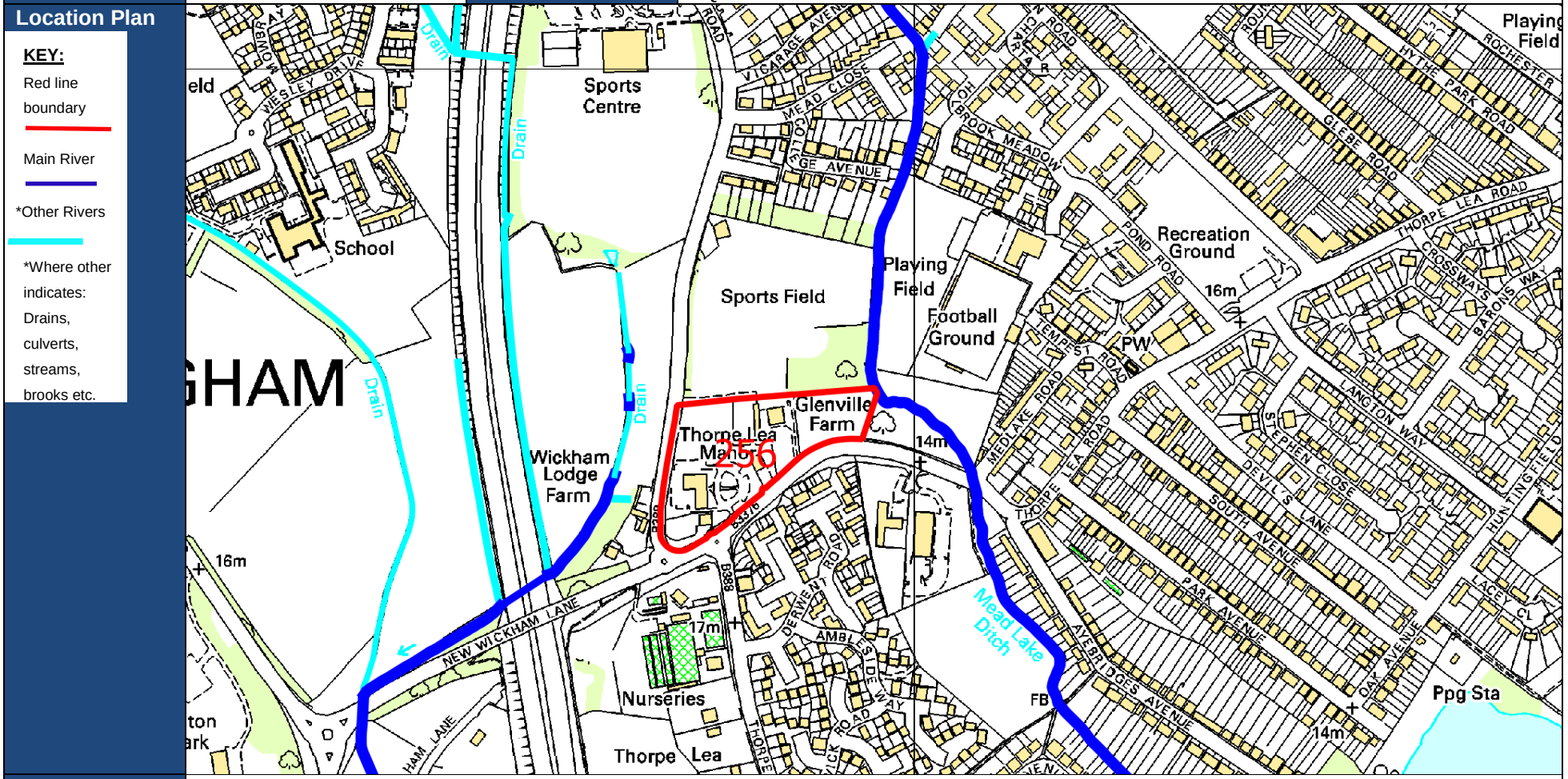
Site 256-Thorpe Lea Road North

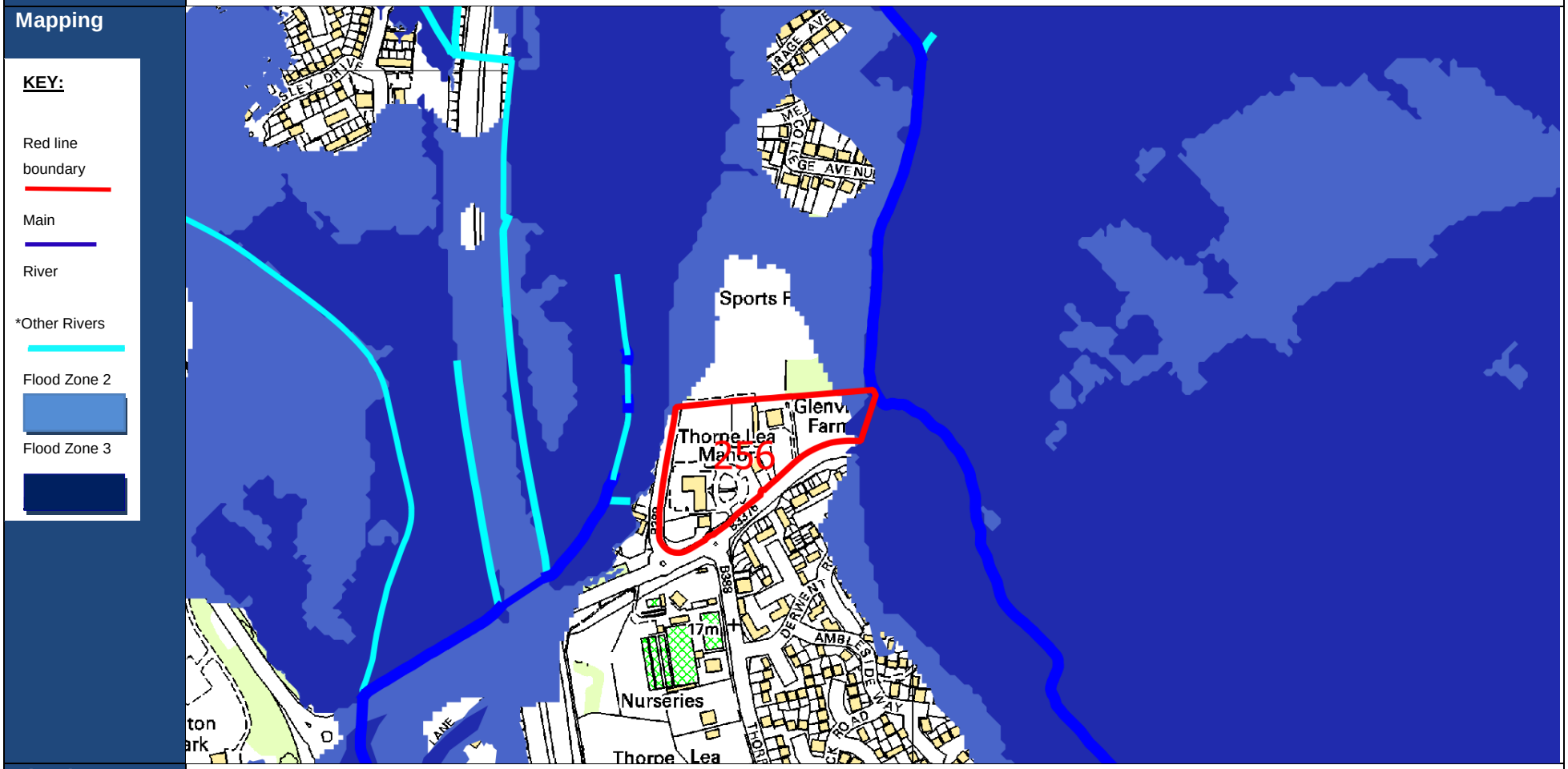
Site Number	256	**Site Name**	Thorpe Lea Road North
Site Location	TW20 8HY	**Grid Reference**	TQ 01821 70592

Location Plan



Description

This site is within Thorpe. It fronts onto B3376 Thorpe Lea Road and the B338 Vicarage Road forms its western boundary. Egham Cricket Club forms the boundary to the north of the site. The Meadlake Ditch, which is a Main River, flows to the east of the site, just touching the north-eastern boundary of the site. The western half of the site is currently occupied by Thorpe Lea Manor which consists of commercial, offices and work studios. The eastern part of the site is Glenville Farm, which comprises two domestic dwellings and commercial, industrial and workshops units together with storage land.

