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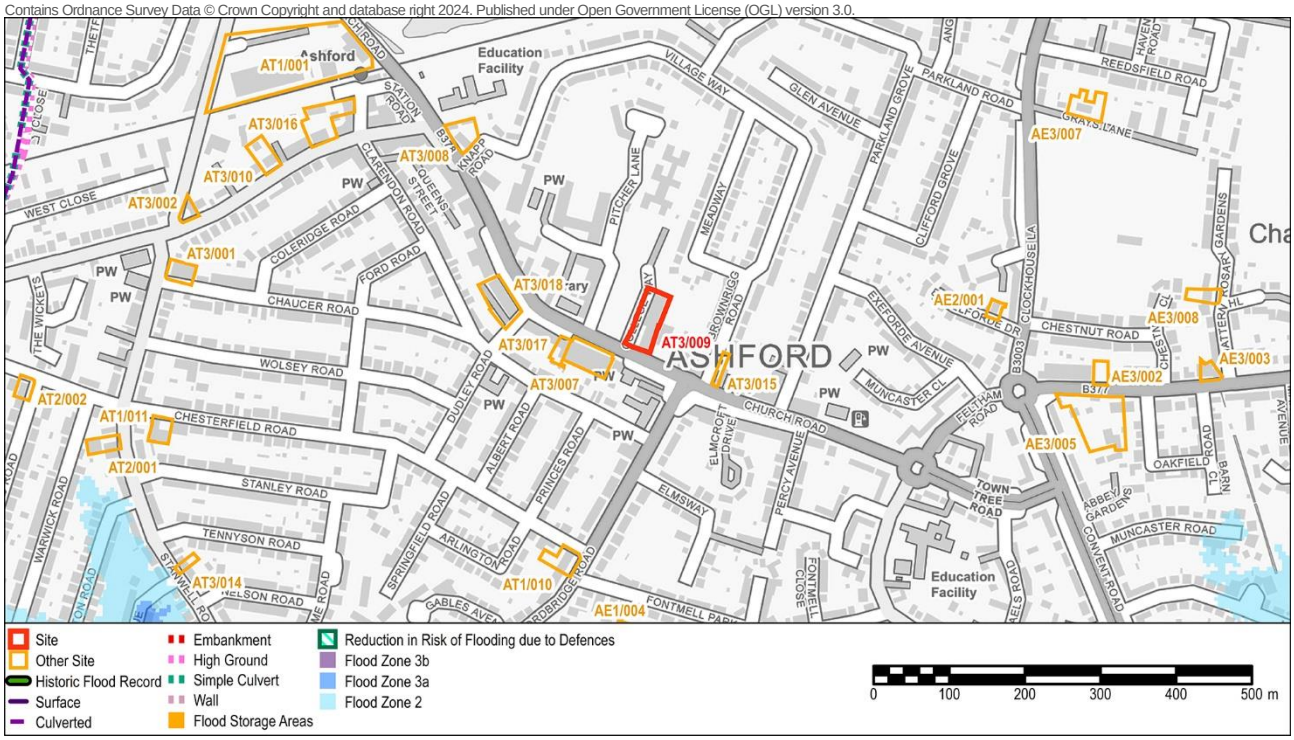
Group 1 Brownfield sites at low risk of flooding from rivers and surface water

AT3/009 (Ashford Telephone Exchange, Church Road)

AT3/009: Ashford Telephone Exchange, Church Road				
Site ID:	AT3/009	**Area (ha):**		0.26
Proposed Use: Residential (C3): 20 units (approx.)			**Vulnerability Classification:** More Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

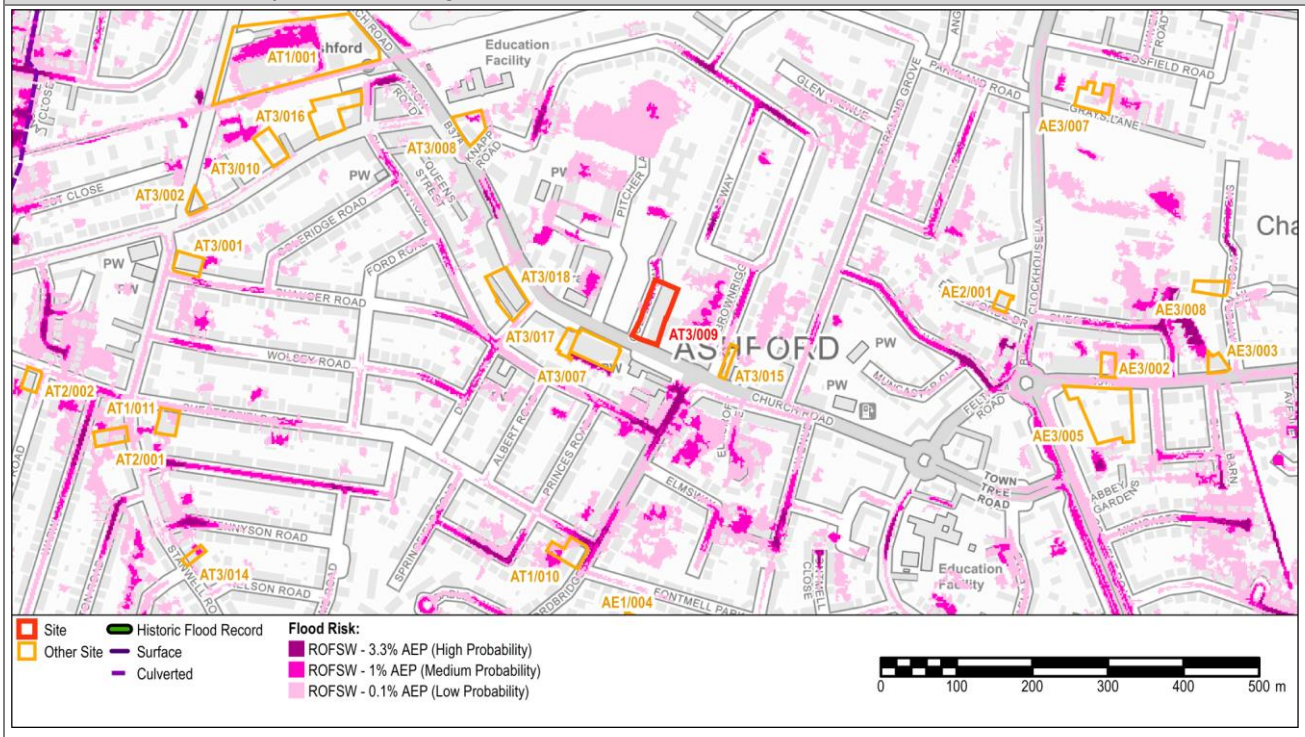


Flood Zones and Flood Records

Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

Surface Water Flooding

AT3/009: Ashford Telephone Exchange, Church Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Staines Reservoirs, King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding. With reference to the 0.1% AEP event extent shows that assuming the low probability events will become more frequent in the future, the site is still not shown to be within an area particularly susceptible to surface water flooding. The site is currently developed land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

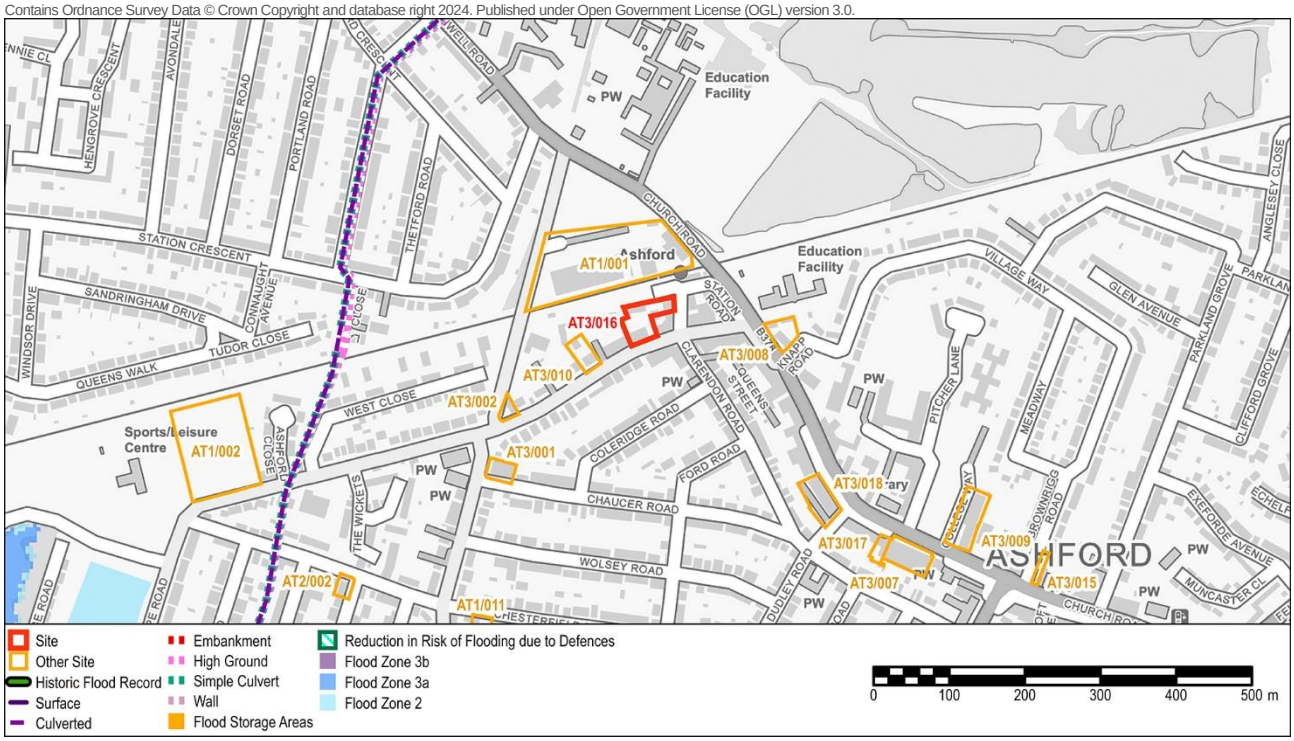
A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

AT3/016 (23-31 (not 11-19) Woodthorpe Road)

AT3/016: 23-31 Woodthorpe Road			
Site ID:	AT3/016	**Area (ha):**	0.24
Proposed Use: Residential (C3): 120 units (approx.) Ground floor office/retail (Class E): 1300 sqm (approx.)		**Vulnerability Classification:** More Vulnerable Less Vulnerable	

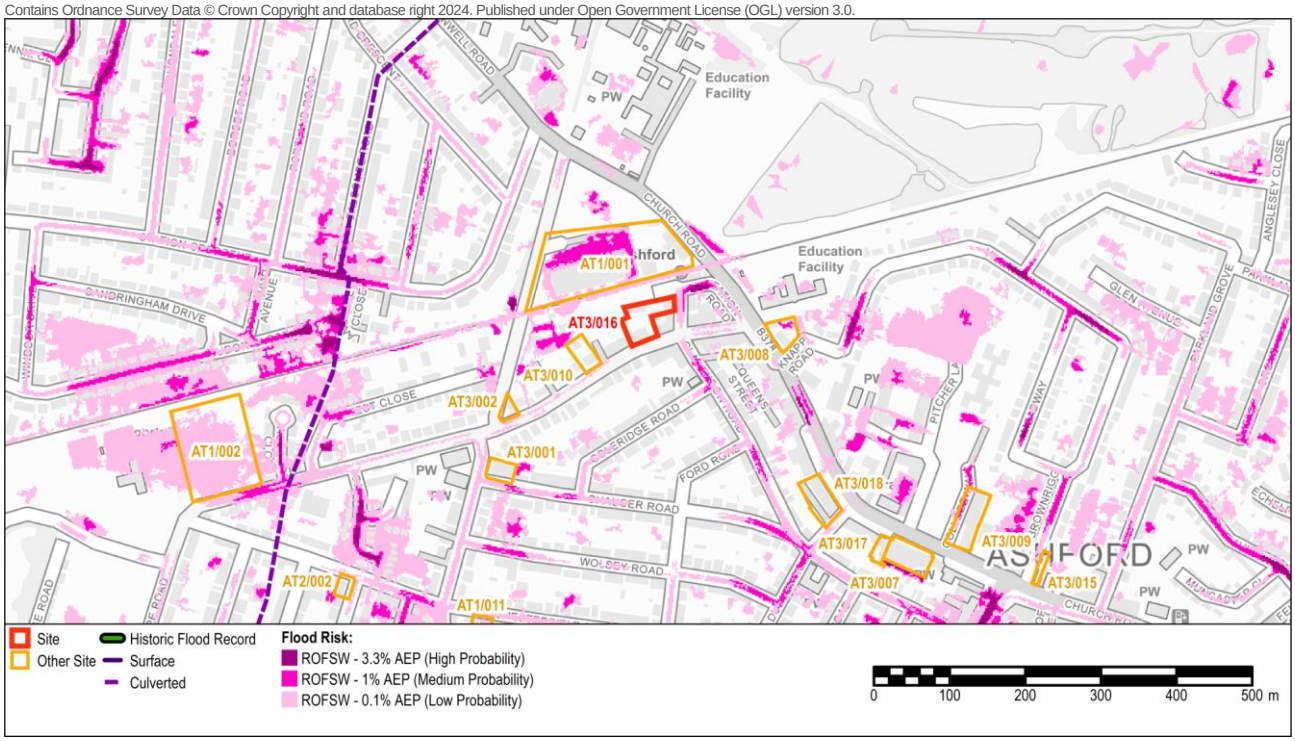
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

