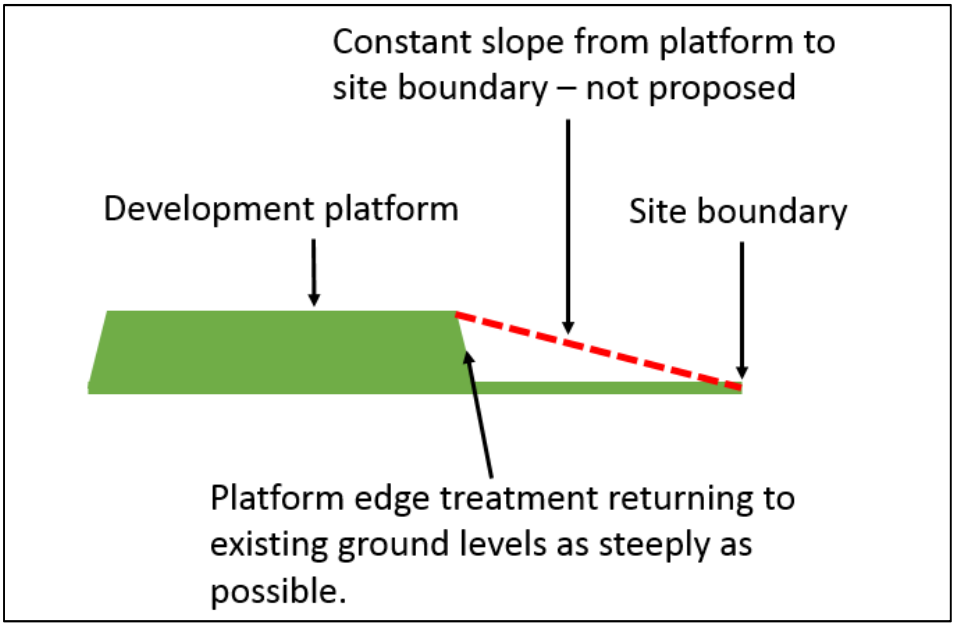
B411 – Teversham Road, Fulbourn, Cambridgeshire
Reserved Matters Application – Layout Update
For Castlefield International Ltd
13th April 2021

This note accompanies an amendment to the Reserved Matters Application (reference S/3290/RM/19) currently under consideration for the permitted development between Teversham Road and Cox's Drove in Fulbourn, Cambridgeshire.

The note addresses flood risk queries raised in January 2021 by local residents. Residents expressed concerns about the potential for site runoff to be directed towards properties on the south-eastern boundary of the site, and the increase in surface water flooding to the south-east of the site which was indicated by the flood modelling (the flood modelling which supported the outline application and the revised flood model prepared and submitted in 2020).

For clarity, the 2017 outline application was supported by a surface water flood model. This flood model was updated in 2020 (to reflect the revised layout submitted for Reserved Matters approval). The new layout which this note accompanies occupies a smaller parcel than the earlier layout submitted for Reserved Matters approval. The revised layout will not therefore have a negative impact on the flood risk (levels, depths etc) established by the 2020 flood model.

The concern that runoff from the site will be shed overland towards the properties on Cow Lane can be addressed by confirming that it is not proposed create a continuous slope between the edge of the raised development platforms and the site boundary. Proposed ground levels will instead return to existing ground levels (or lower) as 'quickly' as possible (see illustrative sketch below).



Simple development platform edge treatment illustration

To address the concerns about increased flood depths predicted by the 2017 and 2020 flood modelling, a floodwater storage basin will be provided along the southern boundary. The shallow basin (500 mm deep) is sized to accommodate a volume of 150 m^3. This volume has been calculated by comparing the post development floodwater surface to the baseline floodwater surface for the 1 in 1,000 annual probability flood. The two floodwater surfaces are not simple flat surfaces as floodwater is typically a flowing, complex surface. The increase in volume has therefore been modelled using terrain modelling software to determine the difference between the two complex surfaces. The basin therefore provides space for floodwater to offset the potential increase in flood volumes predicted by the flood modelling. Currently it is proposed to allow the floodwater from the basin to dissipate through infiltration, evaporation etc (to provide some small benefit); however should a more formal outflow be required then a simple grass topped stone trench would be constructed to allow natural seepage into the central watercourse.