Risk Assessment	
Defences	Although the site is primarily at risk of flooding from the River Thames, the mechanism of flooding in the area of the site is from flood water to flood back up the Meadlake Ditch. There are no formal raised flood defences along on the Meadlake Ditch.
Mapping	
Flood Zones	The vast majority of the site is shown to lie in Flood Zone 1. A small area at the north east corner of the site lies in Flood Zones 2 and 3 (0.13ha or a total of 5.9% of the site area). Flood Zone 1 – 2.00 ha, 94.1% Flood Zone 2 – 0.06 ha, 2.6% Flood Zone 3 – 0.07 ha, 3.3%

Sources of Flooding

Fluvial

1 in 100yr +20%CC Flood Extent

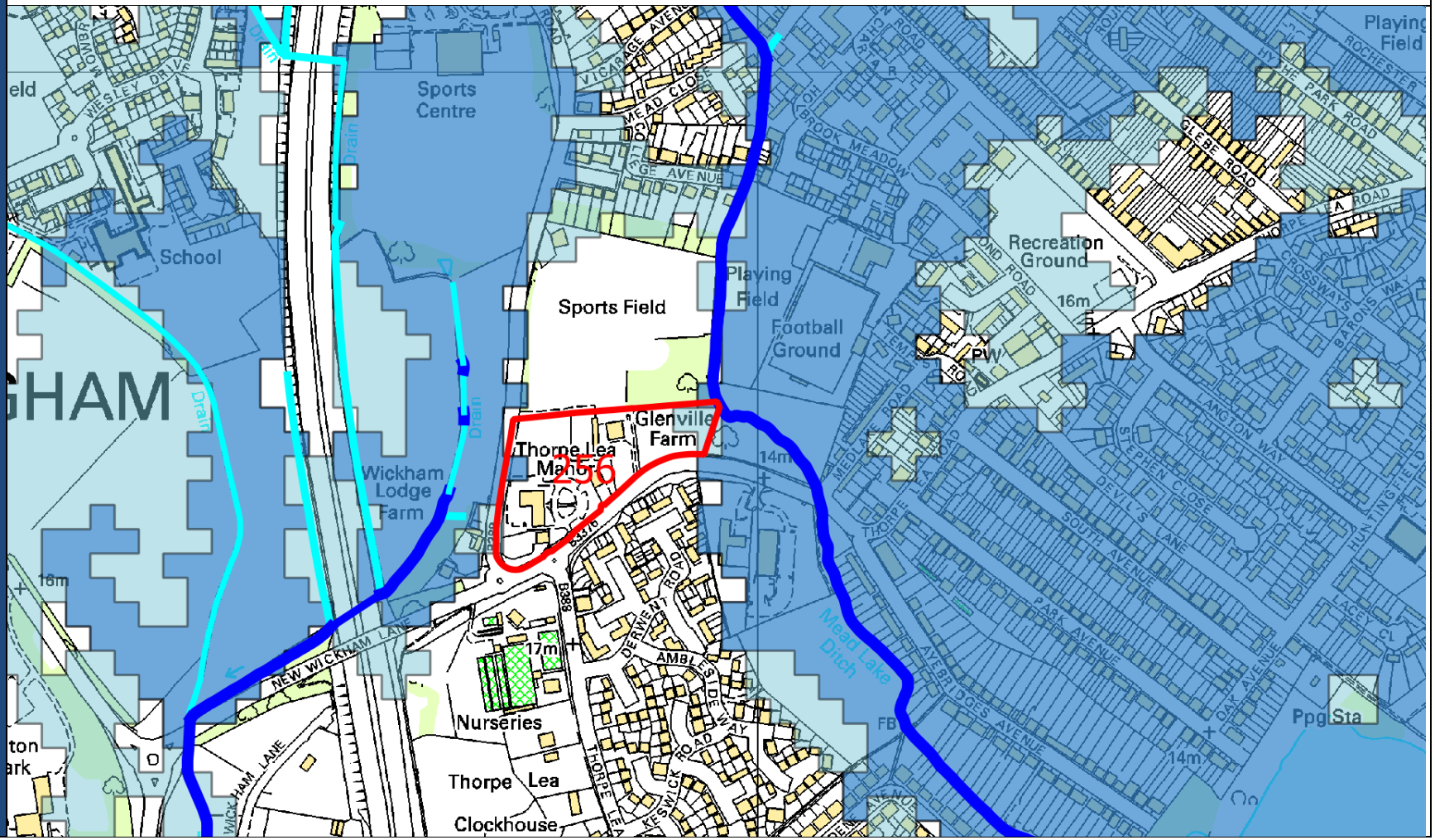
1 in 100yr Flood Extent

The 2009 the River Thames Reach 3 flood model shows that the site lies principally outside the 1 in 100 year flood envelope. When the 20% allowance for climate change is applied approximately 0.24ha or 11.4% of the site is shown to flood.

1 in 100 year Flood – 0.08 ha, 3.5%

1 in 100 year + 20% CC Flood – 0.17 ha, 7.8%

Modelling for the revised climate change allowances is not currently available. An assessment of the implications of the new climate change allowances will need to be undertaken in accordance with in the Environment Agency's Thames Area Climate Change Allowances guidance document. The Basic method will need to be applied for those areas in Flood Zone 2 and the Detailed method would need to be applied to the area in Flood Zone 3.