AT3/016: 23-31 Woodthorpe Road

Surface Water Flooding



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel

Areas Susceptible to Groundwater Flooding	>=75%
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface
Aquifer Designation	Unproductive, Secondary A

Other Sources

Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Staines Reservoirs, King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding. However, Station Approach and Station Road to the east of the site are shown to be potentially susceptible to surface water flooding.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Less Vulnerable (office, retail) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

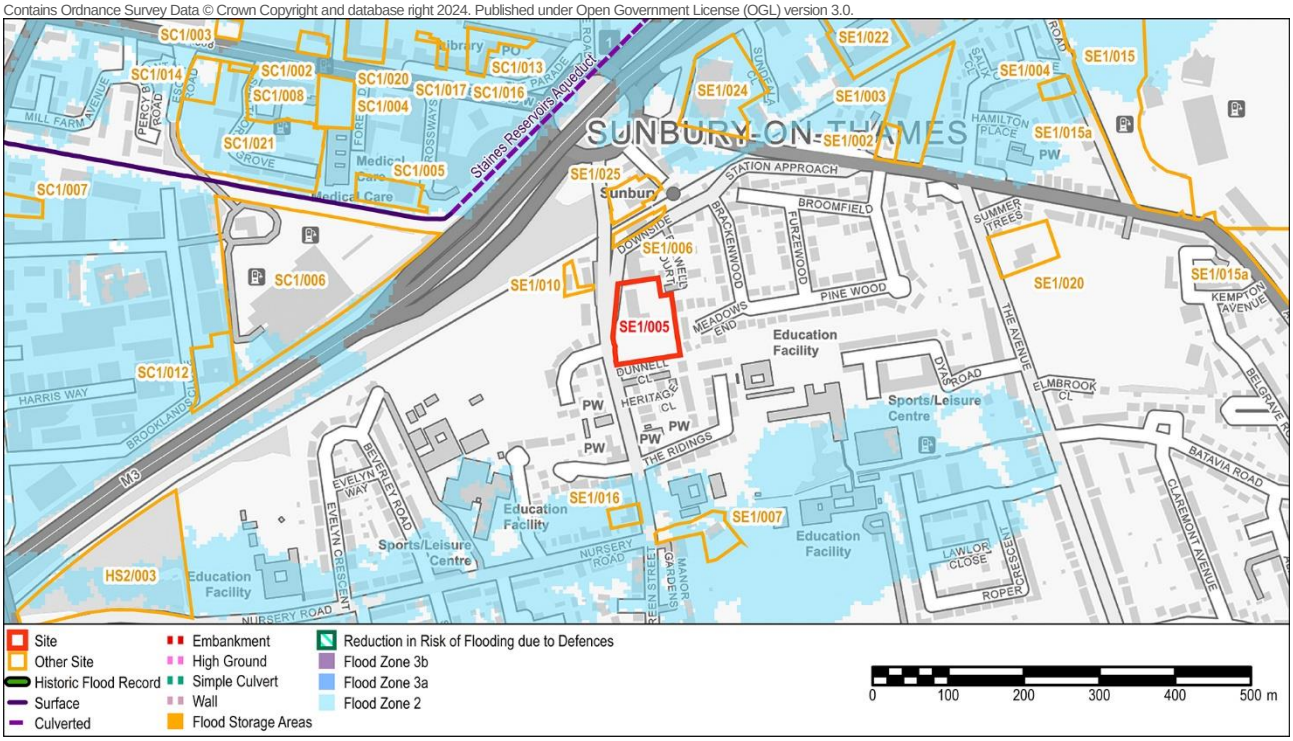
Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Site proposals need to consider emergency planning requirements relating to residual risk from the reservoirs.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

SE1/005 (Benwell House, Green Street)

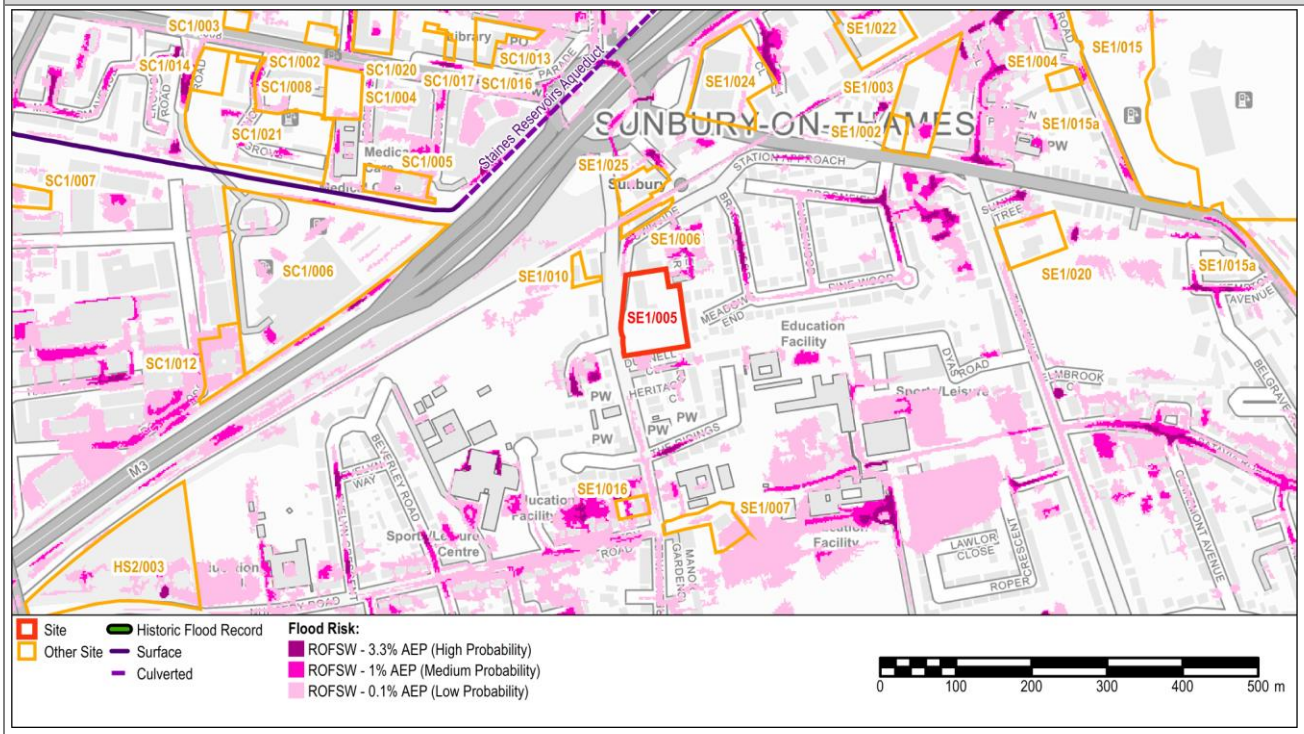
SE1/005: Benwell House, Green Street				
Site ID:	SE1/005	**Area (ha):**		0.8
Proposed Use:	Residential (C3): 39 Units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 4
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 0

Surface Water Flooding

SE1/005: Benwell House, Green Street



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Principal, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. Land to the north is shown to be Flood Zone 2, medium probability of flooding, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping does not identify that the site is susceptible to surface water flooding. The site is currently greenfield land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.
Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

Site Specific Recommendations

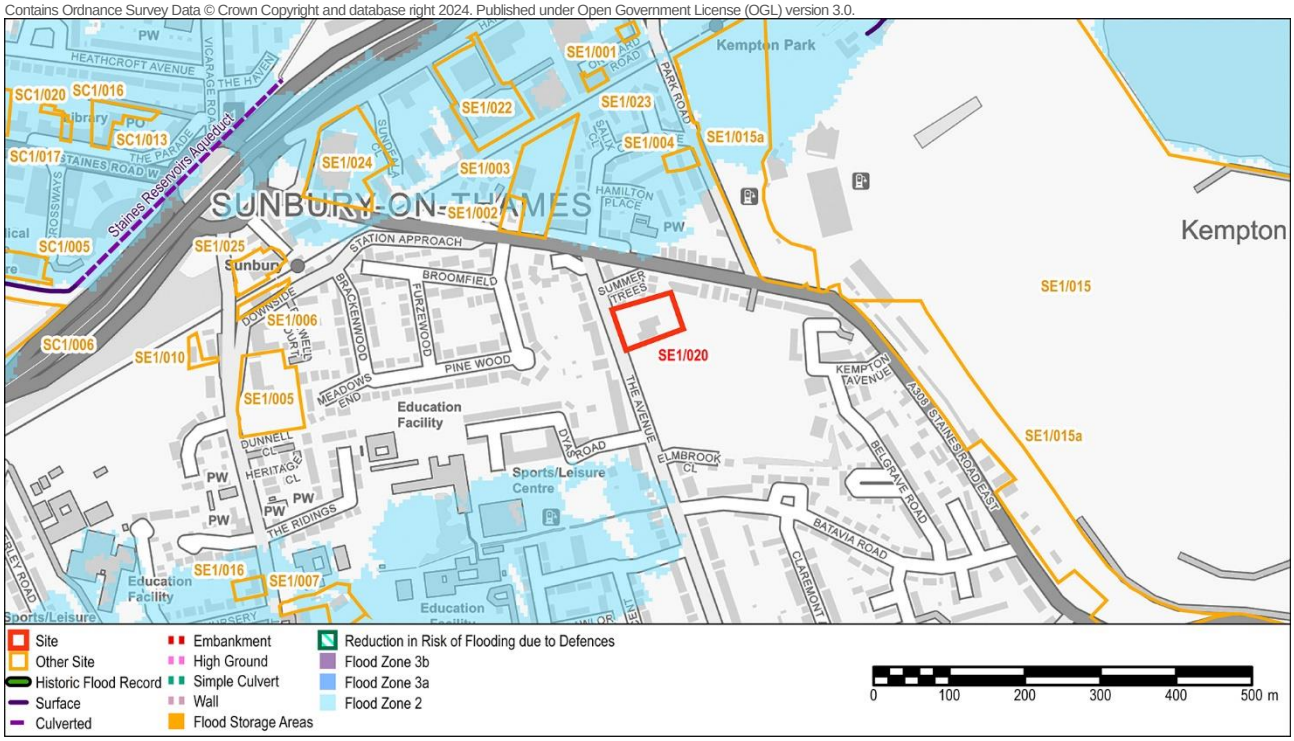
Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

