

**B411 – Teversham Road, Fulbourn, Cambridgeshire**  
**Reserved Matters Application - Layout**  
**For Castlefield International Ltd**  
**12<sup>th</sup> August 2020**

This note summarises the results of a refreshed surface water/overland flow flood model for the permitted development between Teversham Road and Cox’s Drove in Fulbourn Cambridgeshire.

The purpose of refreshing the model was to address concerns raised by the interim Sustainable Drainage Engineer about the potential impacts of amendments to the footprint (the development parcels) on flood levels at the site. The refreshed flood modelling report, reference FWM8709-RT001-R01-00 (from HR Wallingford) is provided separately. For convenience this note presents the ‘worse-case’ flood levels resulting from the 1 in 1,000 storm event. As before the 1 in 1,000 storm levels will be the reference flood levels.

The key changes from the approved outline layout with regards to a potential impact on flooding are listed below and identified on the image below (illustrative outline layout) and overleaf (June 2020 layout).

- 1) The shift of the flood retention bank (which houses the five 150 mm diameter flow control pipes) in the central linear park and meadow park westwards.
- 2) The removal the short section of road from the east of the linear park.
- 3) The increase in the size of the play area and raising 2/3 of the area to create a solid platform.



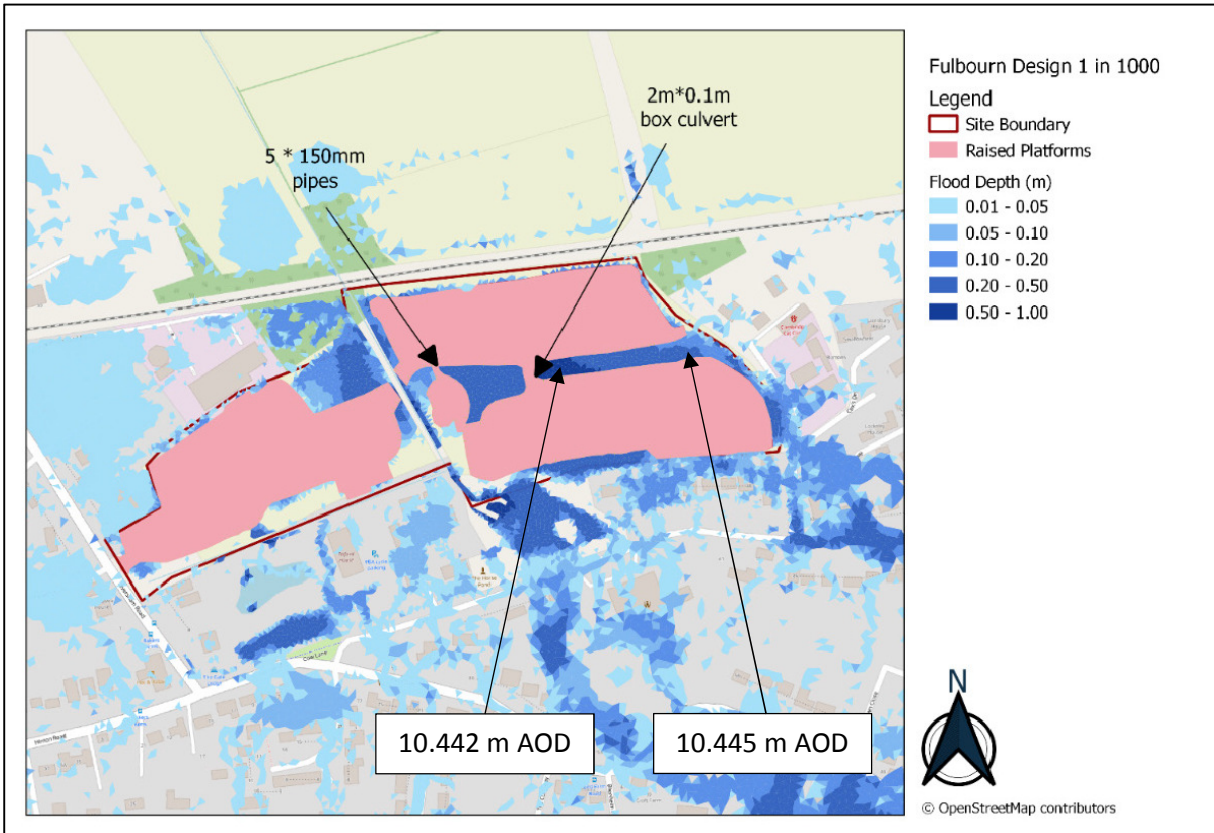
Illustrative layout from the 2017 application.



Reserved Matters application layout.

The primary purpose of the model refresh was to test that the Reserved Matters layout did not result in unmanageable flood levels and continued to provide sufficient space for floodwater. The process of refreshing the model also allowed a detailed investigation of how more use could be made of the linear park storage area. As discussed in the HR Wallingford report (reference FWM8709-RT001-R01-00) this was achieved by simulating a single box culvert (2 m wide by 0.1 m high) beneath the short section of road which divides the linear park from the meadow park. This has the effect of limiting flows from the linear park into the meadow park. This arrangement resulted in flood levels during the 1 in 1,000 event (the worse-case event) in the linear park ranging from 10.442 to 10.445 m AOD and levels in the meadow park of 9.980 m AOD.

For the rest of the development platforms the images in the modelling report confirm that, as before, platform levels of 500 mm above existing ground level will effectively manage flooding (and keep the units dry). The extracted image from the modelling report overleaf shows that aside from a deeper area of flooding in the west of the linear park (for which a specific level has been confirmed) the floodwater around the platforms is 500 mm or less than existing ground levels.



Extract from the modelling report showing the 1 in 1,000 flood event with specific linear park levels added.

As levels are not one of the five Reserved Matters, the levels will not be set at this stage (although a condition may be added to the Reserved Matters permission if deemed necessary).

In conclusion:

- The proposed layout does not materially alter flooding in comparison to the approved illustrative layout and maintains sufficient space for floodwater to be held within, and move through, the site.
- Worse case flood levels (during the 1 in 1,000 storm) are approximately 10.45 m AOD. This will be achieved by setting road levels around the linear park at or above 10.45 m AOD.
- The revised model confirms that for the rest of the site raising the platform levels 500 mm above existing ground levels will continue to protect the proposed units as the worse-case flood depths are in the 200 to 500 mm depth band.