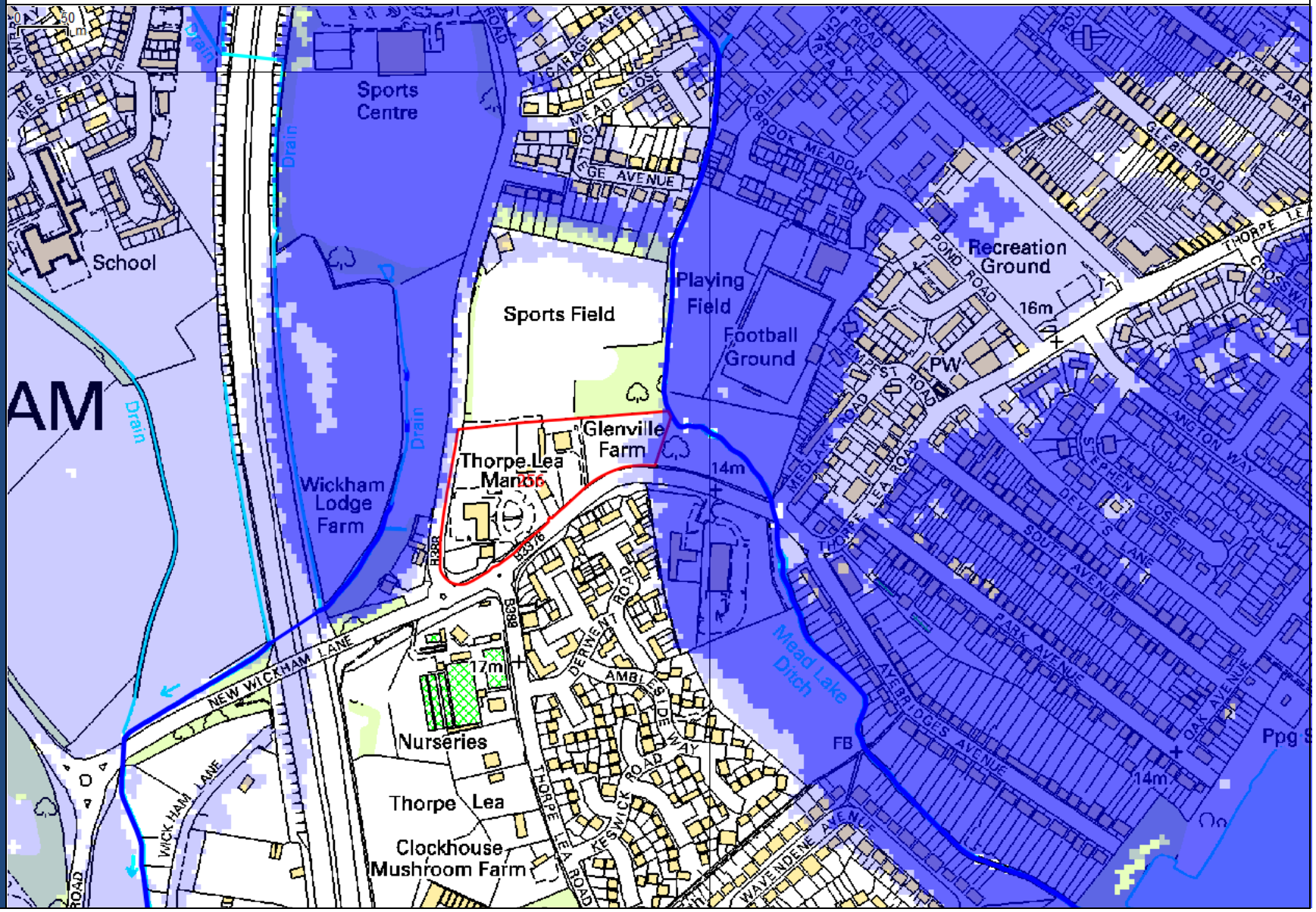
River Thames 2018 Model Output

1 in 100 year and 1 in 100 year + 35% Climate Change

Limited output from the 2018 River Thames Flood Model has been received from the Environment Agency. This consists of the 1 in 100 year flood envelope and the 1 in 100 year plus 35% allowance for climate change envelope.
The updated model shows that eastern part of Glenville Farm floods to a similar extent as predicted by the 2009 modelling.

1 in 100yr + 35%CC Flood Extent

1 in 100yr Flood Extent



River Thames 2018 Model Output

Hazard Mapping 1 in 100 year plus 35% climate change