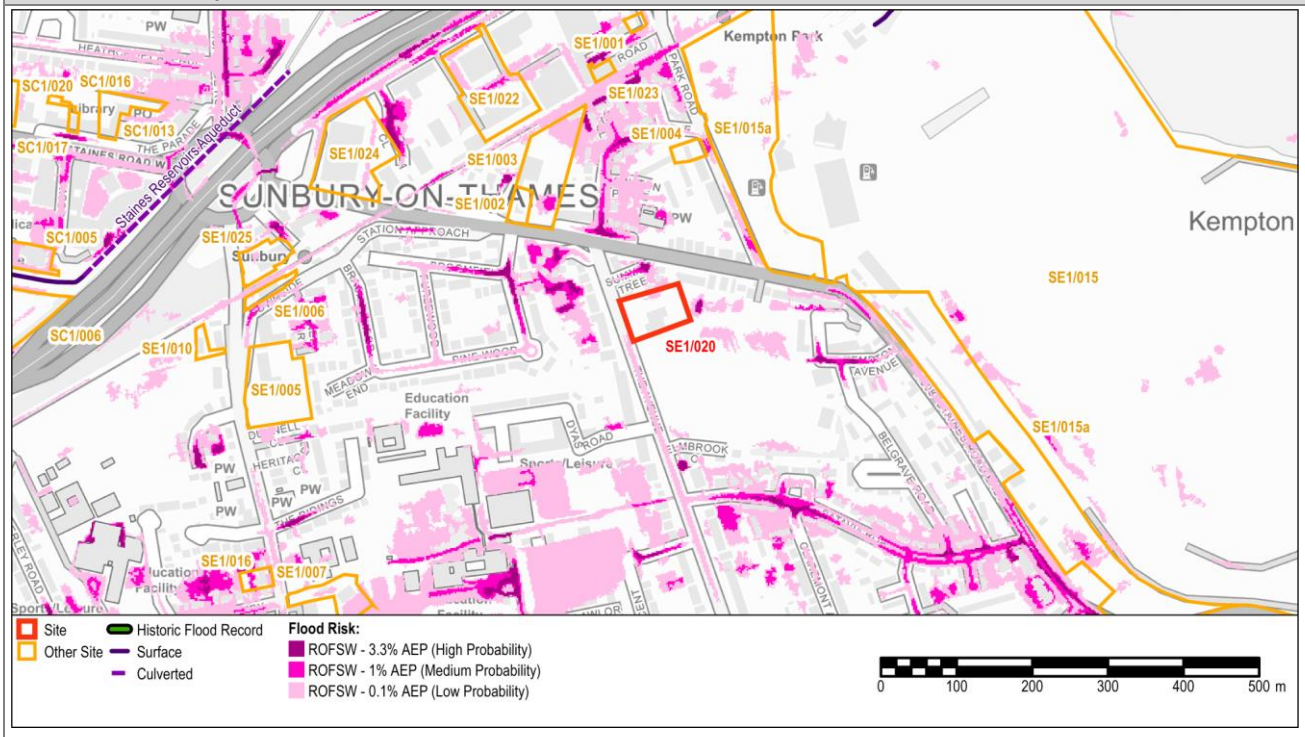
SE1/020 (Sunbury Adult Education Centre, The Avenue)

SE1/020: Sunbury Adult Education Centre, The Avenue				
Site ID:	SE1/020	**Area (ha):**		0.43
Proposed Use:	Residential (C3): 30 units (Approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low

SE1/020: Sunbury Adult Education Centre, The Avenue



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater to occur at surface.		
Aquifer Designation	Principal, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. Land to the north is shown to be Flood Zone 2, medium probability of flooding, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping does not identify that the site is susceptible to surface water flooding. The site is previously developed land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

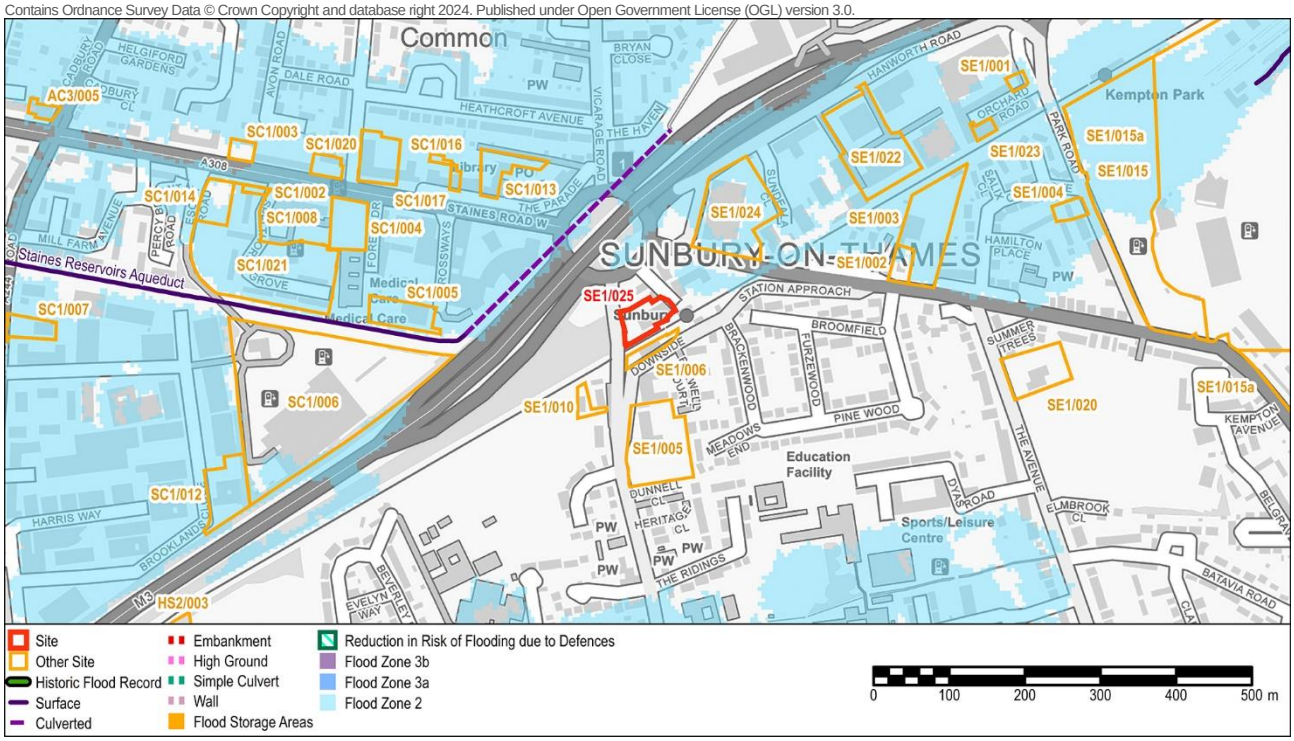
Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

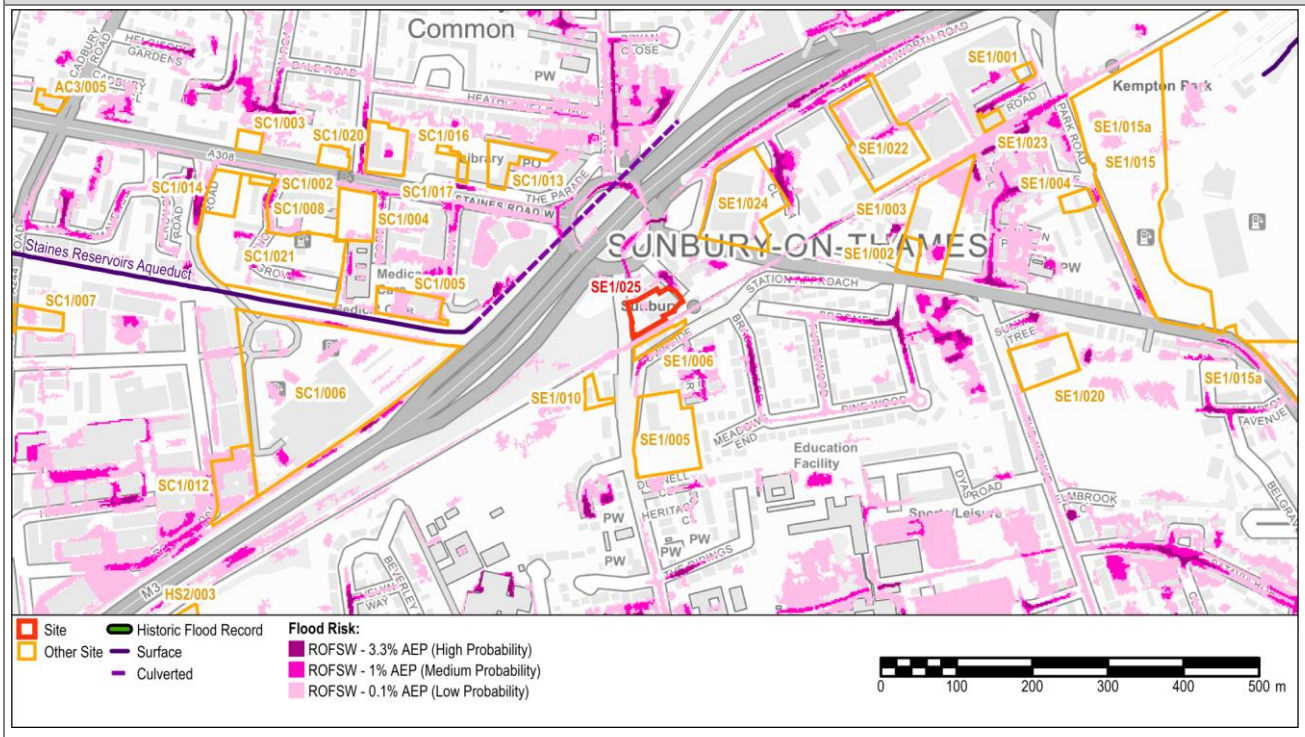
SE1/025 (Elmbrook House, Station Road)

SE1/025: Elmbrook House, Station Road				
Site ID:	SE1/025	**Area (ha):**		0.25
Proposed Use:	Residential (C3): 50 Units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 4
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 0
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SE1/025: Elmbrook House, Station Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater to occur at surface		
Aquifer Designation	Principal, Secondary A, Unproductive		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. Land to the north is shown to be Flood Zone 2, medium probability of flooding, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping does not identify that the site is susceptible to surface water flooding, however one of the access routes (Station Road) is shown to be at risk. In the future there may be more risk of surface water ponding adjacent to the railway line and on low spots beneath the M3/A308 interchange. The site is previously developed land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

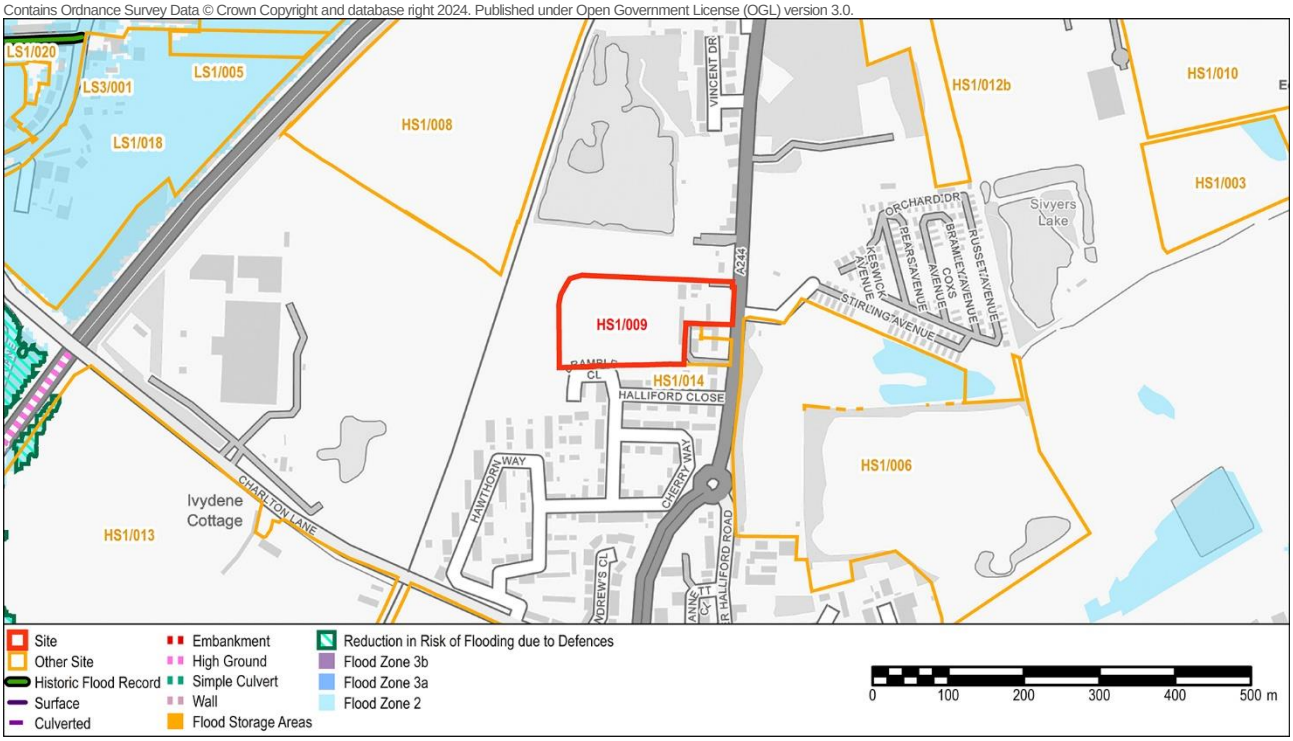
A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Group 2 Greenfield sites at low risk of flooding from rivers and surface water

