.
- d) Full consideration of source control SuDS

This technical note has been prepared to demonstrate that the revised post-development layout complies with the above requirements.

An engineering design has been completed to support the modelling with full details of the proposed embankments and flood storage area works, which should be reviewed in conjunction with this technical note.

## 2 Site Overview

### 2.1 Site Description

The site is located on current agricultural land on the south-eastern outskirts of Burbage, Leicestershire. An unnamed ordinary watercourse, which is a headwater of the Soar Brook, itself a tributary of the River Soar, flows along the southern boundary of the site. An additional tributary crosses from the northwest boundary of the site through the centre to meet the main channel at the southern boundary. A drainage ditch runs parallel to and 100m to the north of the main watercourse and confluences with the unnamed tributary. This ditch is modelled in the 2D only. An overview of the site, along with the watercourses and extents included within the supporting hydraulic modelling, is provided in Figure 2-1.

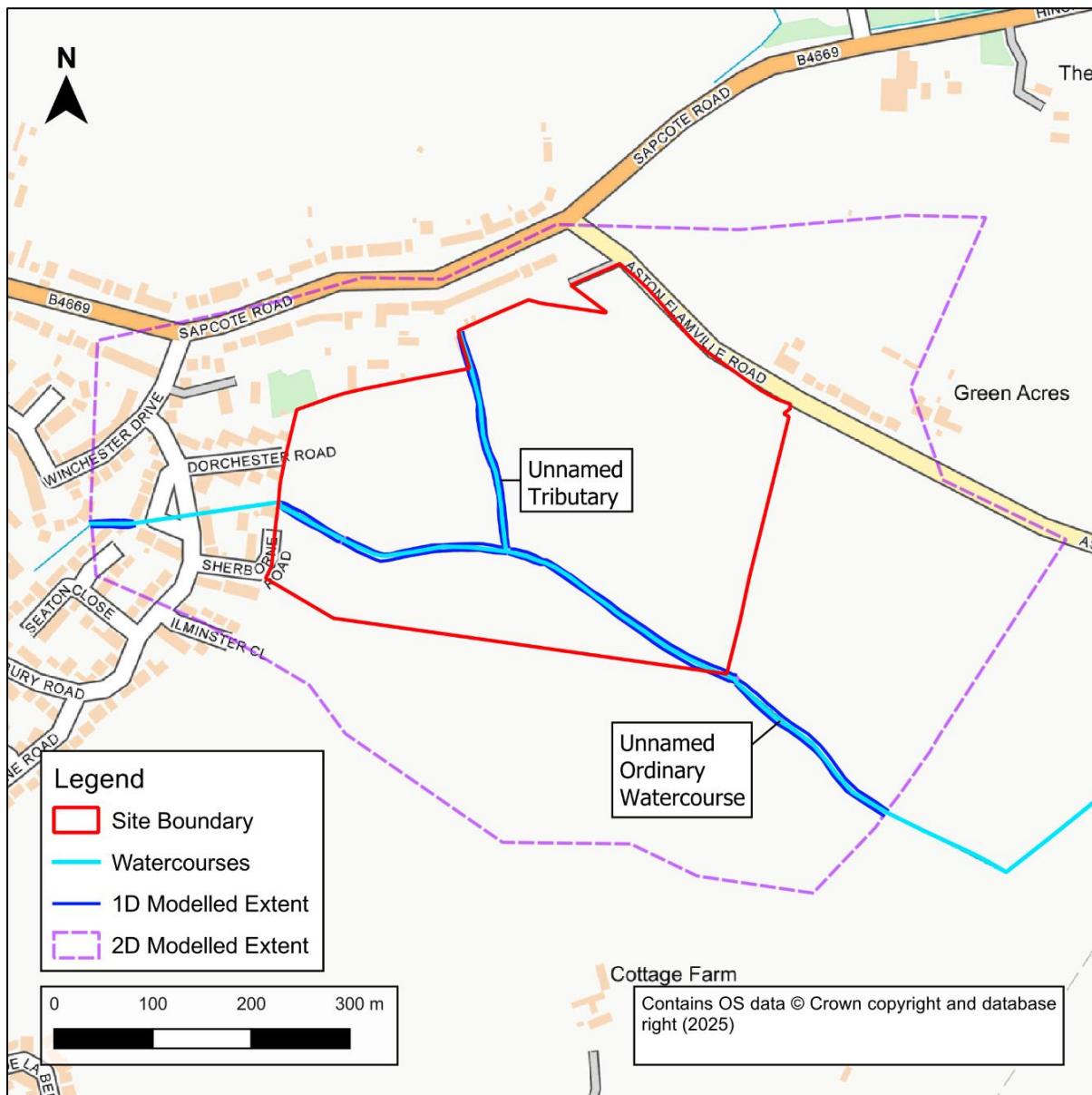


Figure 2-1 - Site overview with model extents

### 3 Hydraulic Modelling

#### 3.1 Previous model

The Sherborne Road hydraulic model is a 1D-2D Flood Modeller-TUFLOW hydraulic model initially developed by JBA in 2021 to develop an understanding of the flood risk posed to the site from the ordinary watercourses. The model includes an approximately 1km reach of the main unnamed ordinary watercourse adjacent to the site along with an approximately 200m reach of the unnamed tributary.

## TECHNICAL NOTE

Several post-development options were tested using the previous model – of these, Option 4 was taken forward for the planning application. This option included:

- The removal of three undersized culverts on the tributary and main watercourse
- Raising the banks of the two modelled watercourses
- The creation of a flood storage area (FSA) with flow control structure at the southern end of the site
  - The flow control structure from the FSA was modelled with a pipe diameter of 700mm
- A 1m deep low flow channel running alongside the FSA with a lowered left-hand bank to allow excess water to spill directly into the FSA

The above combination of flood mitigation features was found to prevent flood water from overtopping the river channel (and thus prevent wide-spread flooding across the site) without increasing flood risk elsewhere.

The hydraulic modelling was detailed within the submitted reporting and Leicestershire County Council as Lead Local Flood Authority (LLFA) advised the Local Planning Authority (LPA) that the proposals were considered acceptable subject to required conditions such as that which is the subject of this technical note.

### 3.2 Hydrology Review

A review was undertaken of the hydrological assessment used in the previous modelling. The assessment was originally undertaken by JBA in 2021 and updated in 2023. The detailed review is included in Appendix A. No significant requirements for an update were identified and the hydrological assessment and inflow hydrographs previously used were deemed to be appropriate for use in this study.

The upper end climate change allowance for the 2080s epoch for the Soar Management Catchment<sup>1</sup> (60%) was applied to the 1% AEP (100-year) peak flow event to derive the 1% AEP plus climate change (60%) event inline with the requirements of the condition.

### 3.3 Baseline Updates

The upper end climate change allowance (60%) was run through the baseline model. No other updates were undertaken.

### 3.4 Post Development updates

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<sup>1</sup> [Climate change allowances for peak river flow](#)

## TECHNICAL NOTE

A number of updates were made to the Option 4 post development model to reflect changes made to the development plans. These updates are listed below and are further detailed in Figure 3-1. A detail of the differences between the previous and updated layouts is presented in Figure 3-2.

- An updated layout of the FSA to accommodate a SuDS basin on the proposed development site (note that the SuDS basin itself was not modelled as it is not within the flooded extent of any modelled post-development scenario)
- The retaining embankments of the FSA were set to 99.5m AOD
- Updated configuration of the raised banks upstream of the FSA to tie into paths and the FSA embankment
- Changes were made to the naming convention of the TUFLOW files to include an Event Name term (~e1~), to avoid producing a large number of virtually identical .tcf files for each modelled event

The rest of the modelling approach was retained from the 2021 Option 4 model.

The model was then run for the full suite of events, including the 1% AEP plus climate change (60%) event.

