

Site 60- Chilsey Green Farm, Pycroft Road, Chertsey

Site Number	60	Site Name	Chilsey Green Farm, Pycroft Road, Chertsey
Site Location	KT16 9EP	Grid Reference	TQ 03142 66841
Location Plan			
KEY:	<p>Red line boundary</p> <p>Main River Blue line</p> <p>*Other Rivers Cyan line</p> <p>*Where other indicates: Drains, culverts, streams, brooks etc.</p>		
Description	<p>This site is located within Chertsey St. Anns. Ruxbury Road and Pycroft Road form its northern boundary, the railway line the southern boundary and open fields to the west. The unnamed Main River that flows between the site and Rutherwyk Road forms the boundary on the eastern side of the site. There are currently a number of dwellings within the site including a nursing home, as well as a number of commercial units.</p>		

Risk Assessment

Defences

There are no formal raised defences that would protect this site.

Mapping

KEY:

Red line
boundary

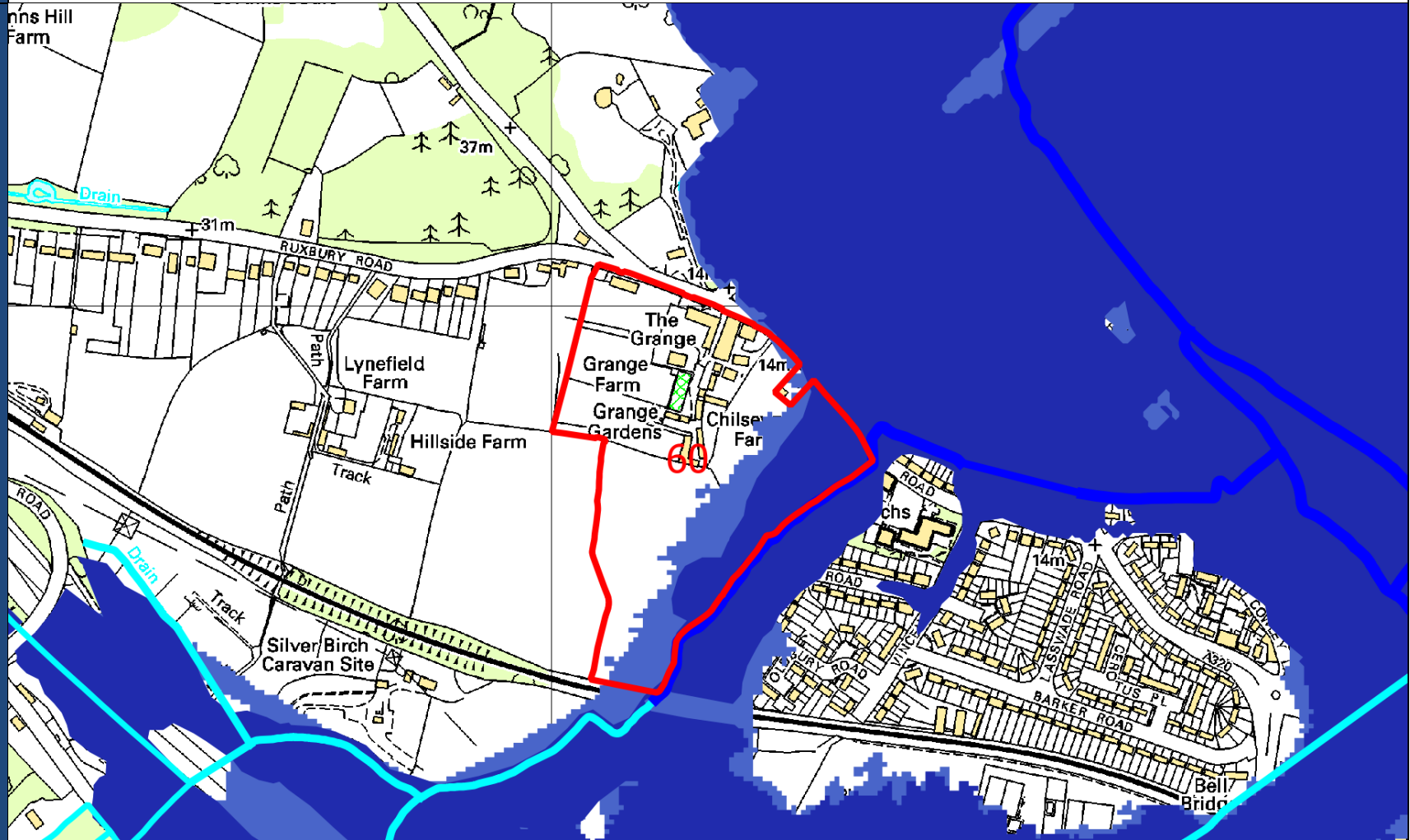
Main

River

*Other Rivers

Flood Zone 2

Flood Zone 3



Flood Zones

The site is shown to lie within Flood Zones 1, 2 and 3.

Flood Zone 1 – 5.21 ha, 66.2%