HS1/009 (Bugle Nurseries, Upper Halliford Road)

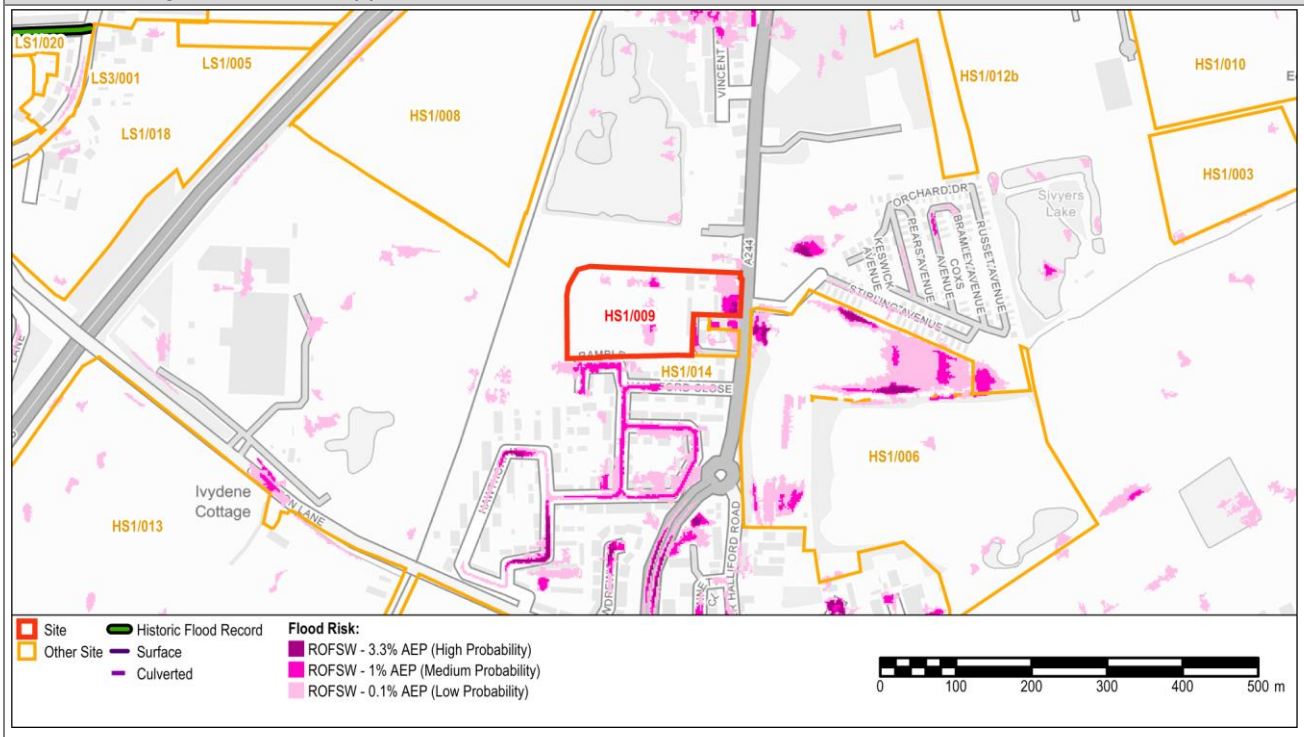
HS1/009: Bugle Nurseries, Upper Halliford Road				
Site ID:	HS1/009	**Area (ha):**		4.88 (2.28 (developable area for residential use)
Proposed Use:	Residential (C3): 79 units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 0; External 3

Surface Water Flooding

HS1/009: Bugle Nurseries, Upper Halliford Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=50%, >=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low probability of flooding from rivers, on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping shows some locations of ponding but does not indicate the site is particularly susceptible to surface water flooding.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

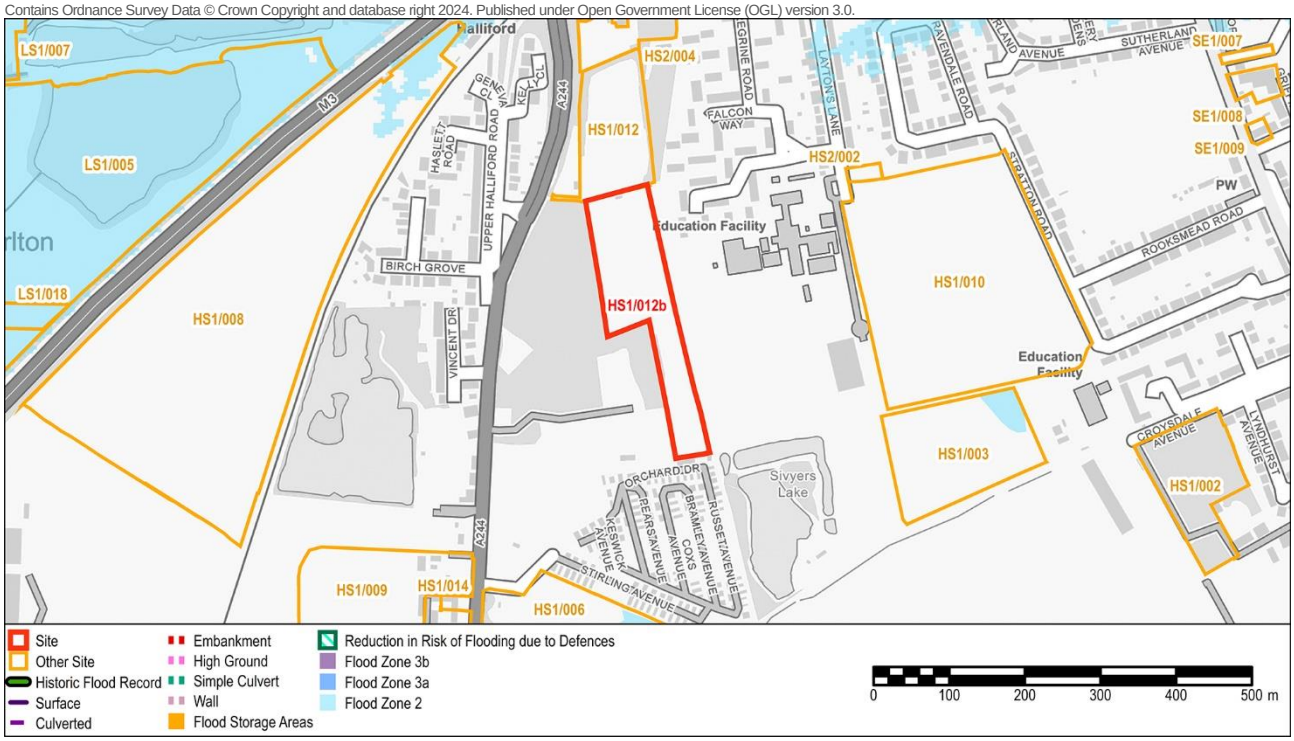
Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from the reservoirs.

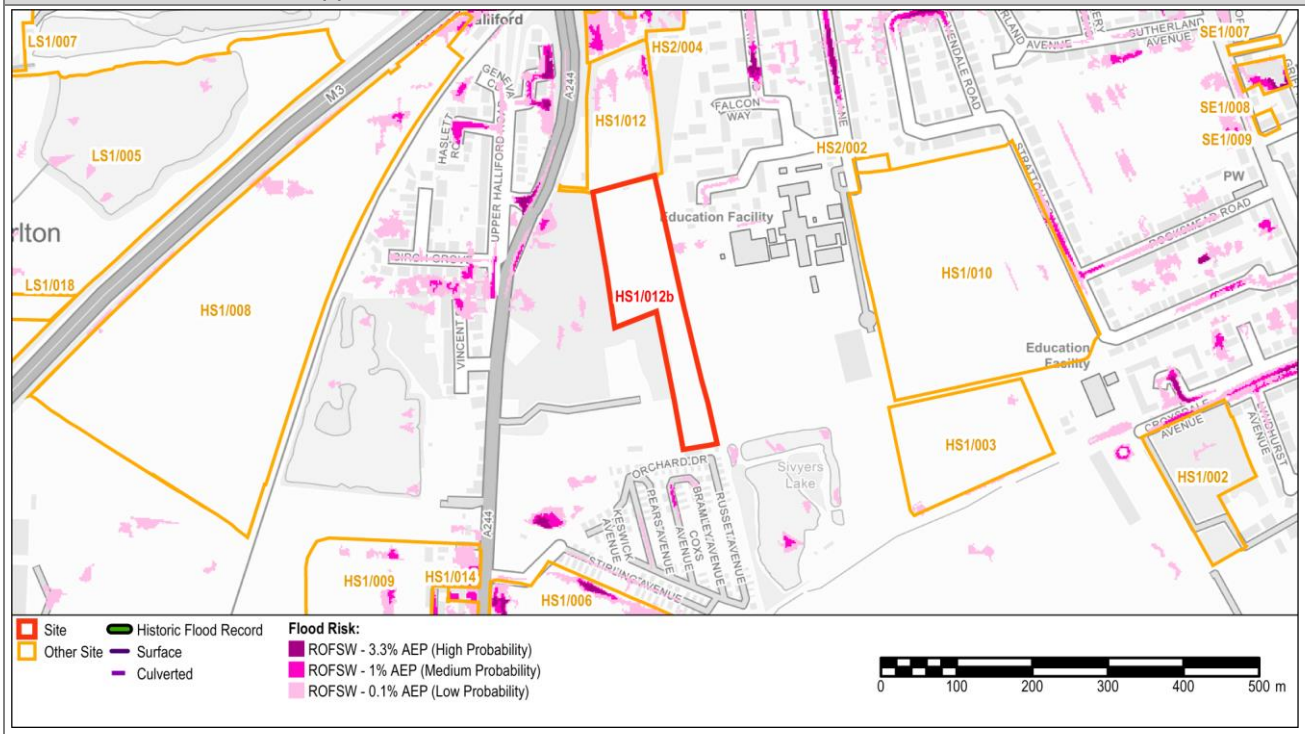
HS1/012b (Land East of Upper Halliford Road)

HS1/012b: Land East of Upper Halliford Road				
Site ID:	HS1/012b	**Area (ha):**		2.34
Proposed Use: Sixth form college (Use Class F1) Residential (Use Class C3): 20 units (approx.)		**Vulnerability Classification:** Less Vulnerable More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 3
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low

HS1/012b: Land East of Upper Halliford Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding either during the 1% AEP event or the 0.1% AEP event (which provides an indication of how the risk of surface water flooding could increase in the future due to climate change). The site is currently greenfield land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