## TECHNICAL NOTE

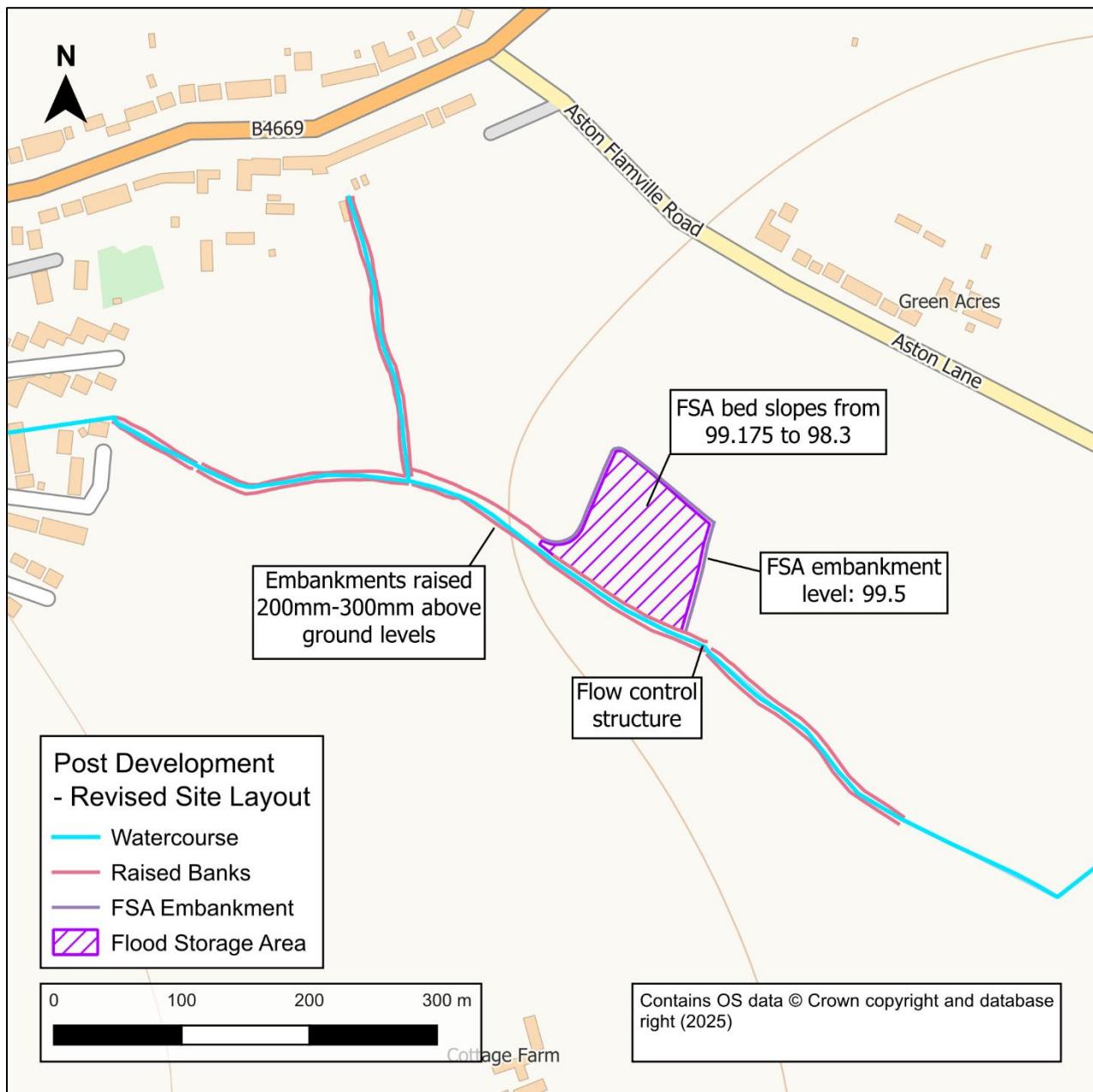


Figure 3-1- Revised Post-developed layout, with levels shown in mAOD

## TECHNICAL NOTE

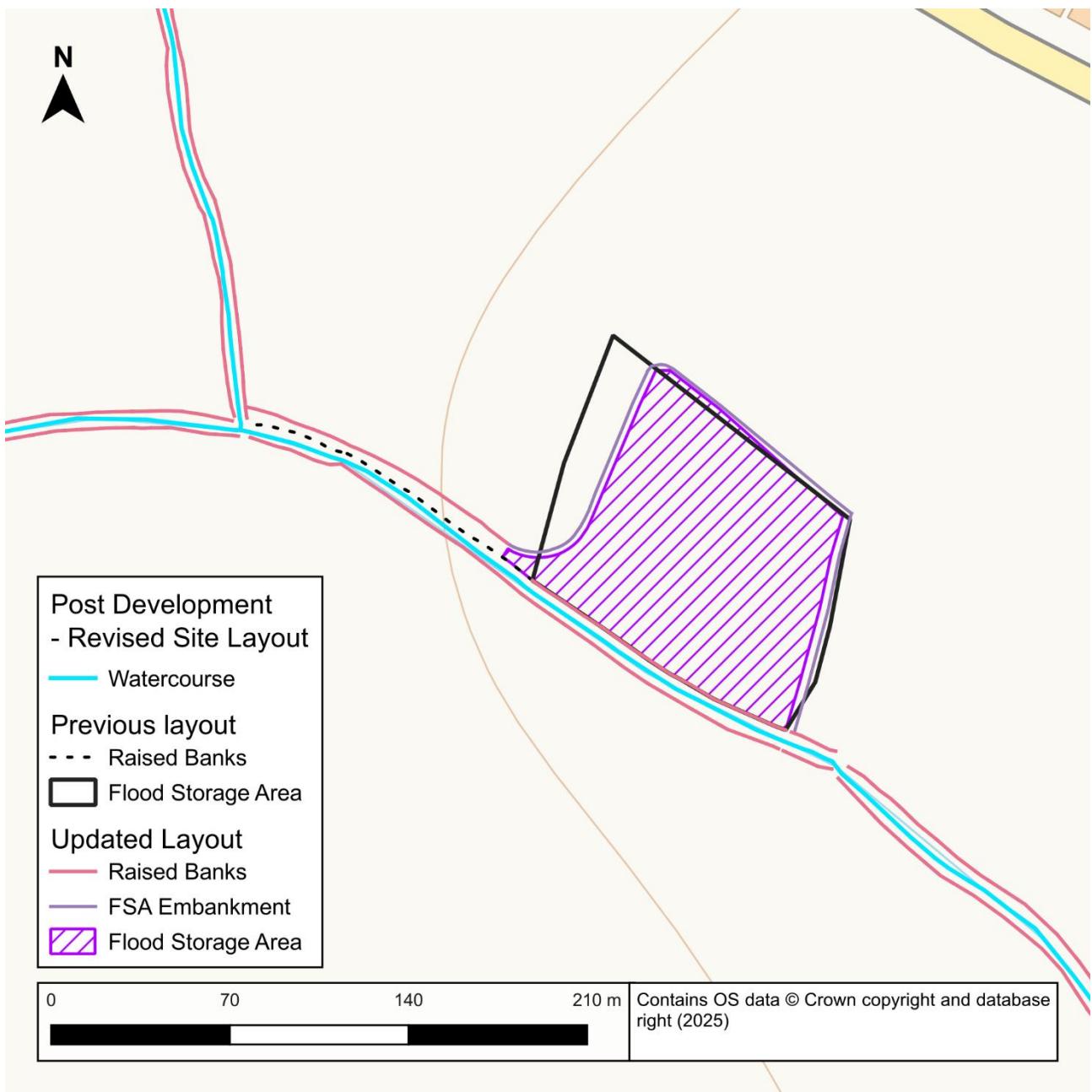


Figure 3-2 - Detail of the changes between the previous and updated Option 4 model scenario

## 4 Hydraulic Modelling Results

### 4.1 Baseline

The maximum depths for the baseline 1% AEP plus climate change (60%) event can be seen below in Figure 4-1. The site exhibits shallow depths of typically <0.1m but with pockets of deeper flooding particularly on the confluence of the tributary and the drainage ditch running parallel to the main watercourse across the site, where there are peak depths of >0.5m. There are also pockets of flooding up to 0.3m elsewhere in the study area, particularly downstream of the proposed development site.

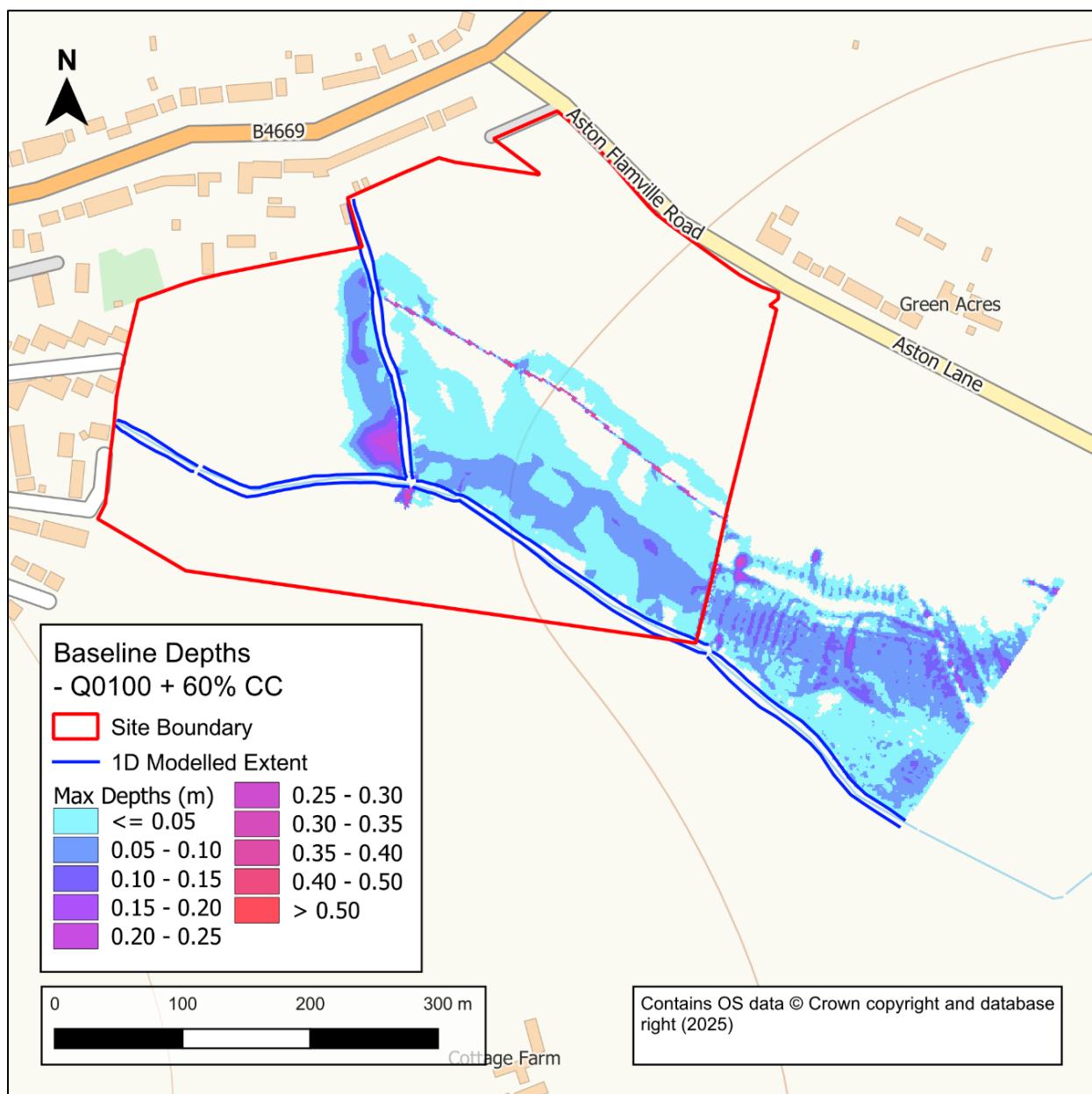


Figure 4-1 - peak flood depths in the baseline 1% AEP plus climate change (60%) event

## TECHNICAL NOTE

Figure 4-2 shows peak water levels for the same event. Water levels vary from approximately 101m AOD at the upstream extent of the tributary to 97.6m AOD at the downstream model extent. Within the site, the lowest water level is 98.5mAOD.