Flood Zone 2 – 1.20 ha, 15.2%

Flood Zone 3 – 1.46 ha, 18.6%

Sources of Flooding

Fluvial

The site is shown to lie outside of the 2009 the River Thames Reach 3 flood model. However, a significant part of the site lies within the 2005 Chertsey Bourne 1 in 100 year flood envelope. The model output shows no difference between the extent of the 1 in 100 year + 20% CC flood and the 1 in 100 year flood.

1 in 100 year Flood – 1.29 ha, 16.4%

1 in 100 year + 20% CC Flood – 0.00 ha, 0%

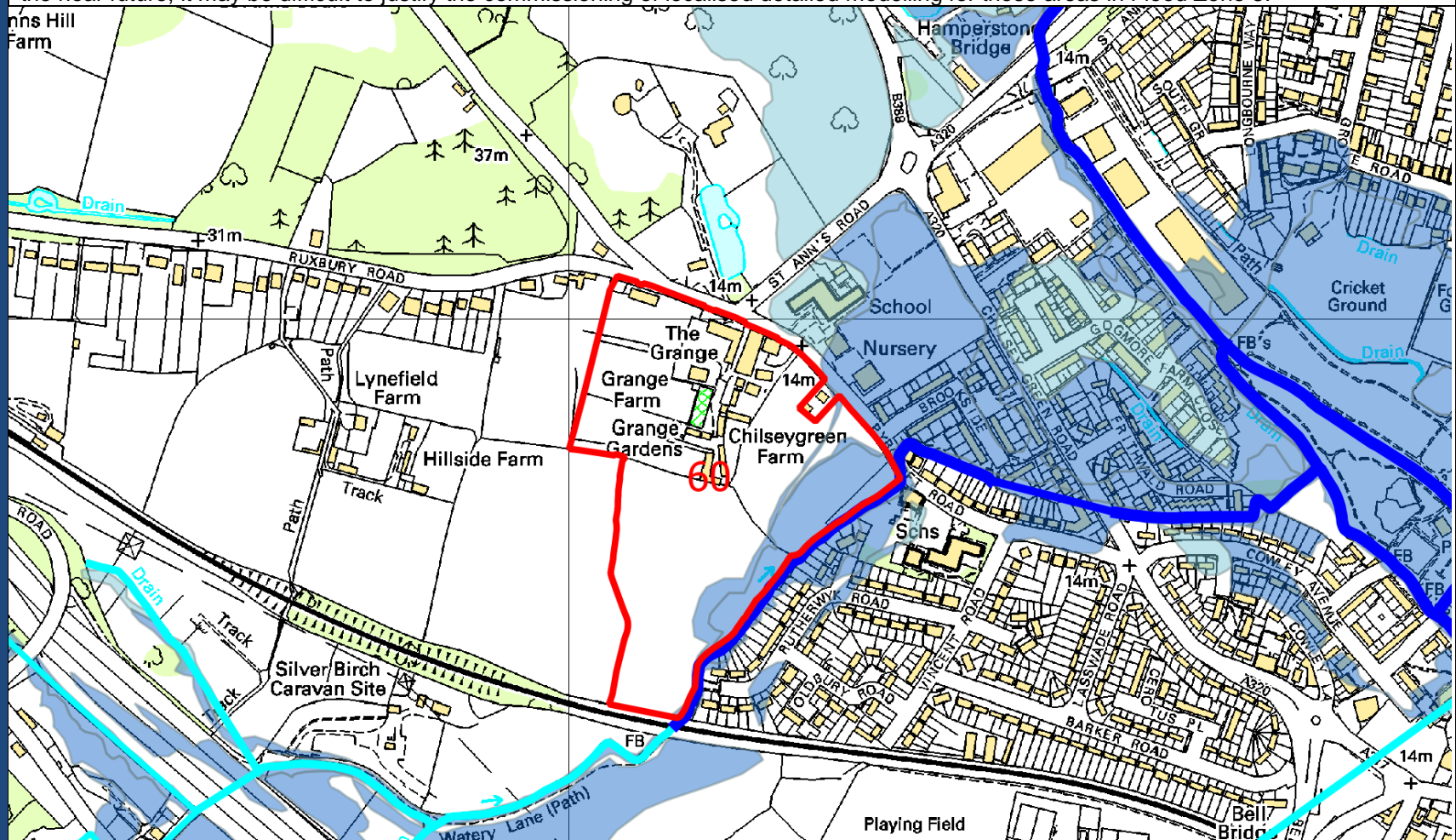
Modelling for the revised climate change allowances is not currently available. An assessment of the implications of the new climate change allowances will need to be undertaken in accordance with in the Environment Agency's Thames Area Climate Change Allowances guidance document. The Basic method will 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. Given that the updated modelling of the River Thames and Chertsey Bourne is expected to be made available in the near future, it may be difficult to justify the commissioning of localised detailed modelling for those areas in Flood Zone 3.