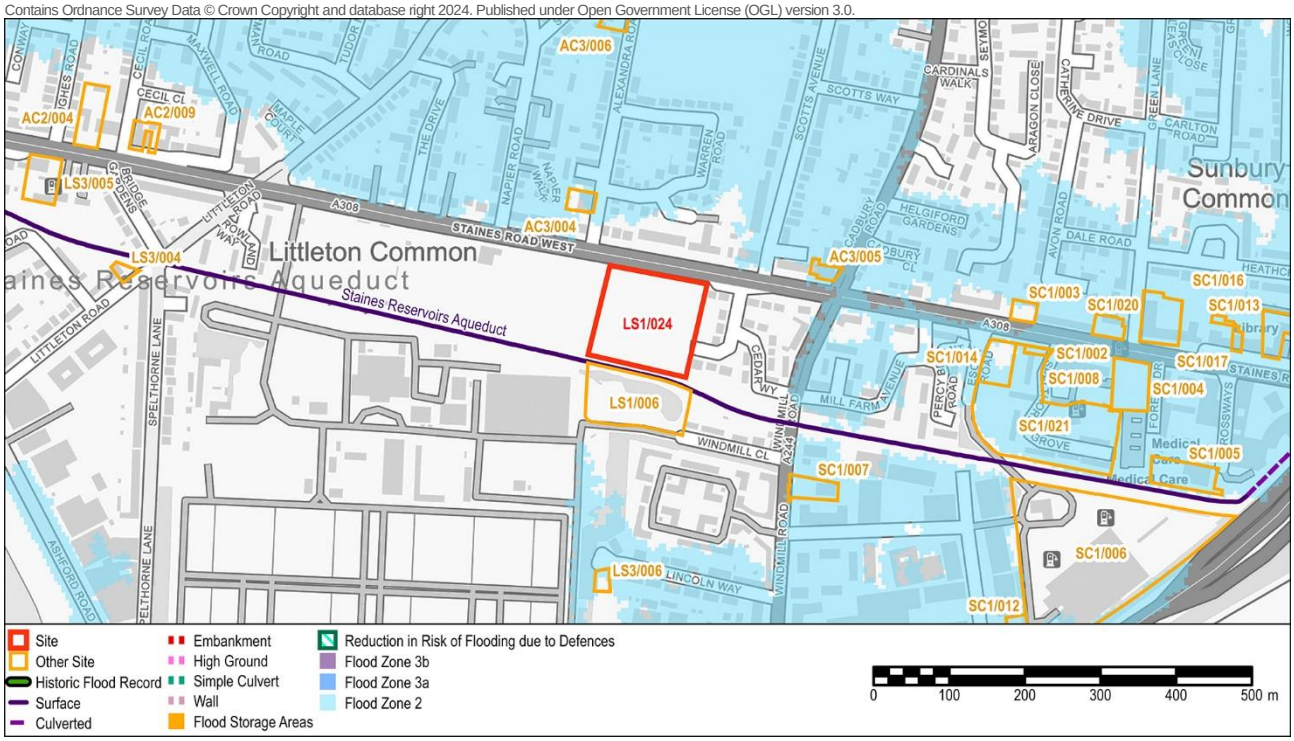
Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

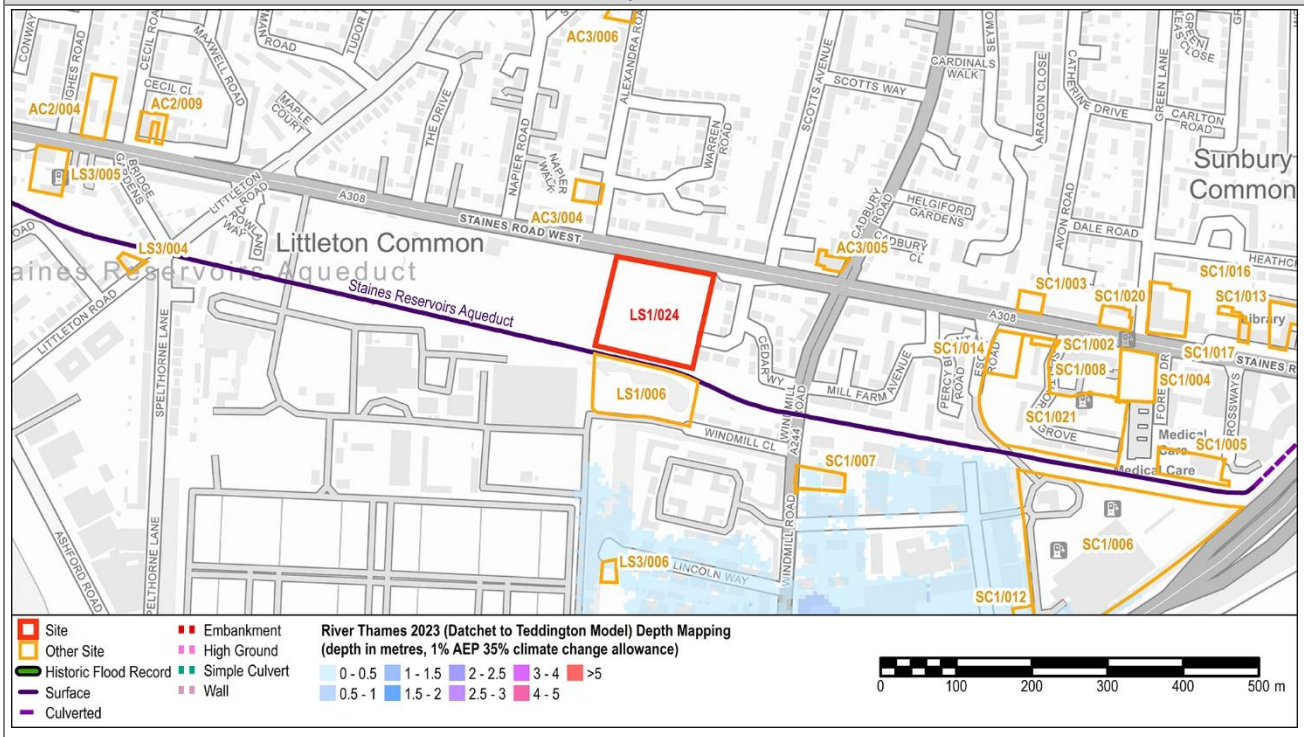
LS1/024 (Land at Staines Road West and Cedar Way)

LS1/024: Land at Staines Road West and Cedar Way				
Site ID:	LS1/024	**Area (ha):**		1.62
Proposed Use:	Residential (C3): 77 units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

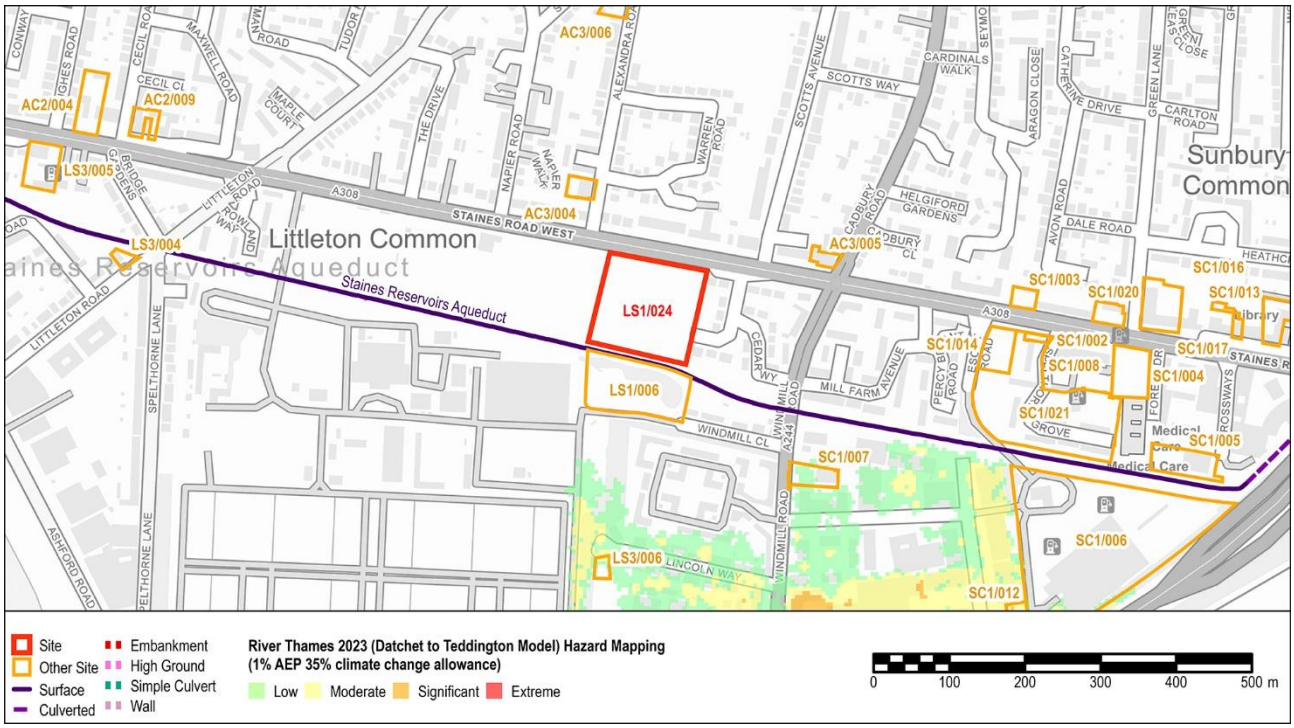


Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

LS1/024: Land at Staines Road West and Cedar Way



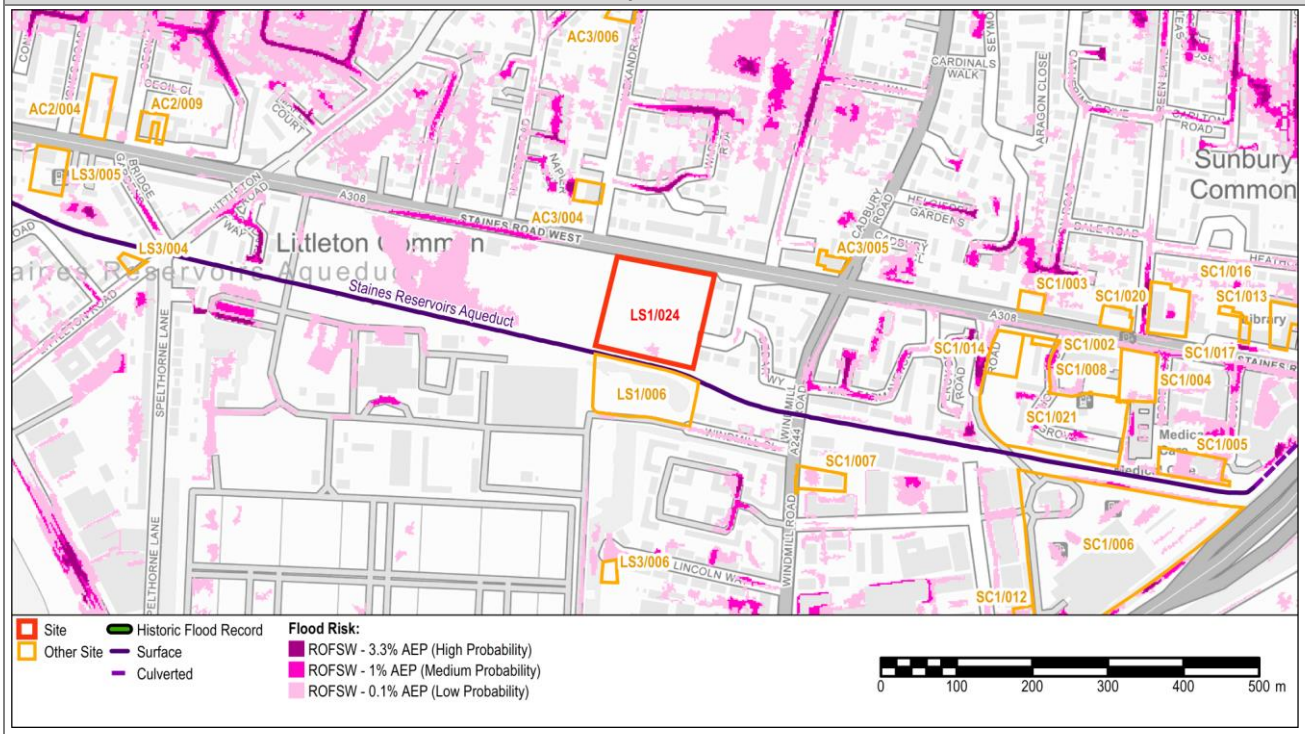
River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



River Thames (Thames Dominated) Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

LS1/024: Land at Staines Road West and Cedar Way



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low probability of flooding from rivers, on the Flood Map for Planning. Land to the east and north is shown to be Flood Zone 2, medium probability of flooding however, this land is not shown to be within defended modelled extents for the design event. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event. Flooding occurs to the south of the Staines Reservoirs Aqueduct.
The Risk of Flooding from Surface Water mapping does not identify that the site is susceptible to surface water flooding. The site is currently greenfield land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