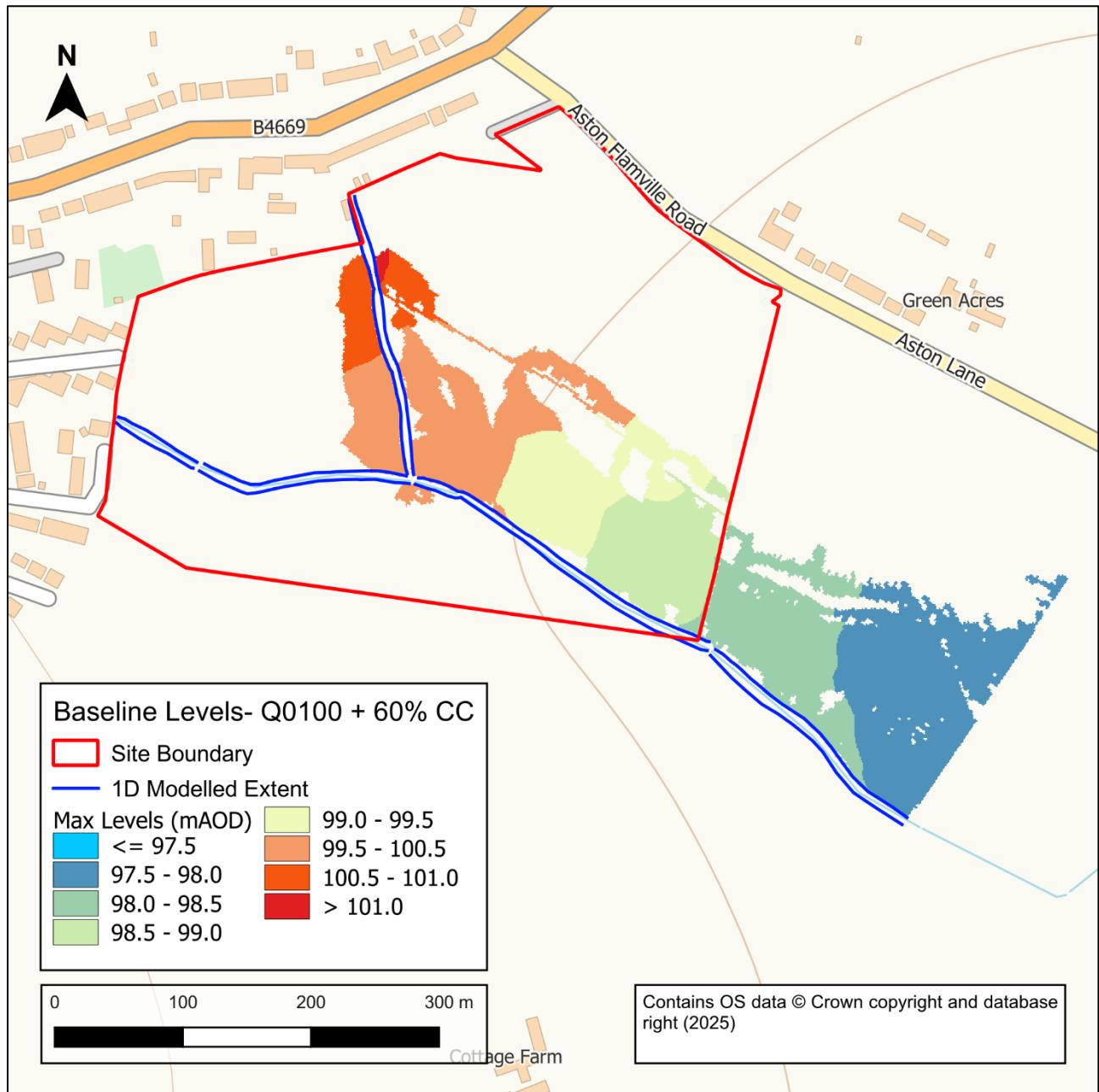


Figure 4-2 - peak water levels in the baseline 1% AEP plus climate change (60%) event

## TECHNICAL NOTE

### 4.2 Post Development

Figure 4-3 below shows the peak flood depths for the 1% AEP plus climate change (60%) event for the revised Option 4 post development scenario. Flood extents on the site are now wholly contained in-bank or in the Flood Storage Area, where depths reach a maximum of 1m along the downstream boundary. There is shallow flooding downstream of the site of typically 0.01m-0.1m, although to a lesser extent than the baseline.

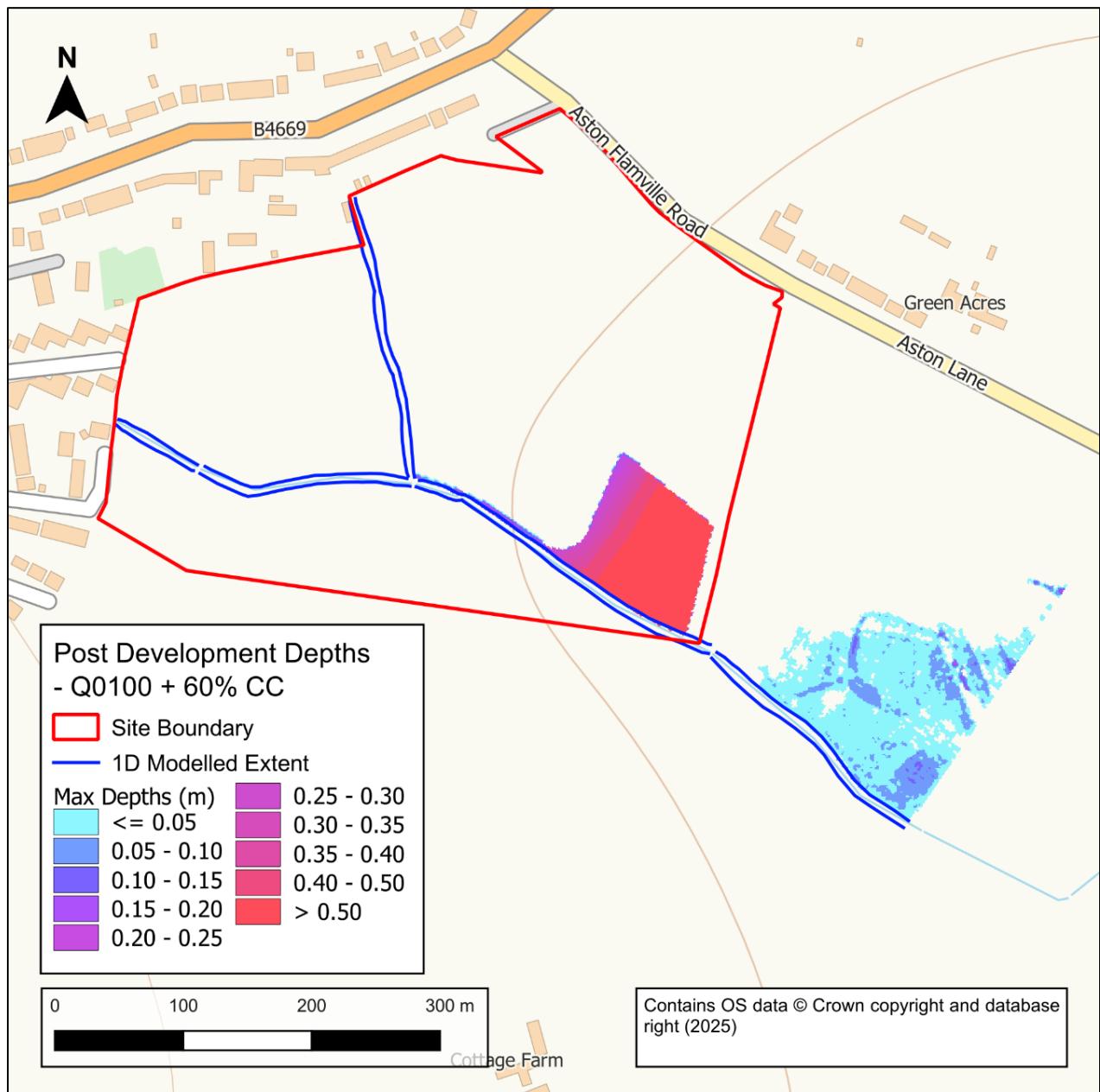


Figure 4-3 - peak flood depths in the post development 1% AEP plus climate change (60%) event

## TECHNICAL NOTE

Figure 4-4 shows the peak water levels for the same event. The peak water level within the FSA is 99.35m AOD and in-channel levels are shown as annotations on the figure. Finished floor levels should be set at least 300mm above the adjacent peak water level.

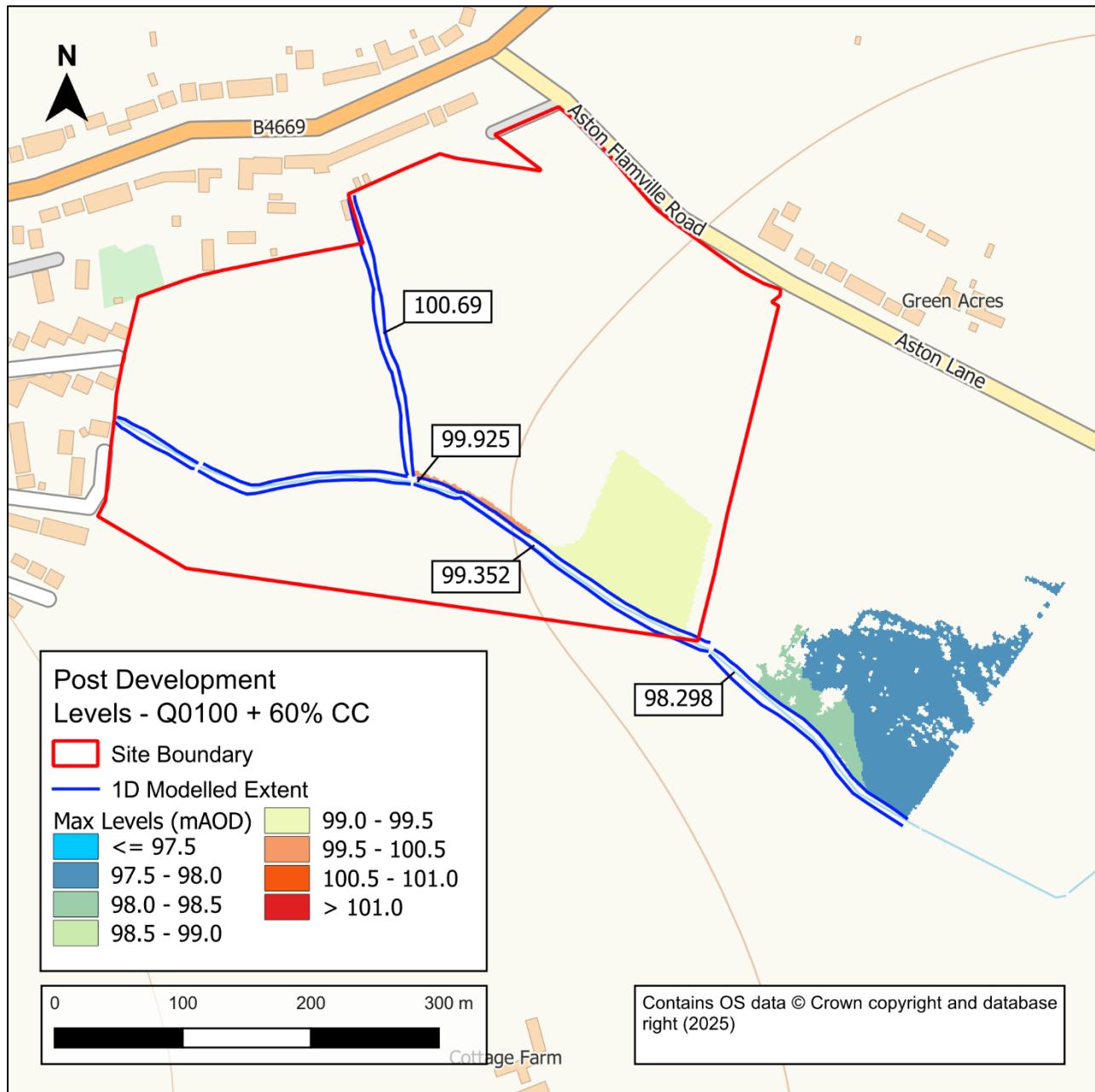


Figure 4-4 - peak water levels in the post development 1% AEP plus climate change (60%) event. In-channel levels in mAOD at key points are shown as annotations.