1 in 100yr +20%CC

Flood Extent



1 in 100yr Flood Extent



River Thames 2018 Model Output

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

1 in 100yr + 35%CC
Flood Extent

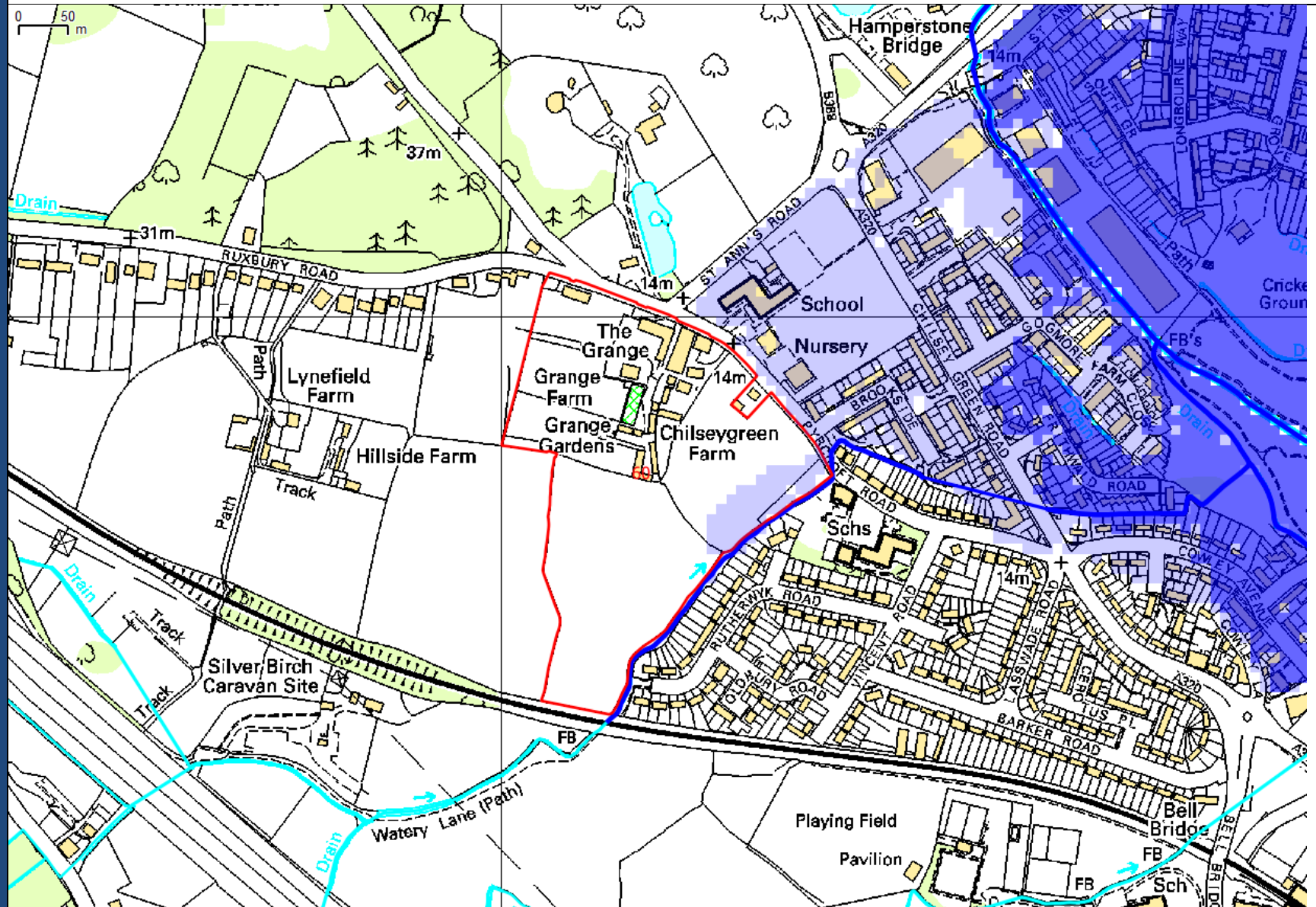


1 in 100yr Flood Extent



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.

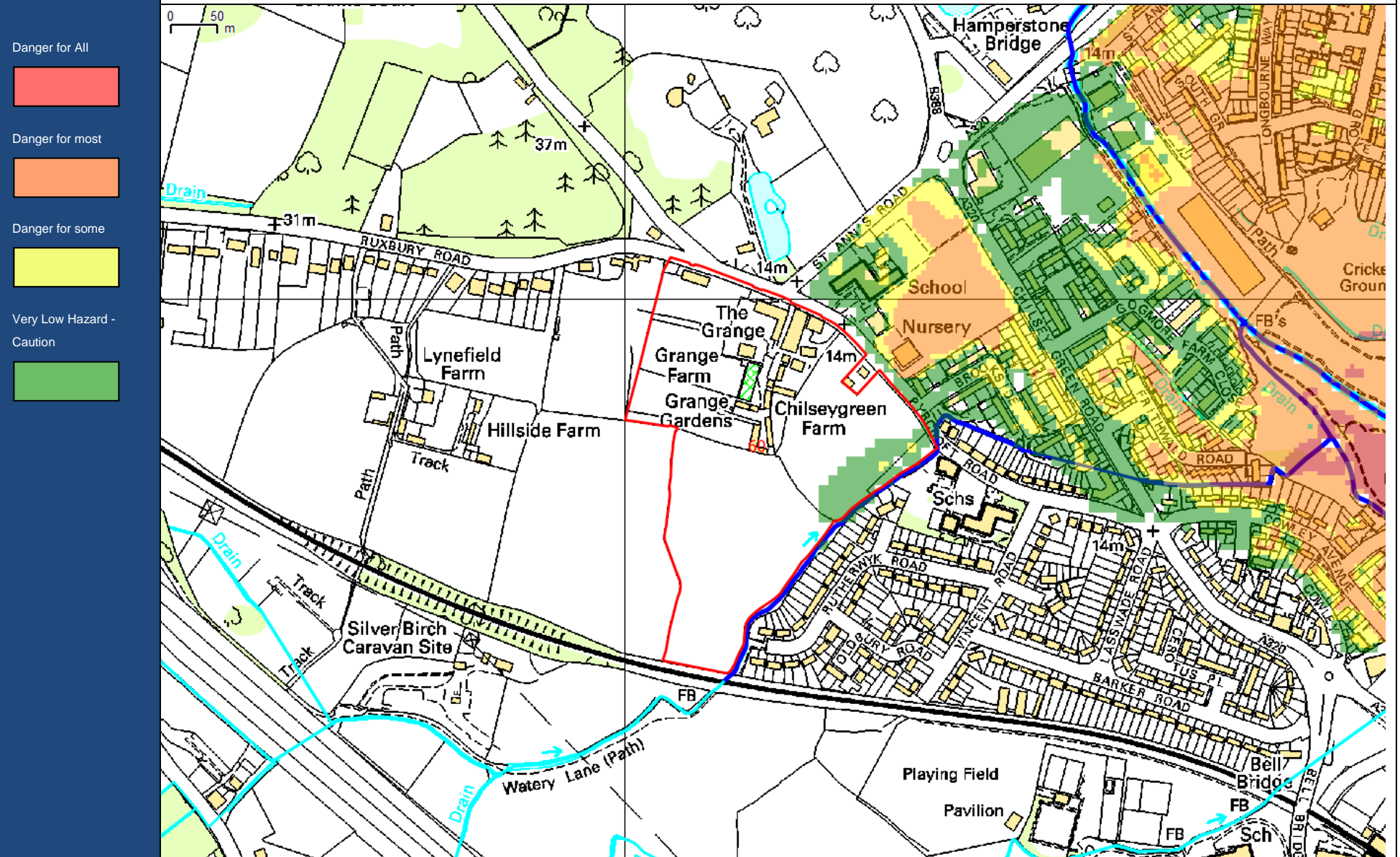
The updated model shows that eastern side of the site does not flood at the 1 in 100 year level. However, it floods from the adjacent watercourse at the 1 in 100 year plus 35% cc allowance to a lesser extent than that predicted by the 2005 Chertsey Bourne model at the 1 in 100 year plus 20% cc allowance.