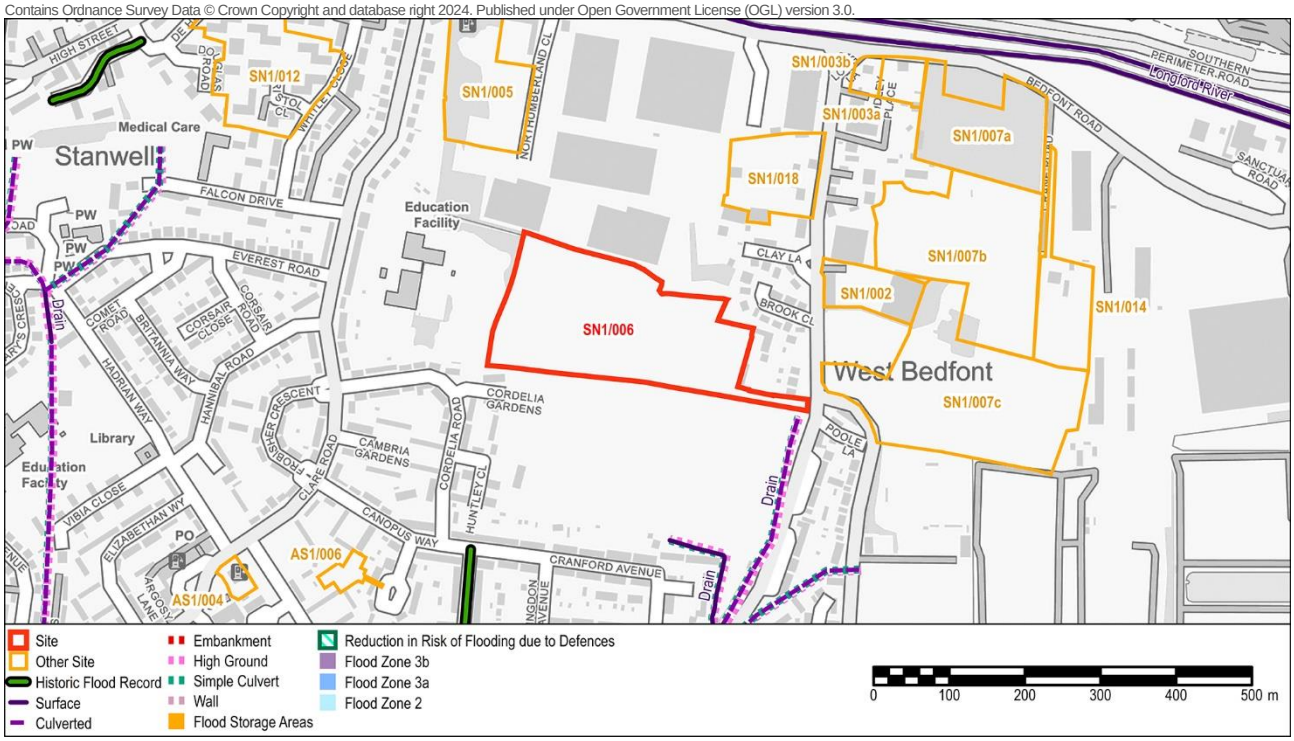
Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

SN1/006 (Land to West of Long Lane and South of Blackburn Trading Estate)

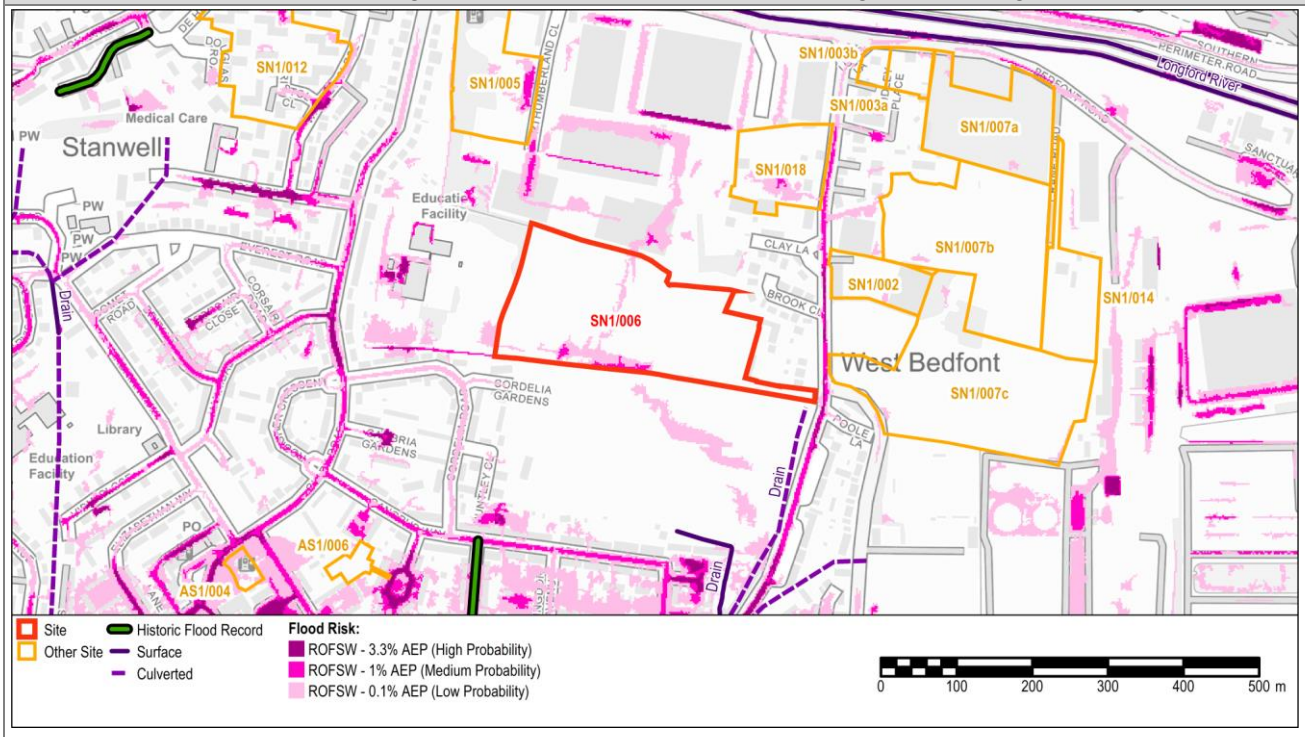
SN1/006: Land to the west of Long Lane and South of Blackburn Trading Estate, Long Lane				
Site ID:	SN1/006	**Area (ha):**		4.83
Proposed Use: Residential (C3) 200 units. Open space provision.		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	06JanuaryNewYear2003
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 6; Surrey County Council Wetspots 6
Sewer flooding records within the post code area in which the site is located:	Internal 14; External 3

Surface Water Flooding

SN1/006: Land to the west of Long Lane and South of Blackburn Trading Estate, Long Lane



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. A culverted watercourse flows south away from the eastern end of the site.
The Risk of Flooding from Surface Water mapping identifies that the site is susceptible to surface water flooding in the south and centre, which may increase in the future as a result of the impacts of climate change. The site is currently greenfield.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

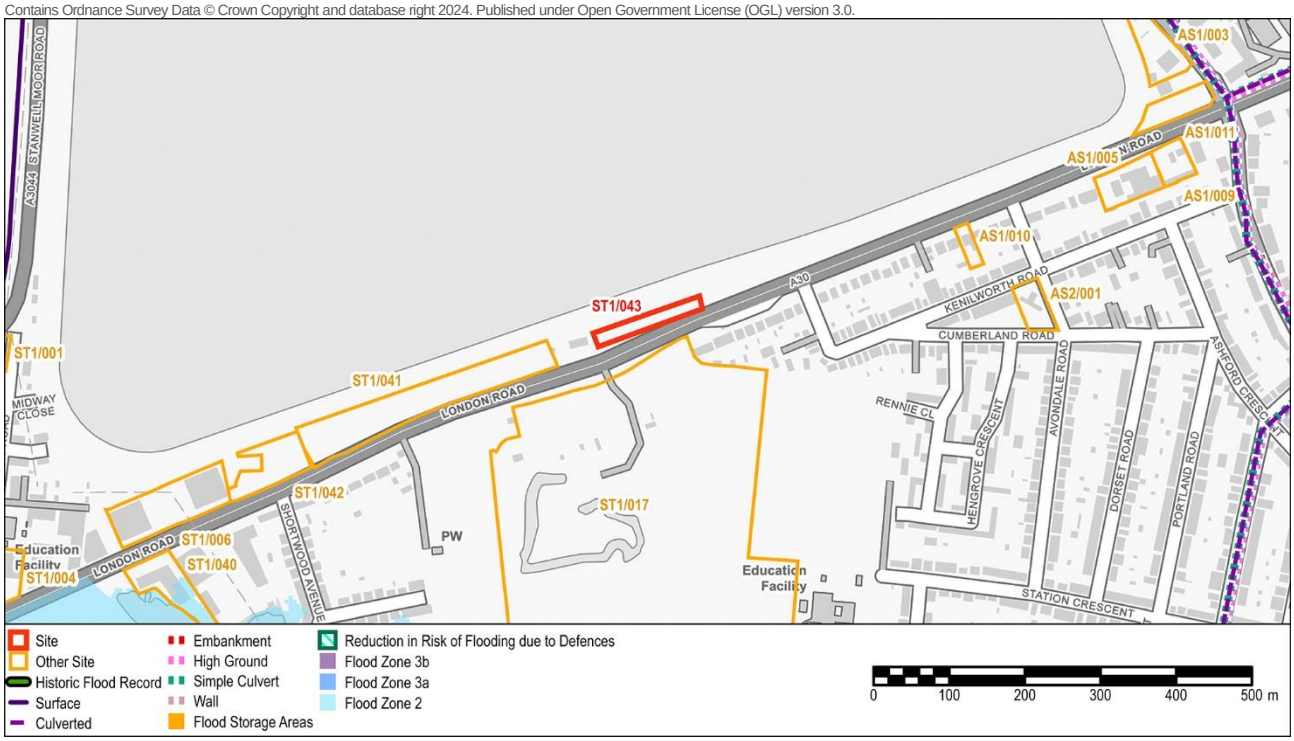
Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

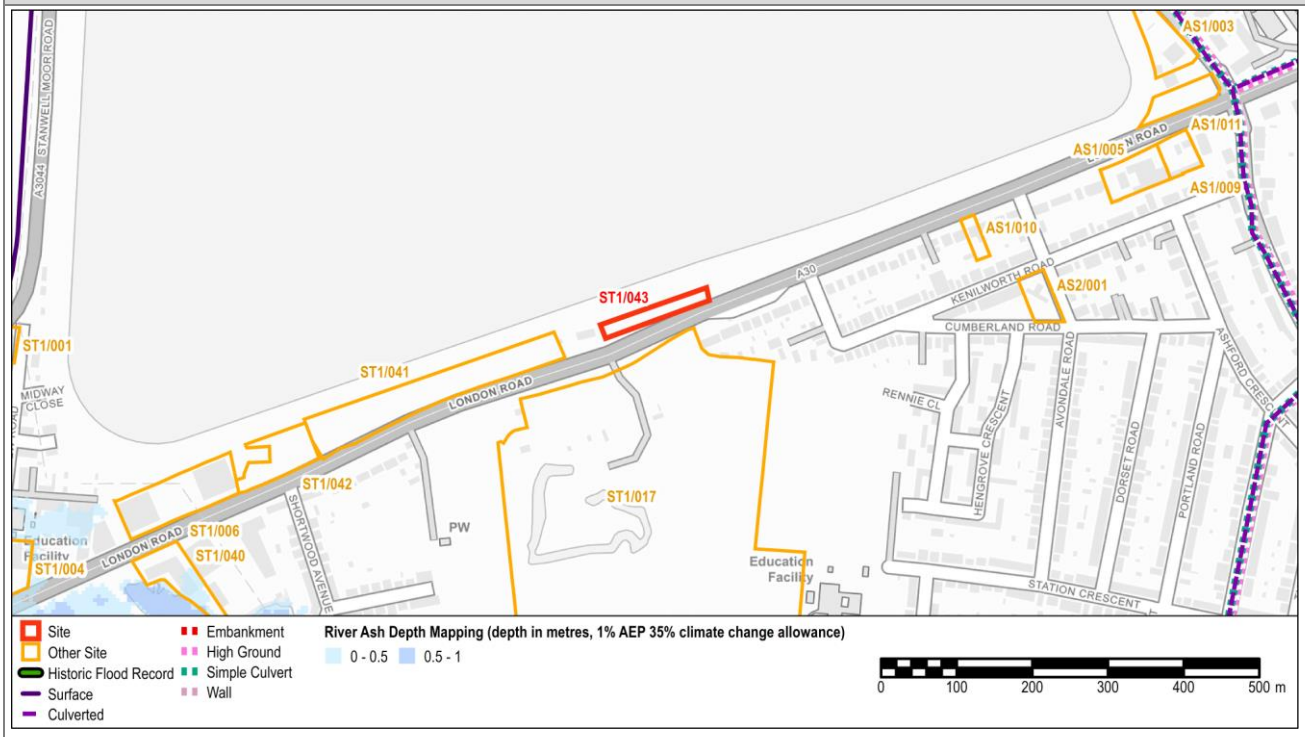
ST1/043 (Land East of 355 London Road)