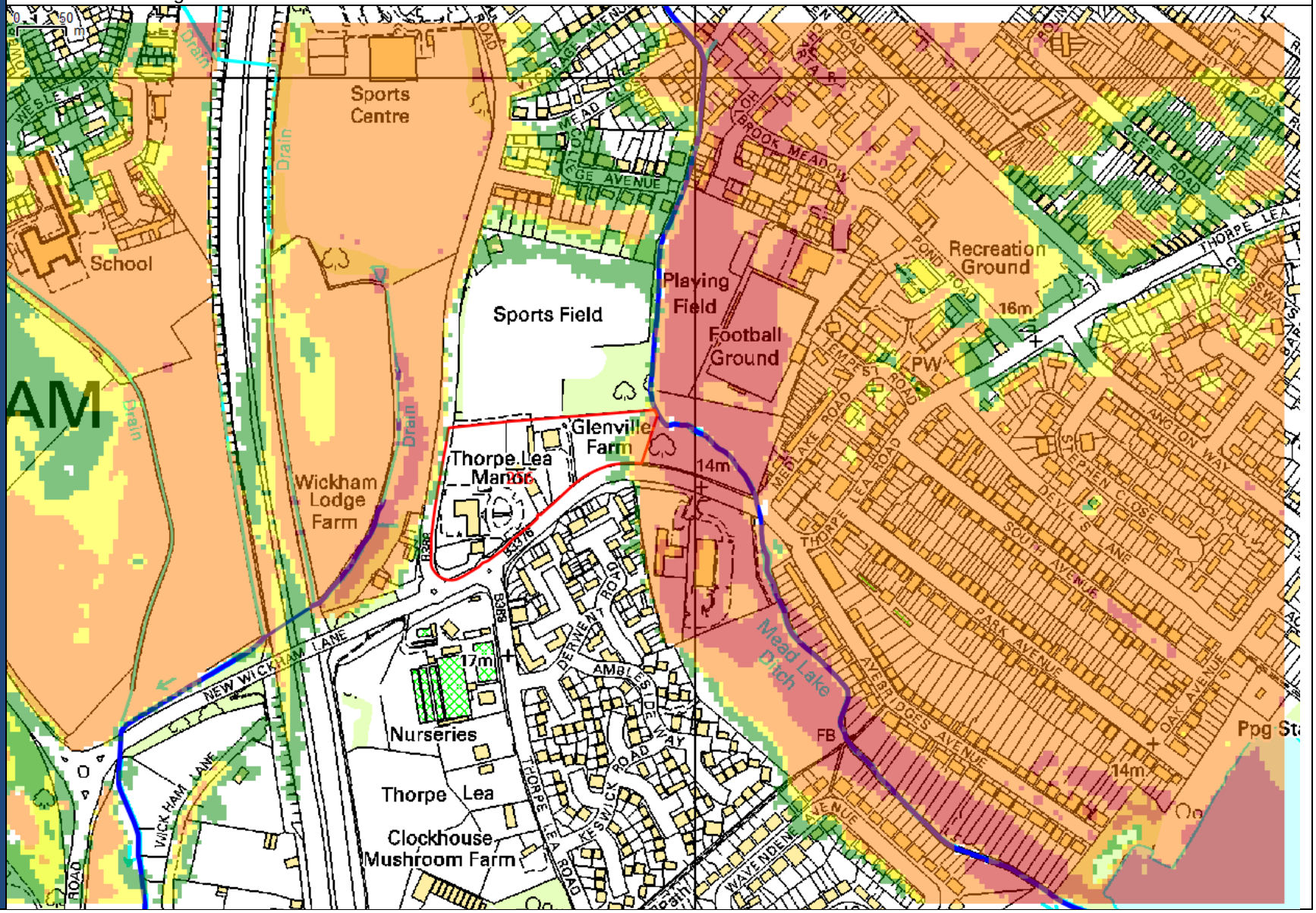
Depth and velocity data has been made available from the River Thames 2018 model. This data has been used to give an approximate assessment of the flood hazard. As the data available is for peak depth and peak velocity, the resulting flood hazard rating gives a 'worse case' scenario. In normal circumstances, peak depth will not occur at the same instance as peak velocity.
Safe Escape is via Thorpe Lea Road, New Wickham Lane, and then south along Stroude Road. The area at New Wickham Lane Bridge shown to be 'Danger for Some' relates to the M25 and not New Wickham Lane.