### 4.2.1 Depth comparison

Figure 4-5 below shows a depth comparison between the baseline and the post development for the 1% AEP plus climate change (60%) event. Outside of the FSA, flood depths have widely decreased or otherwise have shown no significant difference when compared to the baseline. Within the site, flooding has been wholly prevented. There is no flood detriment on the third-party land downstream of the site.

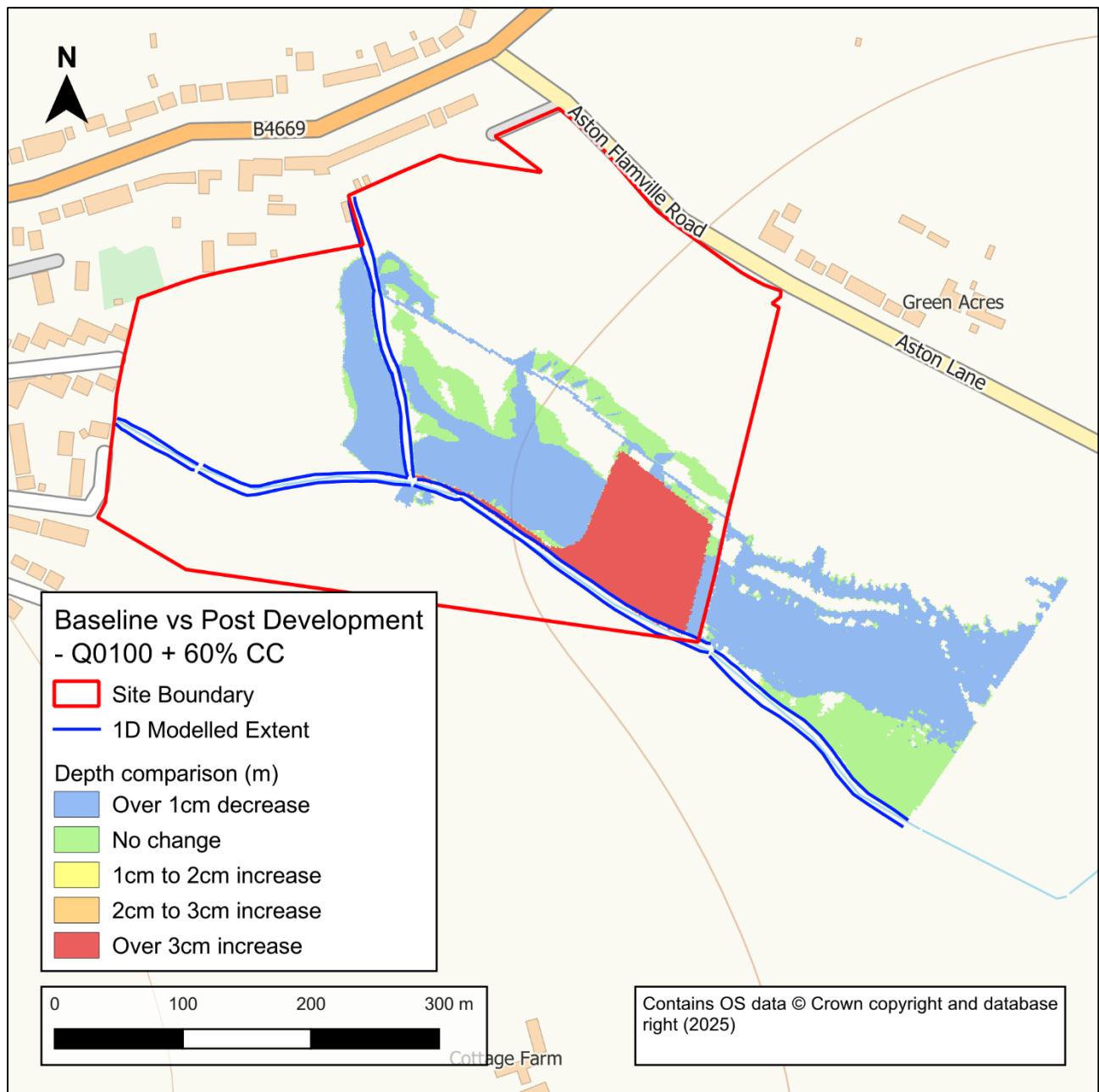


Figure 4-5 - Depths comparison between the baseline and post-development scenarios for the 1% AEP plus climate change (60%) event

### 5 Conclusion

The purposes of this technical note was to demonstrate that the revised post-development layout complies with requirements needed in order to discharge the following planning condition for the proposed Sherborne Road development site. Where the conditions are addressed within this technical note, these are detailed in green below.

Condition 19 (Flood Risk Modelling) – No approval of reserved matters shall take place until such time as the following details have been submitted to, and approved in writing by the Local Planning Authority. Any subsequent design must be carried out in accordance with these approved details:

- a) Modelling updated to reflect upper end climate change allowance for both the proposed and existing scenarios.
- b) Full details of flood compensation areas supported by revised modelling, unless modelling/layout demonstrates that compensation is not required.
- c) Details demonstrating finished floor levels (FFL) are set at least 300mm above the modelled 1 in 100 year plus upper end climate change allowance.
- d) Full consideration of source control SuDS.

Compliance with the Planning Condition 19 has been set out below, demonstrating how each element of the condition is met.

- a) Baseline and post development modelling up to and including the 1% AEP plus climate change (60%) event has been set out in the previous sections and concludes that, with additional proposed measures of raised banks to the existing watercourse and a flood storage area, the flood risk to the proposed development area where dwellings are proposed has been removed. The 60% climate change figure reflects the upper end allowance as required by the condition.
- b) A full engineering design for the raised banks and flood storage area has been completed to support the hydraulic modelling for the site and these drawings are provided in Appendix B. The post development modelling shows that the water is now contained within the flood storage area during the 1% AEP plus climate change (60%) event. Further compensation is not required as there is no loss in floodplain capacity and the impact assessment shows betterment to third-party flood risk.
- c) Maximum water levels during the 1% AEP plus climate change (60%) event for the post-developed scenario are detailed within this technical note. Finished floor levels should be set 300mm above these levels.
- d) Addressing this comment is outside of the scope of this technical note.

In summary, as noted in this report and associated modelling:

- The hydrological assessment from the previous JBA study was reviewed and found to be acceptable for use in this study.
- The Sherborne Road hydraulic model, developed by JBA in 2021 was simulated with the Soar Management Catchment upper end climate change allowance (60%) for the 1% AEP event for the baseline scenario.
- The Option 4 post development layout, which was taken forward from the previous JBA study, was adjusted with changes to the Flood Storage Area (FSA) and embankment layout. This was simulated in the model with the 1% AEP plus climate change (60%) event
- Hydraulic modelling demonstrated that in the revised Option 4 post development layout, the raised banks, FSA and flow control structure fully contain peak flows from the proposed development site, and cause no flood risk detriment to the third party land downstream

## A Hydrology review

## NOTE TO FILE

JBA Project Code	2025s0355
Contract	Sherborne Rd Burbage Condition 19
Client	Jelson Ltd
Day, Date and Time	24 March 2025
Author	Gwyn Jones
Reviewer / Sign off	Samantha Cogan BSc MSc
Subject	Sherborne Rd Burbage Condition 19 - Hydrology Review

### 1 Scope

JBA Consulting were commissioned by Jelson Ltd in February 2025 to undertake a flood modelling study at Sherborne Road, Burbage, Leicestershire. The principal aim of the study is to update a model of the Soar Brook developed by JBA in 2023 to support a planning application to discharge the following planning condition:

*Condition 19 (Flood Risk Modelling) - No approval of reserved matters shall take place until such time as the following details have been submitted to, and approved in writing by the Local Planning Authority. Any subsequent design must be carried out in accordance with these approved details:*

- a) *Modelling updated to reflect upper end climate change allowance for both*
- b) *Full details of flood compensation areas supported by revised modelling, unless modelling/layout demonstrates that compensation is not required.*
- c) *Details demonstrating finished floor levels are set at least 300mm above the modelled 1 in 100 year plus upper end climate change allowance.*
- d) *Full consideration of source control SuDS.*

This document details a review undertaken to assess the suitability of using peak flow estimates and hydrographs from the previous hydrology study of the Soar Brook for use in the updated Sherborne Road model. The previous hydrology study was initially completed by JBA in July 2020 and updated in July 2023.

Further details about the documents reviewed are summarised in the table below. The review considers specific elements of the hydrological assessment, and each element has been given a **Low** / **Medium** / **High** classification based on its likely impact on the final hydraulic model inflows.

Project name:	Sherborne Road Burbage Condition 19
Project number:	2025s0355
Subject of review:	Sherborne Road hydrological assessment
Work carried out by:	JBA Consulting
Documents used in review:	CUX-JBAU-XX-XX-RP-A1-C01-BurbageModellingReport_App.pdf
Applicable standards or guidance:	Applicable at time of 2020 study: Environment Agency. June 2020. Technical guidance 197_08. Flood Estimation Guidelines.  Current guidance: Environment Agency. December 2022. Instruction: LIT 11832. Flood Estimation Guidelines.

## 2 Detailed Review Comments

As the previous hydrological assessment was only completed in 2023, the focus of this review is on what has changed since the study was undertaken and the potential impacts on the results. This will help to determine whether it is necessary to update the hydrological assessment for the Sherborne Road model or whether the previous study inflows can be retained.

### 2.1 Catchment Overview

The study area is a small, urbanised catchment, with the downstream flow estimation point located on the Soar Brook, a tributary of the River Soar, at the smallest FEH catchment boundary. Upstream of this point the watercourse is in small ditches. The catchment geology consists of mudstone, which is slow-draining and so tends to have a higher run-off rate.

The description of the catchment topography and geology in the previous study reporting was checked against Ordnance Survey (OS) mapping, LiDAR, geology<sup>1</sup>, and soil<sup>2</sup> maps, and appears reasonable.

Summary: **Low - No issues identified that would affect the results.**

### 2.2 Hydrometric Data

<sup>1</sup> <https://geologyviewer.bgs.ac.uk/>

<sup>2</sup> <https://www.landis.org.uk/soilscapes/>

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The catchment is ungauged – the 2020 study mentioned a gauge on the River Soar that is significantly downstream and unlikely to be representative of the catchment.