ST1/043: Land East of 355 London Road				
Site ID:	ST1/043	**Area (ha):**		0.27
Proposed Use:	Gypsy and Traveller pitches: 3	**Vulnerability Classification:**		Highly Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

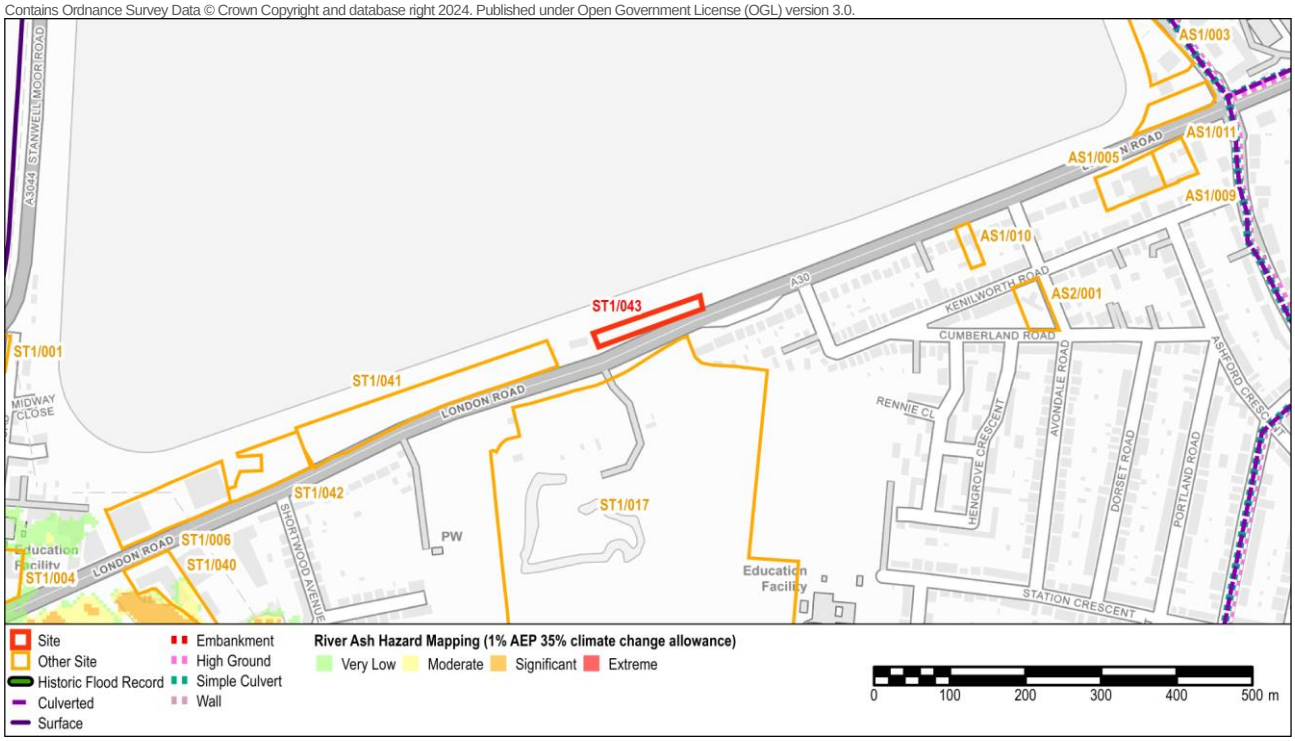


Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST1/043: Land East of 355 London Road



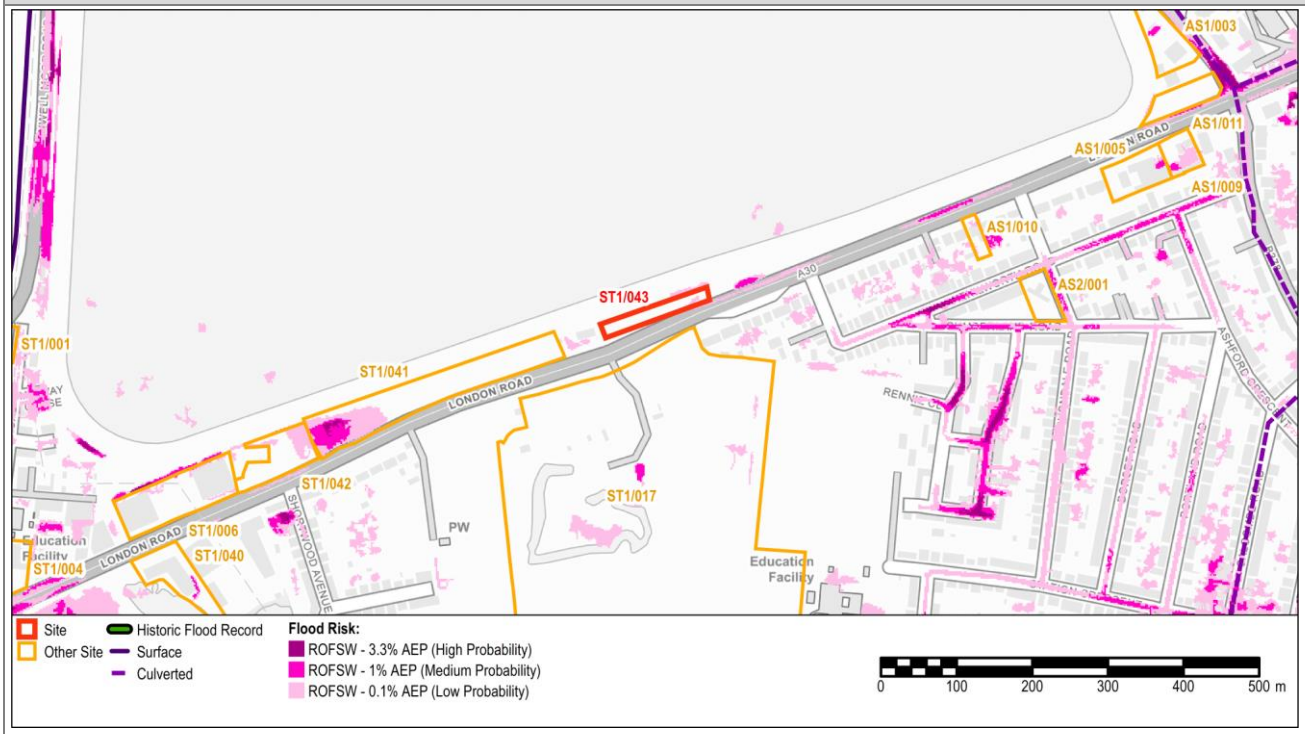
River Ash Maximum Flood Depth 1% AEP plus 35% climate change



River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

ST1/043: Land East of 355 London Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Unknown Lithology (Give Log Description In Comments Field)
Areas Susceptible to Groundwater Flooding	<25%		
BGS Susceptibility to Groundwater Flooding	Not considered prone to groundwater flooding.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is adjacent to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be in Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. The Risk of Flooding from Surface Water mapping does not identify the site or surrounding area to be at particular risk of surface water flooding.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.
The site is immediately adjacent to the Staines Reservoirs and therefore at residual risk of flooding.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

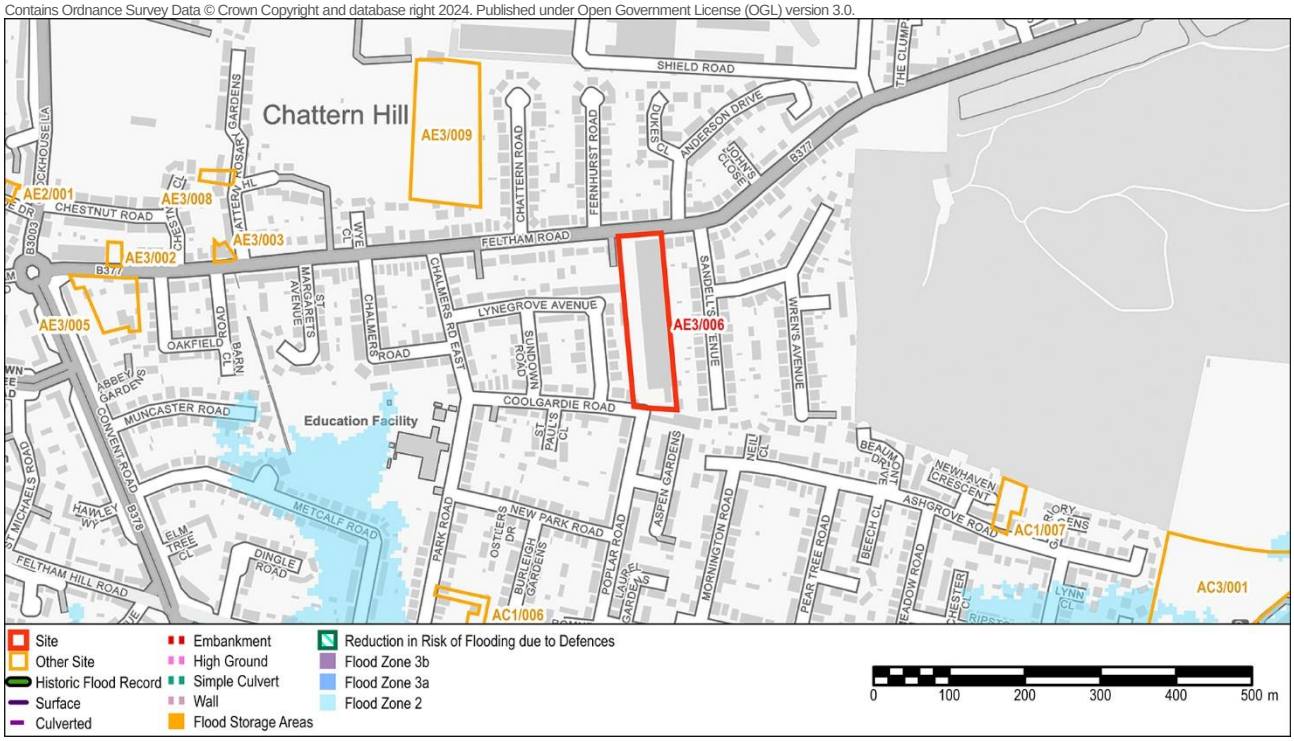
Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Group 3 Sites at low risk of flooding from rivers, and medium to high risk of flooding from surface water

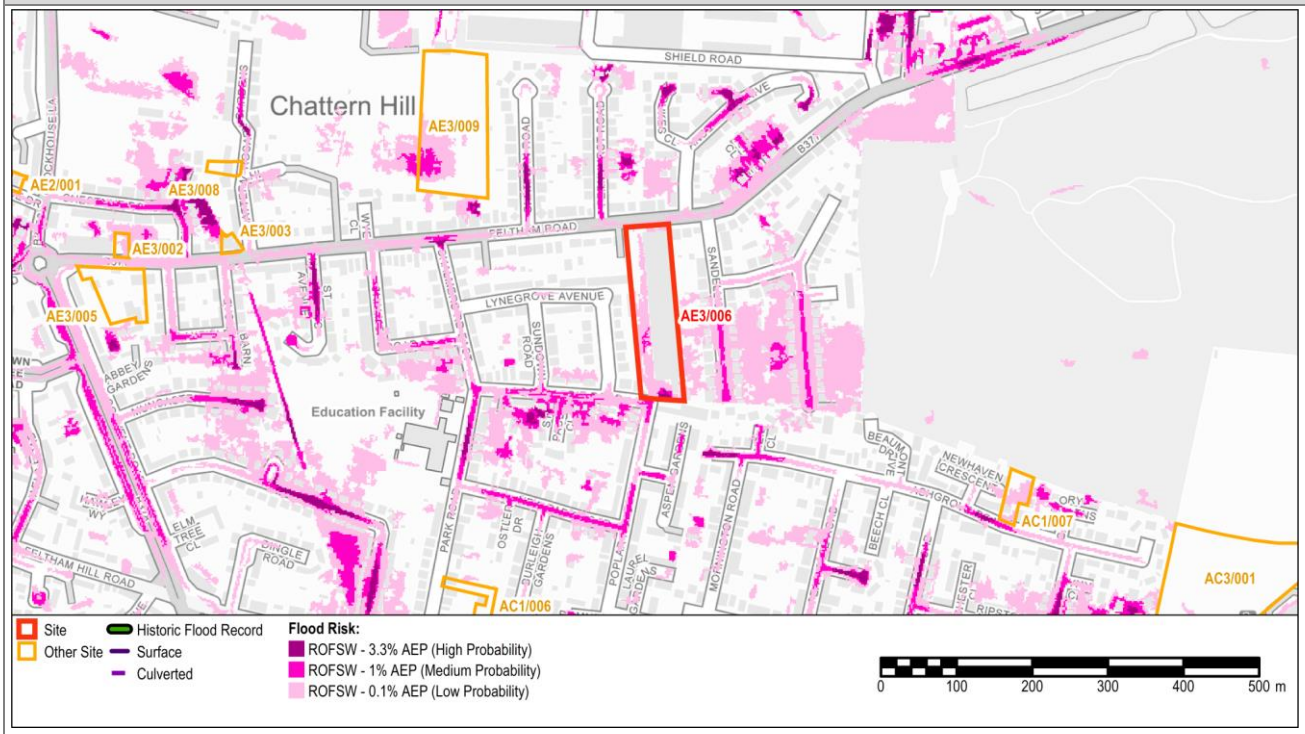
AE3/006 (158-166, Feltham Road, TW15 1YQ)