Danger for All

Danger for most

Danger for some

Very Low Hazard - Caution



River Thames 2018 Model Output

Hazard Mapping 1 in 100 year plus 35% climate change

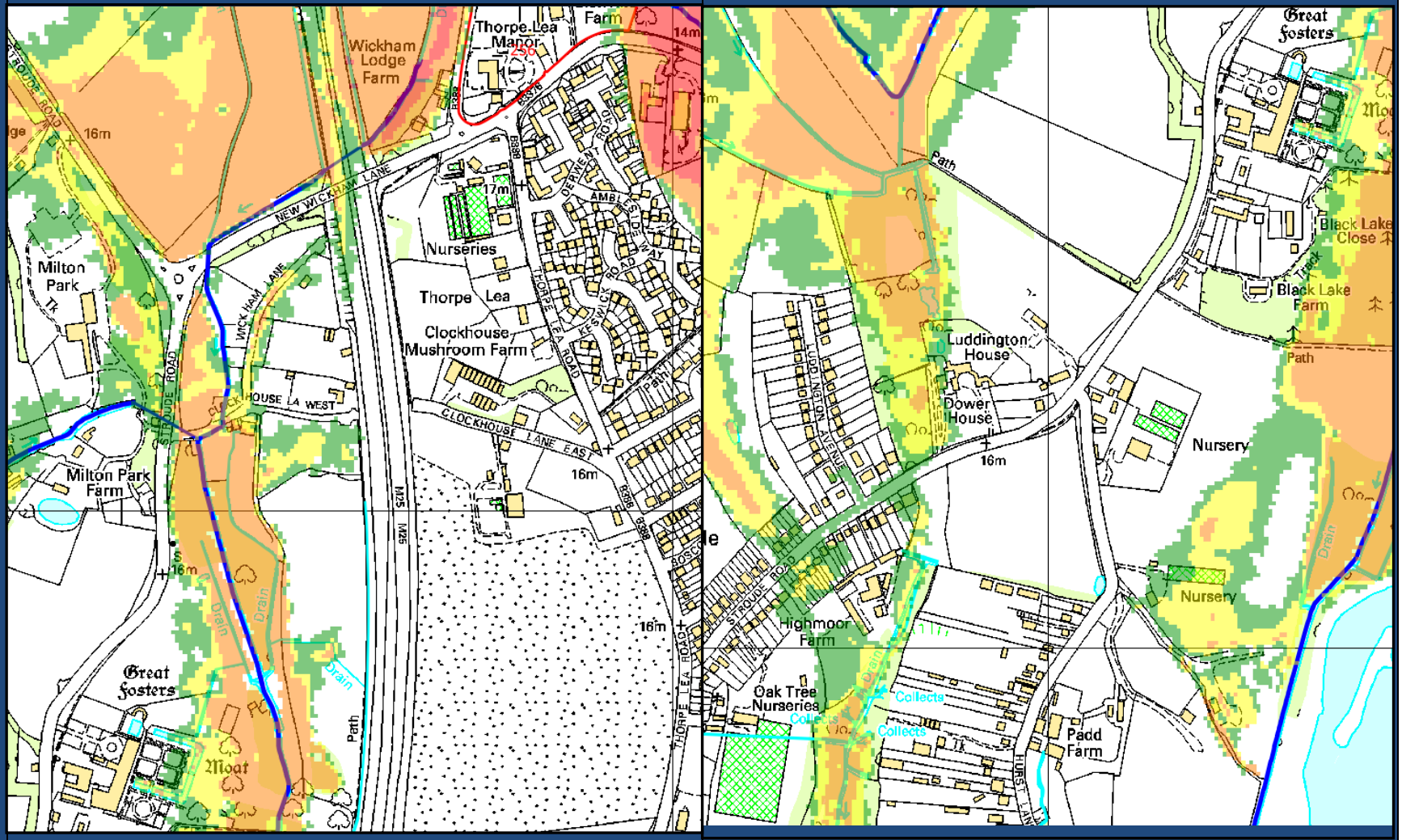
There are two sections of flooding shown along Stroude Road. Both are assessed to hava a Hazard Rating of less than 0.75 and are therefore classified as 'Very Low Hazard – Caution' at the 1 in 100 year event with a 35% allowance for climate change.
These 'calculated' hazard ratings likely to be greater than the 'actual' modelled ratings. Further, the flood envelopes are composites if flooding from both the River Thames and the Chertsey Bourne. The probability of both peaking at the same time is low. Thus, it is possible that the Thorpe Bypass will not be flooded at the same time as the section of Stroude Roade north of New Wickham Lane ant the in the event of a flood either one or the other of these road will be available for safe escape.