The 2023 study mentioned a level gauge (Sharnford) located a short distance downstream of the study area that was used to improve understanding of catchment hydrology and a potential use for model validation. However, this gauge was not used within calculations of flow estimates due to its unsuitability.

Summary: **Low - No issues identified that would affect the results**

### 2.3 Hydrological approach

The current modelling study will use the previous model in its entirety and so the FEPs derived in the previous hydrology are all applicable for this review.

The previous hydrology derived three upstream (A, B and C) FEPs as inflows for the model, which were too small to be included on the FEH Webservice (FEHWS). One downstream FEP (SR\_DS) was derived from the FEHWS at the upstream available extent of Soar Brook, from which the upstream FEPs were calculated using LiDAR and drainage/sewerage maps. This appears sensible given the small nature of the catchments.

The SR\_DS catchment boundary was adjusted based on 1m resolution LiDAR to include an area to the north that appeared to drain into the catchment. This was checked against the latest available LiDAR (2022) and appears to be accurate.

The location of the FEPs appear sensible, with the main FEH FEP located at the downstream extent of the model (at the most upstream possible location), and the three derived FEP at the inflow locations of the model (see Figure 1).



Figure 1 - locations of the study FEPs

The BFIHOST descriptor was used in the 2020 hydrological assessment, but this was updated to BFIHOST19 in the 2023 update. BFIHOST19 is generally preferred as it has addressed several issues in the original BFIHOST values. For SR\_DS, the values are virtually identical (0.44 v 0.447), therefore this is not considered to have had a significant effect on flow estimates, however the 2023 results are preferred for completeness.

There have been no changes to any catchment descriptors since the release of BFIHOST19 in 2019 and as such a comparison between the previous study and current catchment descriptors is not required.

However, there are plans for new catchment descriptors to be released towards the end of 2025. FARL, SAAR, URBEXT and BFIHOST are the descriptors that are proposed to be updated. As these are key descriptors that are used in both the Statistical and ReFH2 methods, these changes may impact on future results for the study.

URBEXT2000 values for SR\_DS and the three derived input FEPs (A, B and C) were manually calculated using the URBAN50k method within the 2020 study and updated to the

## NOTE TO FILE

relevant year within the 2023 update. This seems a reasonable approach given small size and the high (and variable) level of urbanisation in the catchments.

The DPLBAR value was amended in line with the percentage change of catchment area for the derived FEPs as the standard modification equation is known to produce suspect values for smaller catchments. BFIHOST, FARL and the other catchment descriptors were checked against mapping and kept the same for all catchments (based on the values for SR\_DS). This appears to be a reasonable approach given the small size of the catchments.

The previous study selected the ReFH2 method as the preferred method of generating peak flow estimates. This seems reasonable given the small size and high degree of urbanisation of the study catchments, as it includes an urban component that introduces three extra parameters to account for the effect of urbanisation to the runoff and time-to-Peak.

Summary: **Low – No major issues with the hydrological approach**

### 2.4 FEH Statistical Method

The 2023 study used NRFA peak flows dataset, Version 11.1, released March 2023. This contains data up to water year 2020-21. The current version is 13 which includes hydrometric data up to the end of September 2023 (water year 2022). This may affect the pooling group selection for the FEP locations, however as the Statistical method was not deemed appropriate for use as the final estimates this will not have an effect on results.

Since the 2020 hydrological assessment was completed, WINFAP v5 has been released (2021). Small catchment procedures are implemented in this version of WINFAP, which were not contained in v4, and which will be relevant to the study as they are for catchments  $<25\text{km}^2$ . However, as stated above, Statistical methods were not used for the final estimates and so this will not have an effect on results. As such, a detailed review of the data and methods used for the Statistical estimates (QMED donors, pooling groups selection etc) is not required.

Summary: **Low – No issues that would affect the results as the Statistical approach was ultimately not used**

### 2.5 ReFH2

The 2023 study used the ReFH2.4 model for hydrological calculations, which is the latest and preferred model. The 2020 study used FEH13 rainfall statistics, however the 2023 revision used the updated FEH22, which is the preferred dataset given it has almost a decade of additional statistics.

Flow estimates for Site A were calculated using plot scale equations due to the lack of watercourse within the sub-catchment. Site B (although not explicitly stated in the report) was calculated using the derived catchment descriptors using the default equations. Site C

flow estimates were calculated based on scaling the SR\_DS by an area scaling factor due to its small size. These appear to be reasonable approaches, although plot scale equations could be applied to the Site B calculations as well given its small size, which would remove the need to recalculate DPLBAR. However, this is not expected to have had a significant effect on results.

A 3.75-hour storm duration (with summer seasonality) was reported to have been used for the 2023 study, which are reported as the average storm duration for the FEP point critical storm duration. However, in the model files, it appears that a 4.5-hour duration was used, which matches the duration used in the 2020 study. The reason for this discrepancy is unknown, and it may be a mislabelling of the model files.

Both durations seem reasonable given the small size and high degree of urbanisation of the catchments, and a consistent storm duration was used for all inflows. No information is given about the ARF value used, although it is assumed this is based on the value for SR\_DS.

Summary: **Low** – although there are apparent discrepancies in the storm durations between the hydrology report and the model, these are unlikely to have a significant effect on calculated flow estimates.

### 2.6 Conclusions and recommendations

The conclusions drawn from the review of the 2023 Sherbourne Road, Burbage hydrological assessment are:

- The assessment generally appears to be thorough, and the approaches taken are valid.
- Since the study was started, and completed, there have been several updates to datasets and methods:
  - 2 years of additional peak flow data compared to the dataset used for the calculations in the Statistical method.
  - Small catchments procedures released and applied in WINFAP v5.
- However, the Statistical approach is not considered to be appropriate for the study catchments and so updates to the peak flow data/WINFAP etc is not relevant to the study.
- No updates to the ReFH2 method or catchment descriptors have been made since the study date that would have an effect on the results

Based on the conclusions of the review, the following recommendations are made:

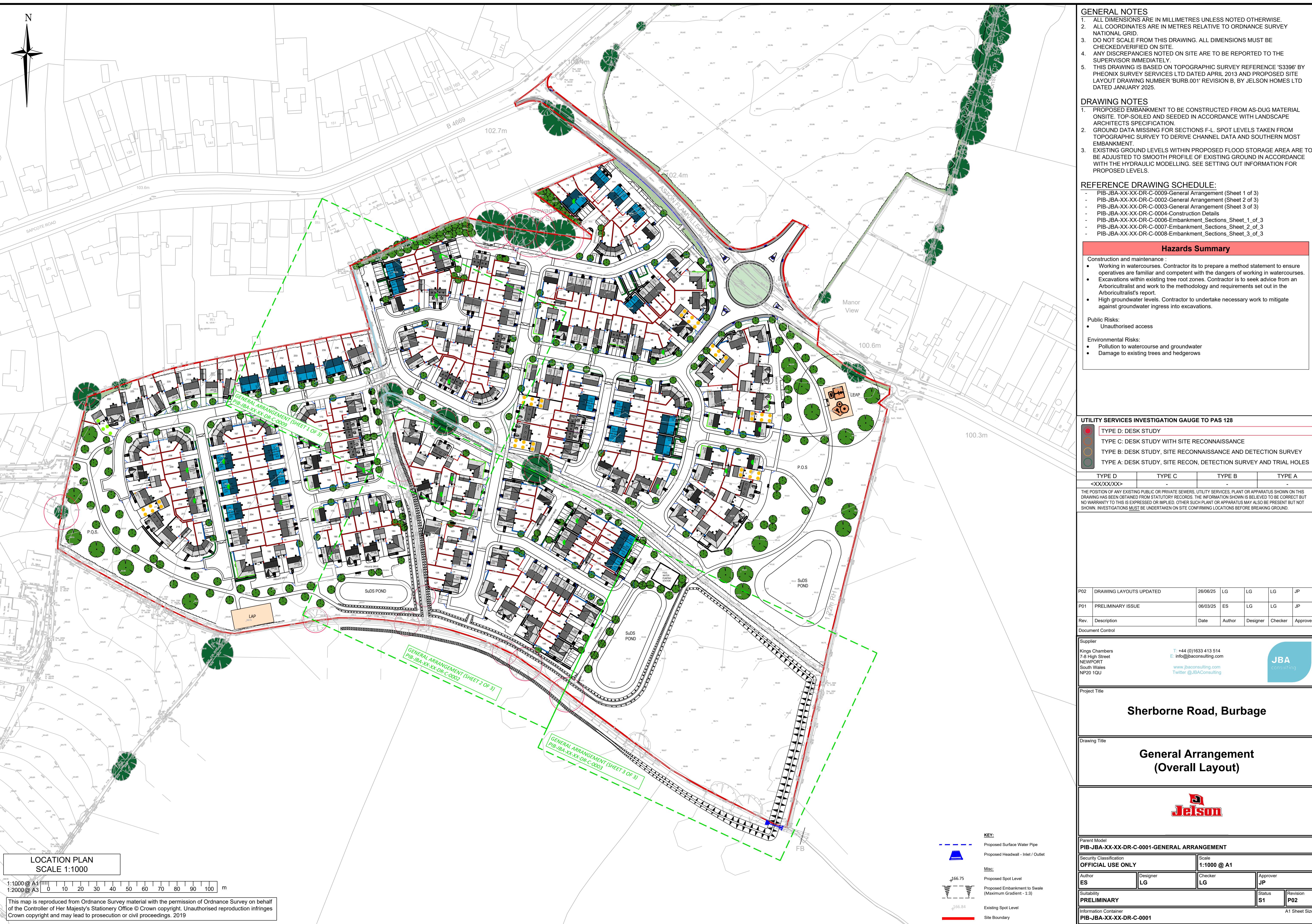
- Ideally all calculations would be revised for the current study using the latest datasets, methods and guidance. However, this review indicates that the risk of using the previous study hydrology is likely to be very low, and inflows for the