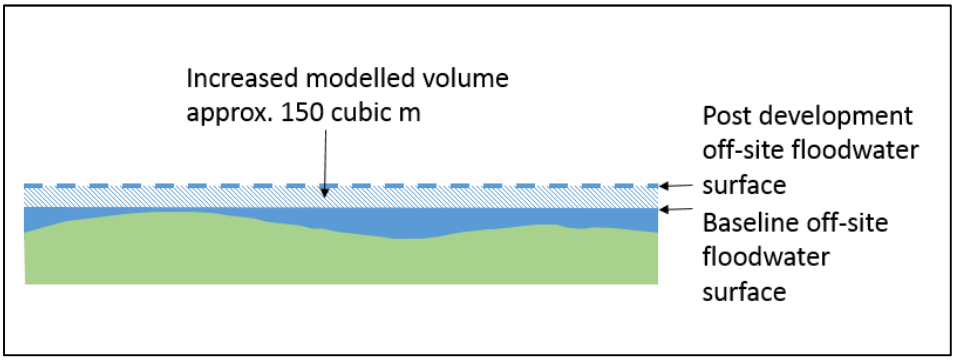
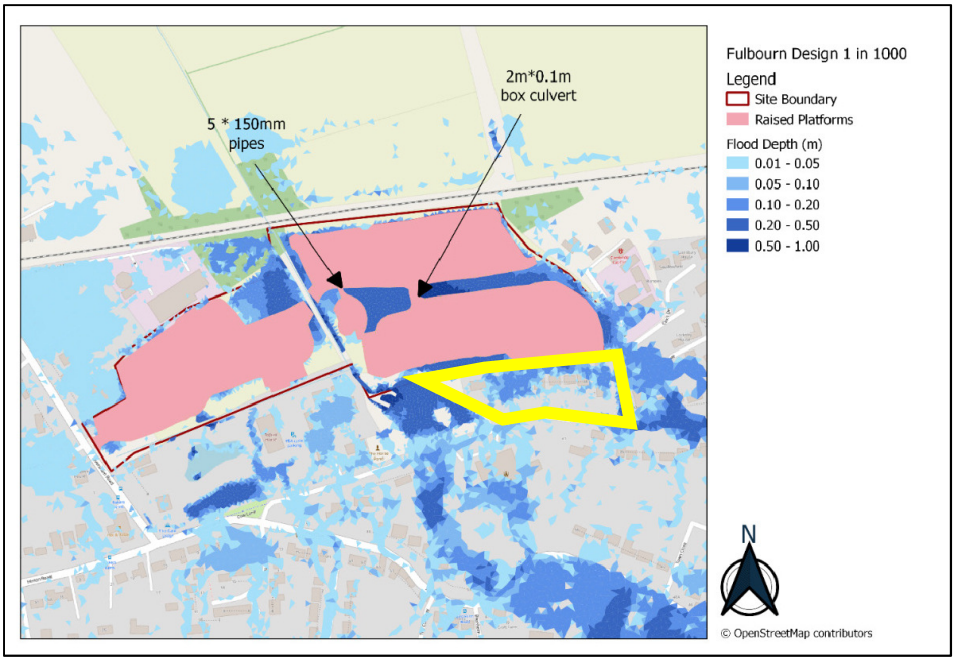


Illustration of the compensatory flood storage volume provided by the scheme.



Area of compensatory storage assessment – note that the flood depths in the legend are ranges and do not show actual depths.

The provision of such a compensatory flood storage basin was discussed in a video meeting with the Lead Local Flood Authority (LLFA) and the Cambridge City/South Cambridgeshire sustainable drainage team.

To reiterate, there are no plans to increase ground levels along the south-eastern boundary of the site to prevent floodwater from spilling onto the site from the properties on Cow Lane. As part of the 'water centric' design progression of the site, the strip of land along the south-eastern boundary of the site has always been set aside as an area for floodwater (as well as ecology and landscaping).

For clarity, the surface water management scheme for the site falls under a separate application (reference S3209/19/DC). Revisions to, and queries about, the surface water management (drainage) scheme will therefore continue to be addressed under this Discharge of Condition application.

Appended information

Drawing B411 – PL – SK – 321 – Cow Lane Flood Basin

N

1in3 SIDE SLOPE

1in2 SIDE SLOPE

Poorwell Water

KEY

SURFACE WATER ATTENUATION BASIN (FOR REFERENCE)

COW LANE FLOOD BASIN
500mm DEEP PROVIDING
150m³ STORAGE

NOTES

REV	DESCRIPTION	DE	DR	CH	DATE
P02	REVISED TO SUIT NEW LAYOUT	DP			14/04/2021
P01	REVISED TO SUIT NEW LAYOUT	DP			13/04/2021

DESIGNED BY	DRAWN BY	CHECKED BY
-	DP	-

SCALE @ A1 SIZE	DATE
D.N.S.	12/04/2021

PROJECT TITLE

FULBOURN, CAMBRIDGE

DRAWING TITLE

COW LANE FLOOD BASIN

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DRAWING NUMBER	REV.
B411 - PL - SK - 321	P02

M:\B411 Fulbourn, CAMBS\DRAWINGS\AUTOCAD\CURRENT DRGS\B411 - PL - SK - 321 - P02 - COW LANE FLOOD BASIN