Danger for All

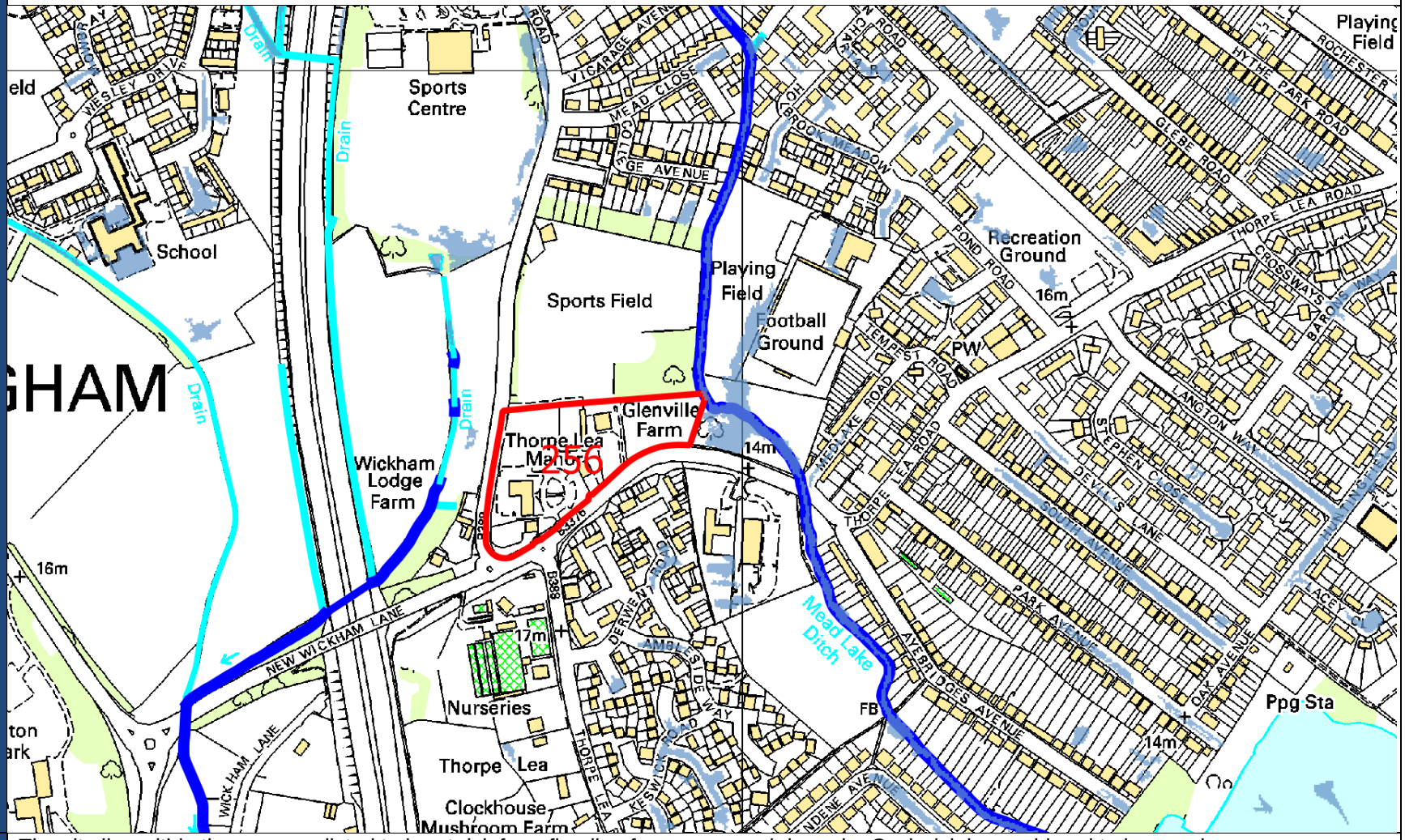
Danger for most

Danger for some

Very Low Hazard - Caution



Surface Water/Sewer	The Risk of Flooding from Surface Water map shows there are no areas identified within the site that are susceptible to being flooded by surface water. Thus there is a very low risk of surface water flooding within the site.
Artificial Sources	The site lies within the area predicted to be at risk from flooding from a reservoir breach. Such risk is considered to be very low.
Summary of flood risk from all sources of flooding	• Flooding from Fluvial sources – The detailed modelling indicates that the site principally lies outside of the 1 in 100 year flood envelope, including an 20% allowance for climate change. The best available information indicates that the site lies in Flood Zone 1. The implications of the revised climate change allowances will need to be investigated further with respect to the small areas of the site that lie in Flood Zones 2 and 3. • Flooding from Pluvial Sources – There is a very low risk of pluvial flooding. • Flooding from Artificial Sources – Although the site is shown to be at risk of reservoir flooding, this risk is considered to be very low.



Risk Management – Guidance will be provided in the following section to inform policy development	
Flood Risk Management Recommendations	• The site is partially greenfield and partially brownfield. • The indications are that the ground water table is high and the British Geological Survey have identified that very significant constraints are indicated for infiltration SuDS. • The runoff from the equivalent, developed, brownfield area of the site will need to be attenuated to, as near as is reasonably practicable, greenfield runoff rates. The runoff from any increase in the developed