## NOTE TO FILE

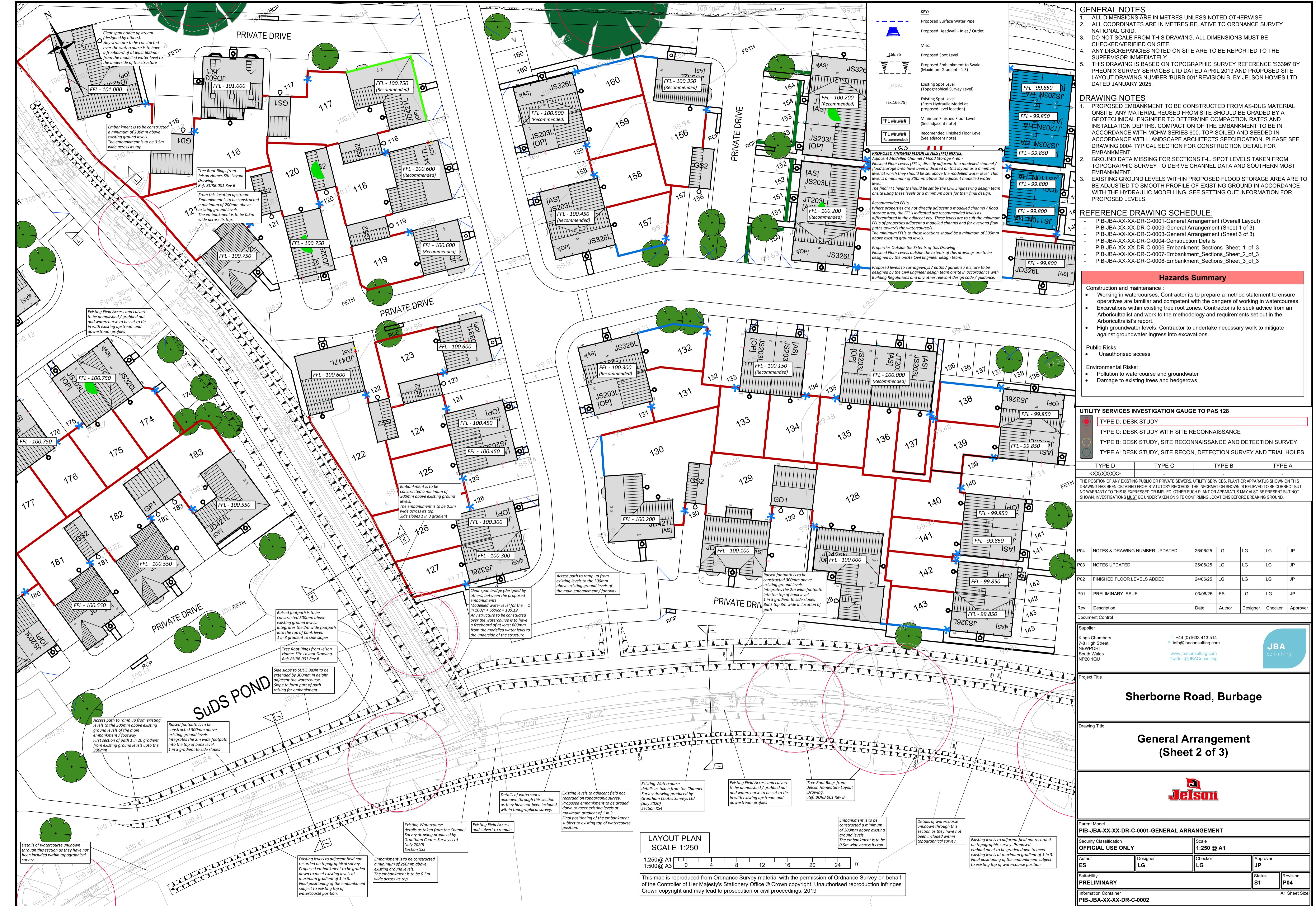
updated model could be taken from the existing model with reasonable confidence. This recommendation is caveated by the fact that it is not possible to confirm what the impacts of updating the hydrological assessment on hydraulic model results would be until revised inflow hydrographs are run through the model.

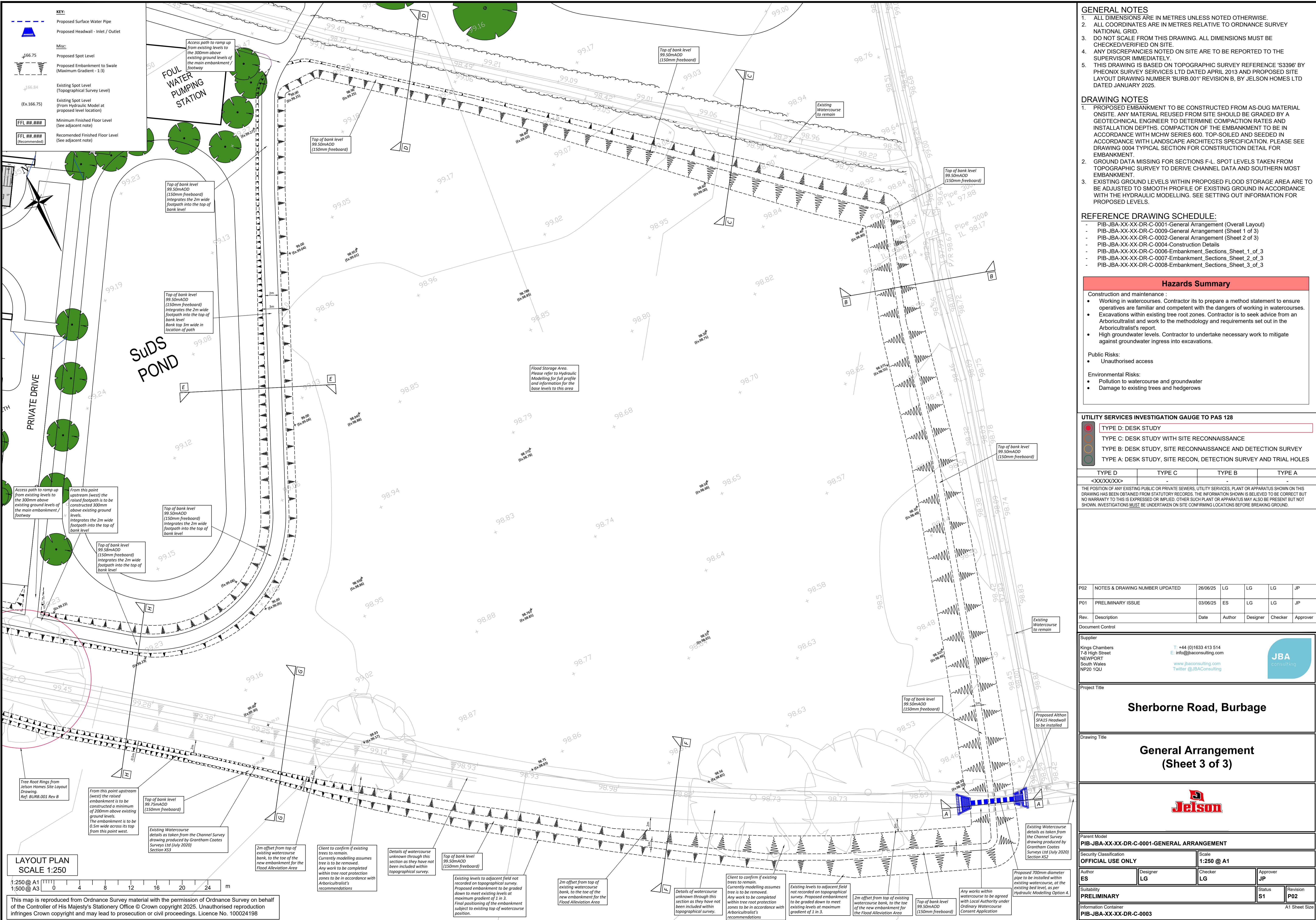
- The forthcoming release of the updates for the catchment descriptors, ReFH model and Statistical method (expected later in 2025) may affect the results and will be of relevance to any future revisions of the hydrology

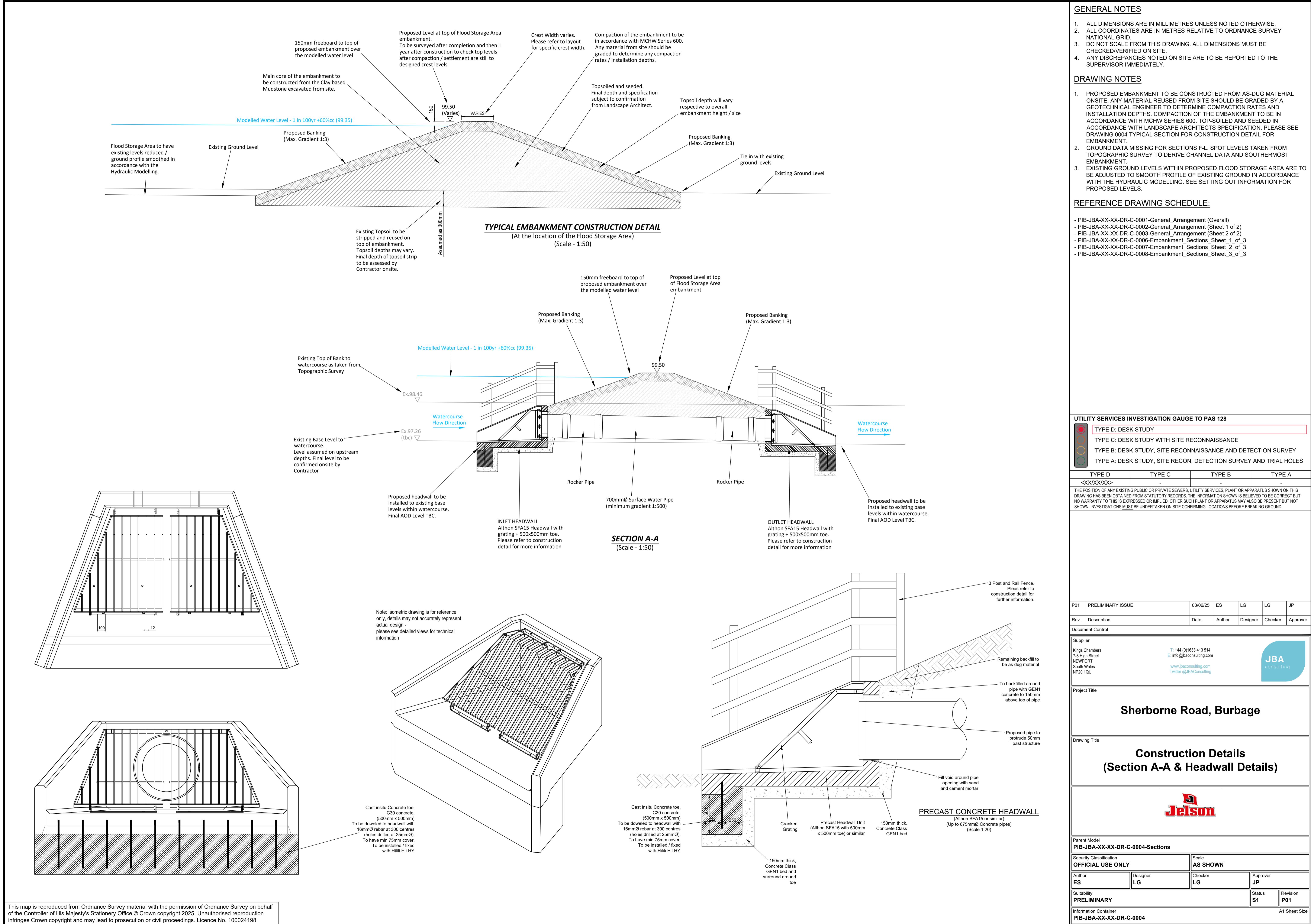
## B Post-developed engineering drawings