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 Pycroft Road, and Ruxbury Road



Surface Water/Sewer

The Risk of Flooding from Surface Water map shows there are is a medium to low risk of surface water flooding adjacent to the watercourse. However, this pluvial flooding does not extend beyond the extent of Flood Zone 3 or the 1 in 100 year flood envelopes. The remainder of the site is shown to be at very low risk of pluvial flooding.

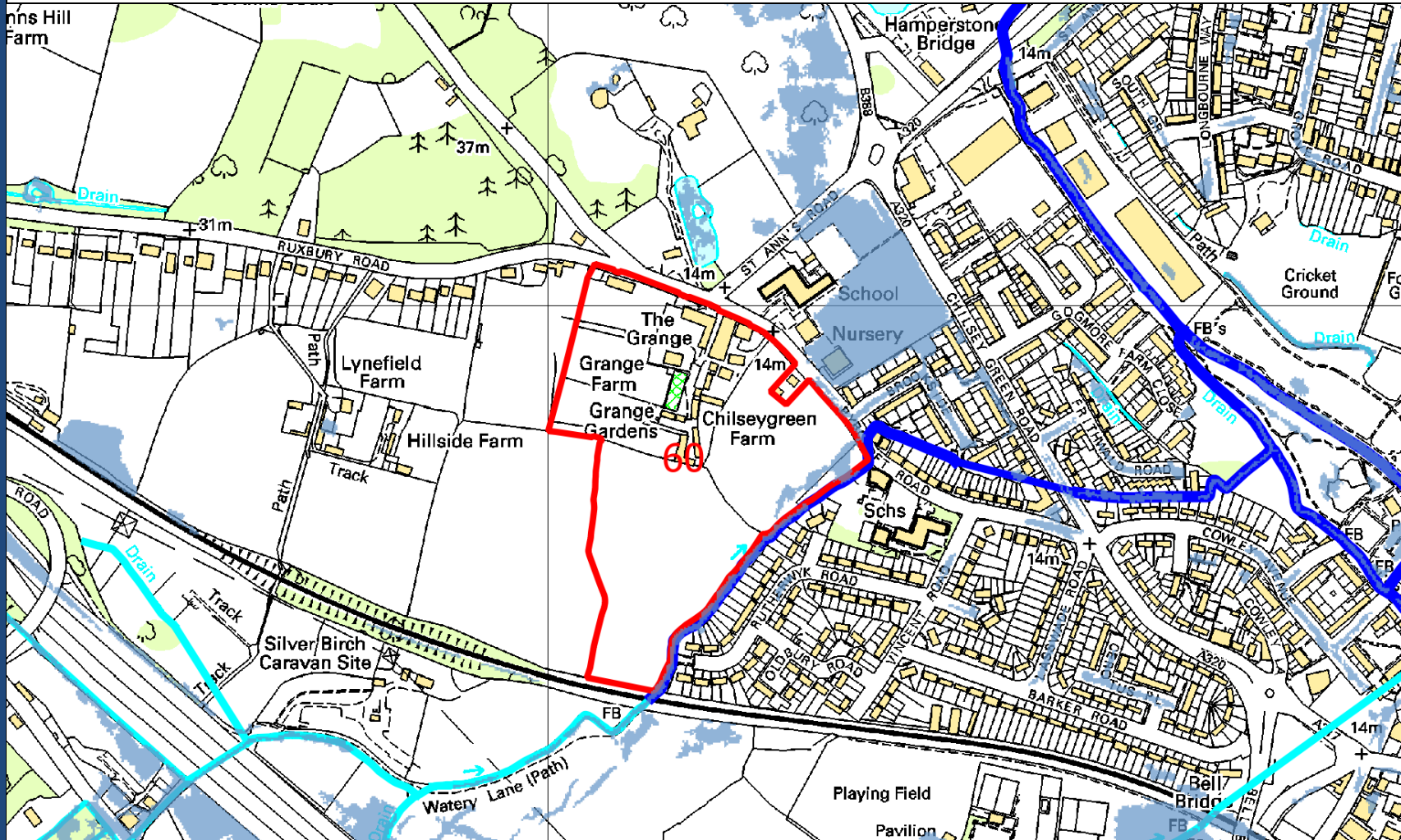
KEY:

Red line boundary Main

River

*Other Rivers

SW Flood Extent



Artificial Sources

The site lies outside of the area predicted to be at risk from flooding from a reservoir breach

Summary of flood risk from all sources of flooding

- Flooding from Fluvial sources – The site is divided between areas that lie in Flood Zones 1, 2 and 3. The site is shown to lie within the 2005 model's 1 in 100 year plus 20% climate change flood envelope and this is a similar area to that of the Flood Zone 3 flood extent
- Flooding from Pluvial Sources - There is a very low risk of pluvial flooding for most of the site. Small areas are at a medium risk to low risk of pluvial flooding
- Flooding from Artificial Sources – No risk of flooding from a reservoir breach has been identified.

Risk Management – Guidance will be provided in the following section to inform policy development

Flood Risk Management Recommendations

- The site is approximately split between 17% brownfield and 83% greenfield.
- The British Geological Survey in its SuDS mapping indicates area that the ground water table is potentially high over most of the site although it may be lower in the higher area to east. However, they have identified that there are opportunities for bespoke infiltration SuDS. Where infiltration is possible it should be utilised.
- Any runoff from the development will need to be attenuated to greenfield runoff rates.
- 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. The unnamed main river running along the eastern boundary of the site should be used to receive any discharge that is required from the site.
- 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.
- The site is divided between all three Flood Zones. Within the site, the development should be undertaken sequentially with the development taking place in Flood Zone 1 principally within Flood Zone 1 followed by Flood Zone 2. 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 Ruxbury Road and Almnors Road. The access to the site should be located to the west of St. Ann's Road, as Pycroft Road is shown to flood.

Reasonable prospect of compliance within the Exception Test?

More Vulnerable development should not take place in Flood Zone 3.

Flood Risk Suitability Score

4