area of the site above the current impermeable area shall be restricted to the greenfield runoff. • In accordance with the SuDS Hierarchy, if infiltration is not practicable for all or some of the surface water runoff from the site then discharge to a watercourse or other water body. Given the sites proximity to the Meadlake Ditch, it may be possible to discharge the surface water runoff in to this. • There are no public surface water sewers within this area of Thorpe Lea. Surface water should not be discharged to the foul sewer system. Where it can be fully demonstrated that there are no other practical means to drain the site then connecting into the public foul sewer (as effectively a combined sewer) will be considered. Such connection will only be allowed where Thames Water have confirmed that their sewer has the capacity to receive the attenuated flow as stated above. • The surface water drainage system should be designed to ensure that no flooding occurs up to the 1 in 30 year pluvial event and that ensure that no on site property flooding or increased off site flood risk occurs for events up to the 1 in 100 year event, including allowance for climate change. • As the site is principally in Flood Zone 1, all classifications of development are appropriate. Within the site, the development should be undertaken sequentially with the development taking place in Flood Zone 1. Where appropriate, level for level floodplain compensation will be considered in in order to rationalise the area of development. • Safe access and egress from the site is achievable to the west along the B3376 Thorpe Lea Road.
Reasonable prospect of compliance within the Exception Test?	As the site lies outside of Flood Zone 3 there will be no requirement to satisfy the Exception Test.
Flood Risk Suitability Score	**4**