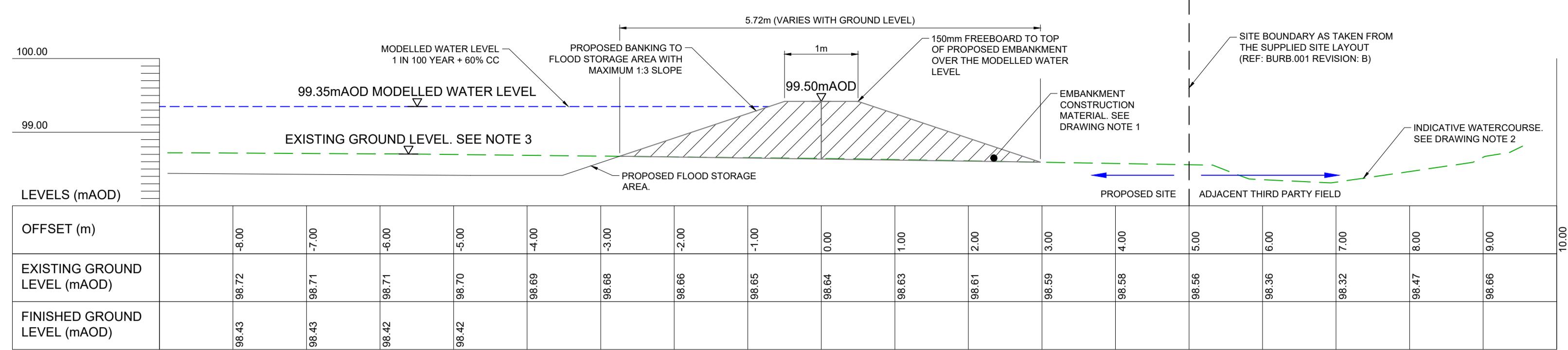




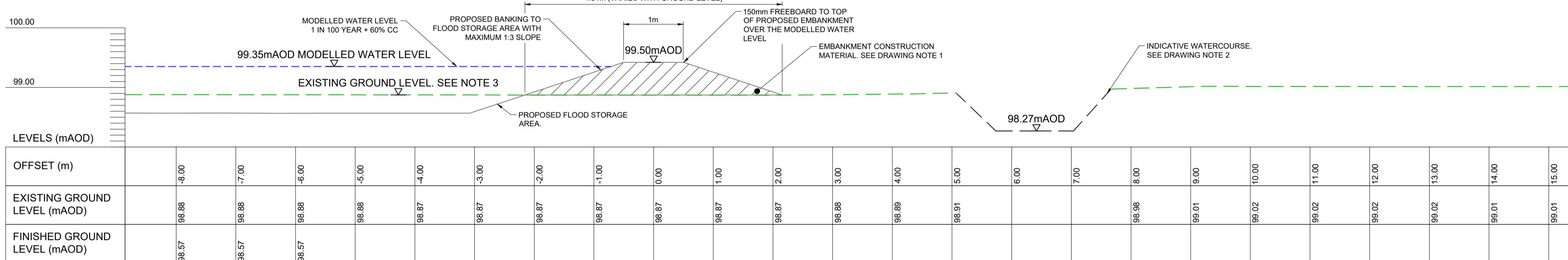




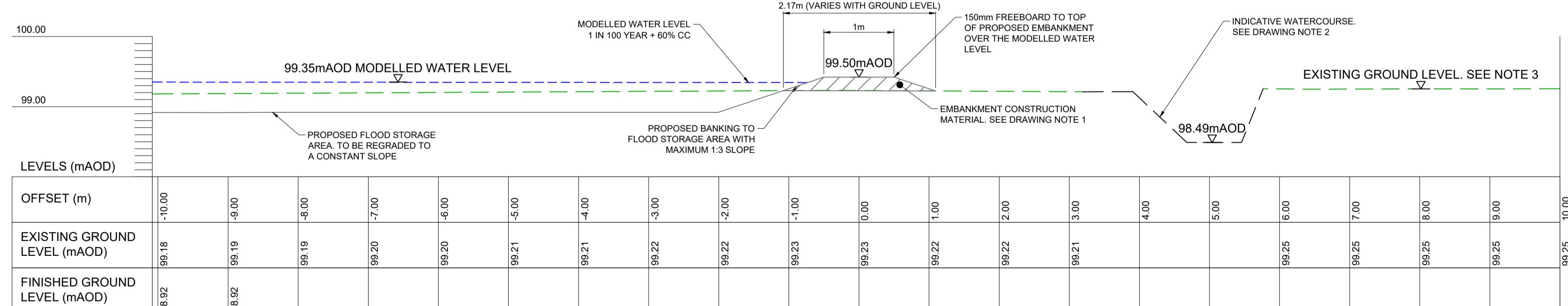




## SECTION B-B



## SECTION C-C



## SECTION D-D

## GENERAL NOTES

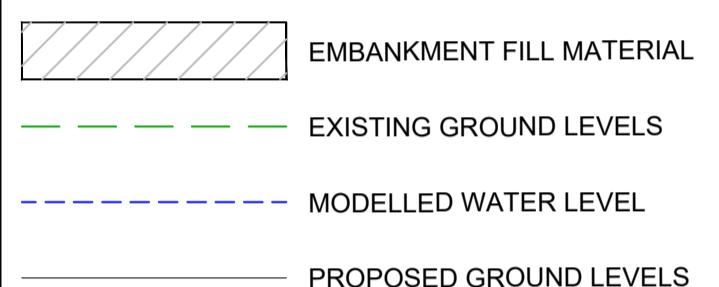
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2. ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
3. DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED/VERIFIED ON SITE.
4. ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE SUPERVISOR IMMEDIATELY.

## DRAWING NOTES

1. PROPOSED EMBANKMENT TO BE CONSTRUCTED FROM AS-DUG MATERIAL ONSITE. ANY MATERIAL REUSED FROM SITE SHOULD BE GRADED BY A GEOTECHNICAL ENGINEER TO DETERMINE COMPACTION RATES AND INSTALLATION DEPTHS. COMPACTION OF THE EMBANKMENT TO BE IN ACCORDANCE WITH MCHW SERIES 600. TOP-SOILED AND SEEDED IN ACCORDANCE WITH LANDSCAPE ARCHITECTS SPECIFICATION. PLEASE SEE DRAWING 0004 TYPICAL SECTION FOR CONSTRUCTION DETAIL FOR EMBANKMENT.
2. GROUND DATA MISSING FOR SECTIONS F-L. SPOT LEVELS TAKEN FROM TOPOGRAPHIC SURVEY TO DERIVE CHANNEL DATA AND SOUTHERNMOST EMBANKMENT.
3. EXISTING GROUND LEVELS WITHIN PROPOSED FLOOD STORAGE AREA ARE TO BE ADJUSTED TO SMOOTH PROFILE OF EXISTING GROUND IN ACCORDANCE WITH THE HYDRAULIC MODELLING. SEE SETTING OUT INFORMATION FOR PROPOSED LEVELS.

## REFERENCE DRAWING SCHEDULE:

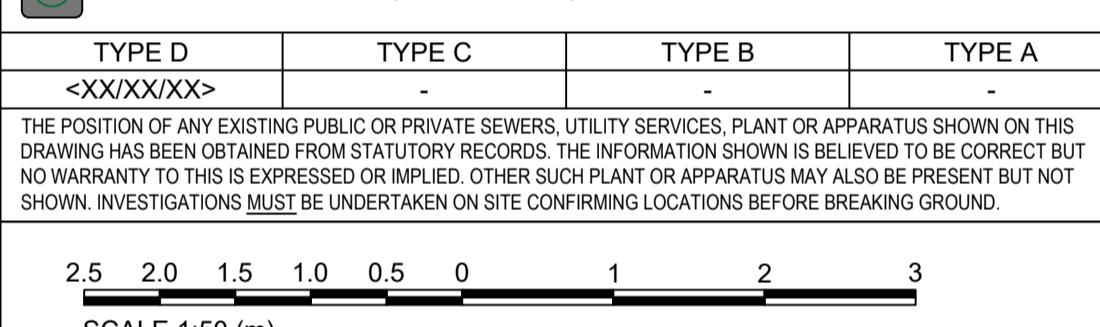
- PIB-JBA-XX-XX-DR-C-0001-General\_Arrangement (Overall)
- PIB-JBA-XX-XX-DR-C-0002-General\_Arrangement (Sheet 1 of 2)
- PIB-JBA-XX-XX-DR-C-0003-General\_Arrangement (Sheet 2 of 2)
- PIB-JBA-XX-XX-DR-C-0004-Construction\_Details
- PIB-JBA-XX-XX-DR-C-0007-Embankment\_Sections\_Sheet\_2\_of\_3
- PIB-JBA-XX-XX-DR-C-0008-Embankment\_Sections\_Sheet\_3\_of\_3



UTILITY SERVICES INVESTIGATION GAUGE TO PAS



- TYPE D: DESK STUDY
- TYPE C: DESK STUDY WITH SITE RECONNAISSANCE
- TYPE B: DESK STUDY, SITE RECONNAISSANCE AND DETECTION SURVEY
- TYPE A: DESK STUDY, SITE RECON, DETECTION SURVEY AND TRIAL HOLES



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Sherborne Road, Burbage Civils 3D

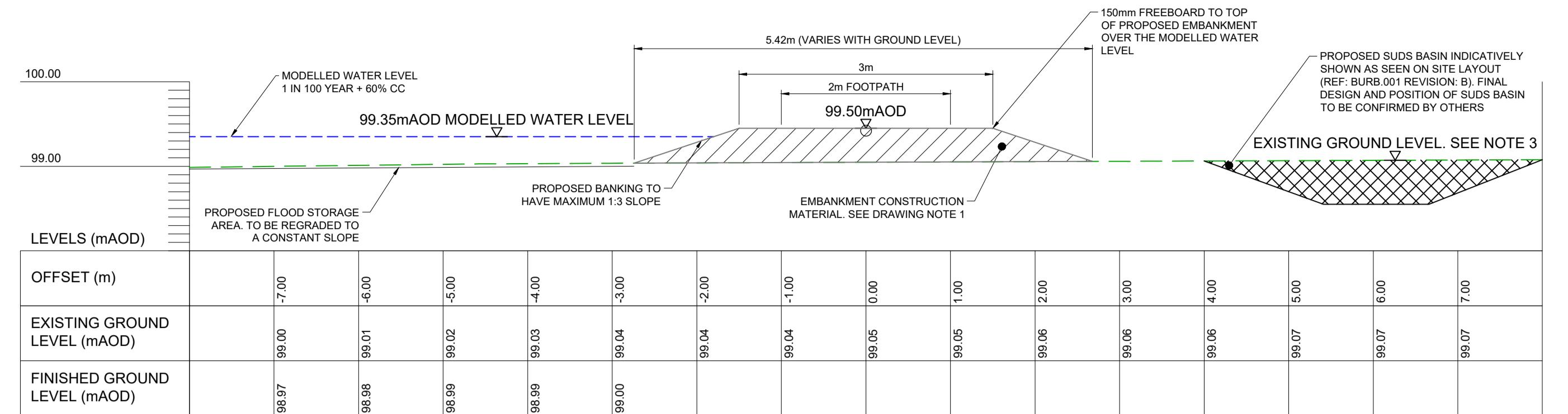
# Embankment Sections

## Sheet 1 of 3

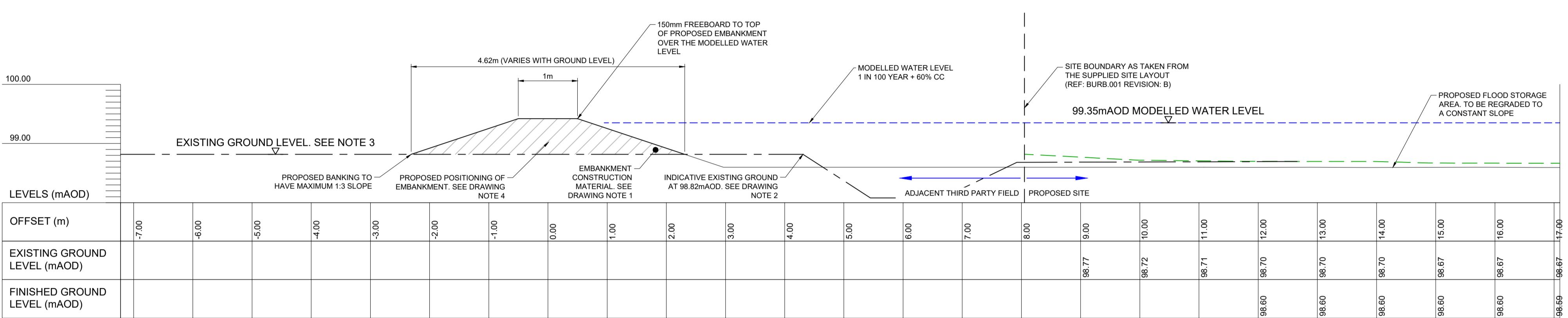


Parent Model <b>PIB-JBA-XX-XX-M2-C-0001-Sections_Setup</b>					
Security Classification <b>OFFICIAL USE ONLY</b>		Scale <b>1:50</b>			
Author <b>ES</b>	Designer <b>LG</b>	Checker <b>LG</b>	Approver <b>JP</b>		
Suitability <b>WORK IN PROGRESS</b>				Status <b>S0</b>	Revision <b>P01</b>
Information Container <b>PIB-JBA-XX-XX-DR-C-0006</b>			A1 Sheet Size		

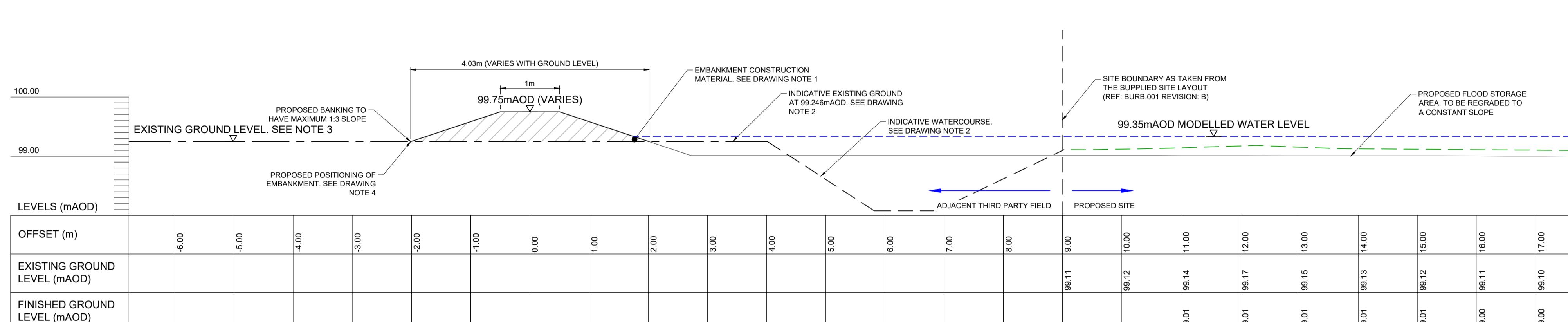
**FOR COMMENT**



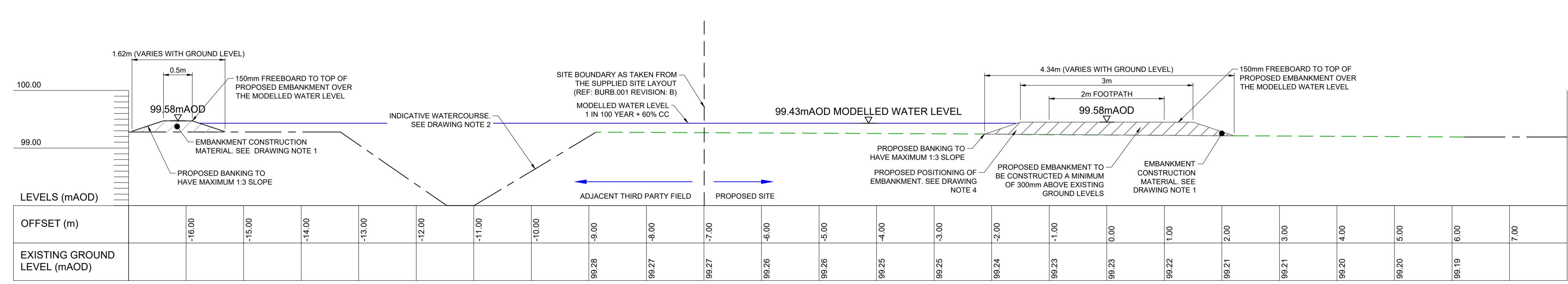
SECTION E-E



SECTION F-F



SECTION G-G



SECTION H-H  
CH: 107.54

GENERAL NOTES

- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
- DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED/VERIFIED ON SITE.
- ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE SUPERVISOR IMMEDIATELY.

DRAWING NOTES

- PROPOSED EMBANKMENT TO BE CONSTRUCTED FROM AS-DUG MATERIAL ON SITE. ANY MATERIAL REUSED FROM SITE SHOULD BE GRADED BY A GEOTECHNICAL ENGINEER TO DETERMINE COMPACTION RATES AND INSTALLATION DEPTHS. COMPACTION OF THE EMBANKMENT TO BE IN ACCORDANCE WITH THE MCHW SERIES 600 TOP-SOILED AND SEEDED IN ACCORDANCE WITH LANDSCAPE ARCHITECTS SPECIFICATION. PLEASE SEE DRAWING 0004 TYPICAL SECTION FOR CONSTRUCTION DETAIL FOR EMBANKMENT.
- GROUND DATA MISSING FOR SECTIONS F-L. SPOT LEVELS TAKEN FROM TOPOGRAPHIC SURVEY TO DERIVE CHANNEL DATA AND SOUTHERNMOST EMBANKMENT.
- EXISTING GROUND LEVELS WITHIN PROPOSED FLOOD STORAGE AREA TO BE ADJUSTED TO SMOOTH PROFILE OF EXISTING GROUND IN ACCORDANCE WITH THE HYDRAULIC MODELLING. SEE SETTING OUT INFORMATION FOR PROPOSED LEVELS.
- SITE BOUNDARY POSITION HAS BEEN BASED ON THE RED LINE BOUNDARY FROM THE SUPPLIED SITE LAYOUT (REF: BURB.001 REVISION: B). THE POSITION OF THE PROPOSED EMBANKMENT IS LOCATED OUTSIDE OF THE RED LINE BOUNDARY. CLIENT IS TO CONFIRM WITH THIRD PARTY LANDOWNER THE POSITION OF THE EMBANKMENT AND UNDERTAKE ANY NECESSARY LEGAL AGREEMENT.

REFERENCE DRAWING SCHEDULE:

- PIB-JBA-XX-XX-DR-C-0001-General\_Arrangement (Overall)
- PIB-JBA-XX-XX-DR-C-0002-General\_Arrangement (Sheet 1 of 2)
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- PIB-JBA-XX-XX-DR-C-0008-Embankment\_Sections\_Sheet\_3\_of\_3

PROPOSED SUDS BASIN (DESIGNED BY OTHERS)

EMBANKMENT FILL MATERIAL

EXISTING GROUND LEVELS

MODELED WATER LEVEL

EXISTING GROUND LEVELS (ASSUMED)

PROPOSED GROUND LEVELS

UTILITY SERVICES INVESTIGATION GAUGE TO PAS 128

	TYPE D: DESK STUDY
	TYPE C: DESK STUDY WITH SITE RECONNAISSANCE
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	TYPE A: DESK STUDY, SITE RECON, DETECTION SURVEY AND TRIAL HOLES

THE POSITION OF ANY EXISTING PUBLIC OR PRIVATE SEWERS, UTILITY SERVICES, PLANT OR APPARATUS SHOWN ON THIS DRAWING HAS BEEN OBTAINED FROM STATUTORY RECORDS. THE INFORMATION SHOWN 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. INVESTIGATIONS **MUST** BE UNDERTAKEN ON SITE CONFIRMING LOCATIONS BEFORE BREAKING GROUND.

SCALE 1:50 (m)

P01 PRELIMINARY ISSUE 01/05/25 ES LG LG JP

Rev. Description Date Author Designer Checker Approver

Document Control

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Project Title

**Sherborne Road, Burbage Civils 3D**

Drawing Title

**Embankment Sections  
Sheet 2 of 3**



Parent Model PIB-JBA-XX-XX-M2-C-0001-Sections\_Setup

Security Classification OFFICIAL USE ONLY Scale 1:50

Author ES Designer LG Checker LG Approver JP

Suitability WORK IN PROGRESS Status S0 Revision P01

Information Container PIB-JBA-XX-XX-DR-C-0007 A1 Sheet Size