AE3/006: 158-166, Feltham Road, TW15 1YQ				
Site ID:	AE3/006	**Area (ha):**		1.32
Proposed Use: Housing (C3): 75 units (approx.)		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

AE3/006: 158-166, Feltham Road, TW15 1YQ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is located close to the Queen Mary Reservoir and Staines Reservoirs. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning.
The site is previously developed land. The Risk of Flooding from Surface Water mapping identifies that the site is susceptible to surface water flooding along the edge of the existing development.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Access/egress for surface water that is low risk during the 0.1% AEP event is likely to be achievable north on Feltham Road.

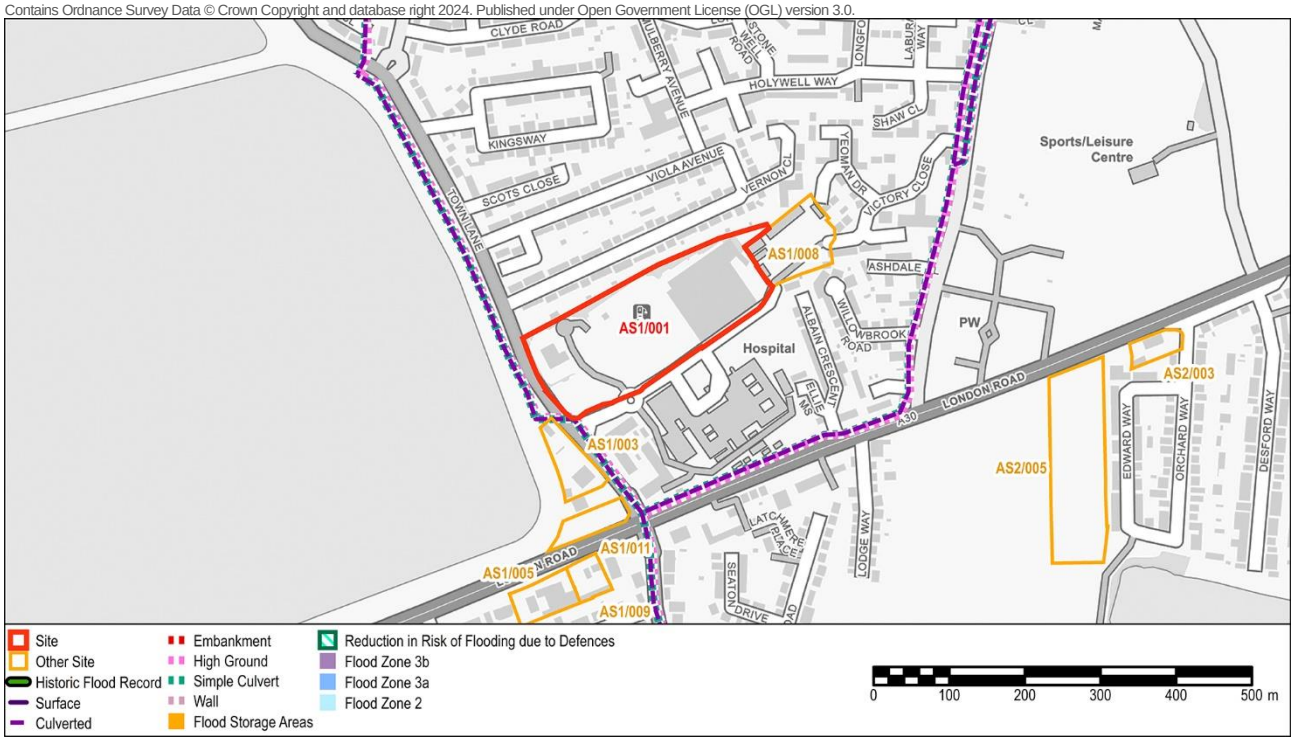
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

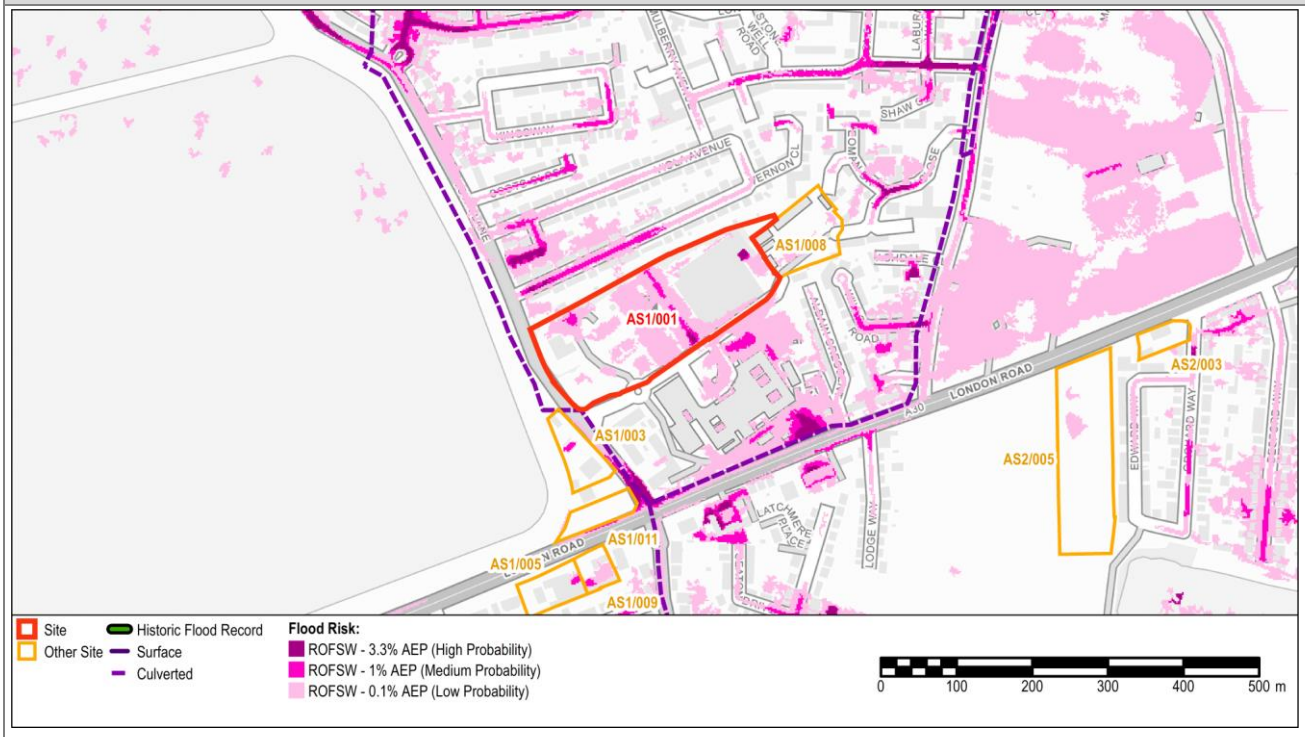
AS1/001 (Tesco Extra, Town Lane)

AS1/001: Tesco Extra, Town Land				
Site ID:	AS1/001	**Area (ha):**		3.98
Proposed Use: Retail: Retention of the existing superstore on site. Residential (C3): 350 units (approx.)		**Vulnerability Classification:** Less Vulnerable More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 4; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 14; External 3
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

AS1/001: Tesco Extra, Town Land



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is adjacent to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is located in Flood Zone 1, low probability of flooding from rivers. A culverted watercourses passes beneath Town Lane to the west of the site. The risk of flooding from surface water mapping indicates the site is susceptible to surface water flooding and there are records of flooding in the local area. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area. The site is adjacent to Staines Reservoirs and therefore at residual risk of flooding.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, Less Vulnerable (retail) and More Vulnerable (residential) development are compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

An 8m buffer zone is required between built development and a culverted main river (measured from edge of culvert). A Flood Risk Activity Permit will be required for any works within 8m of a culverted main river (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).

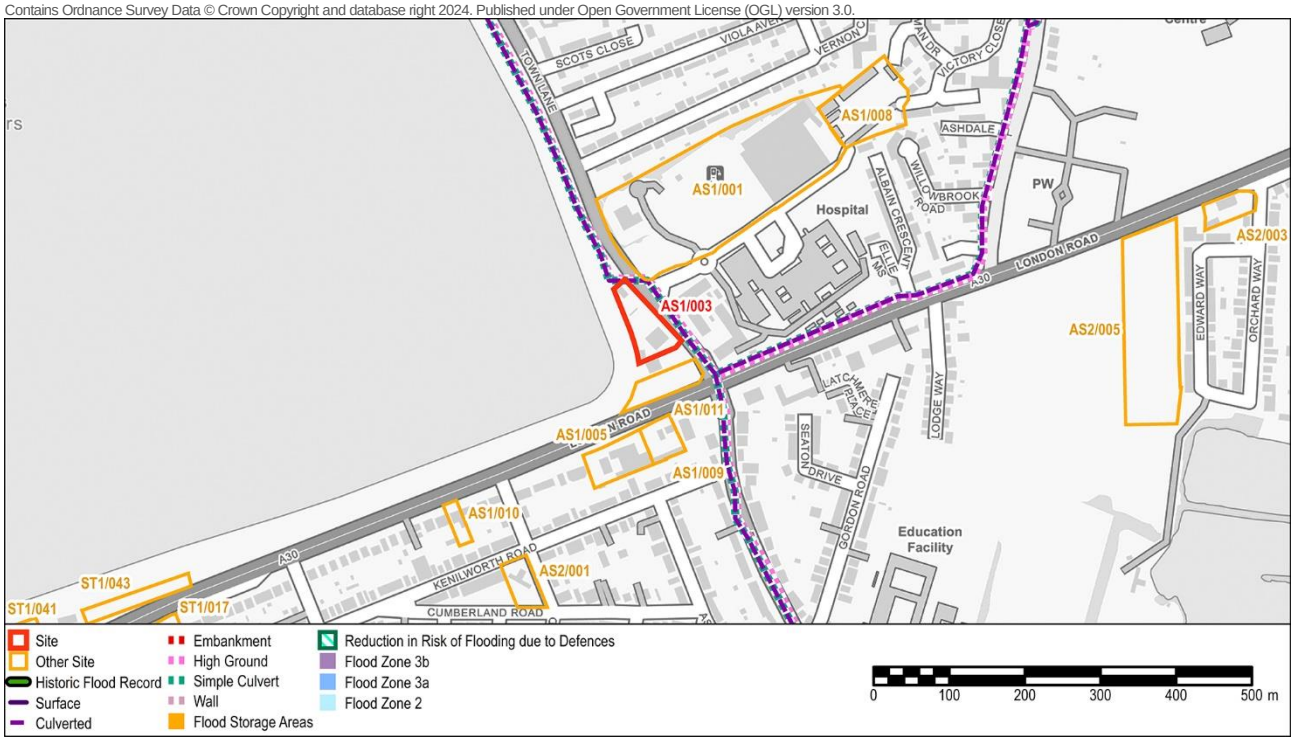
A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

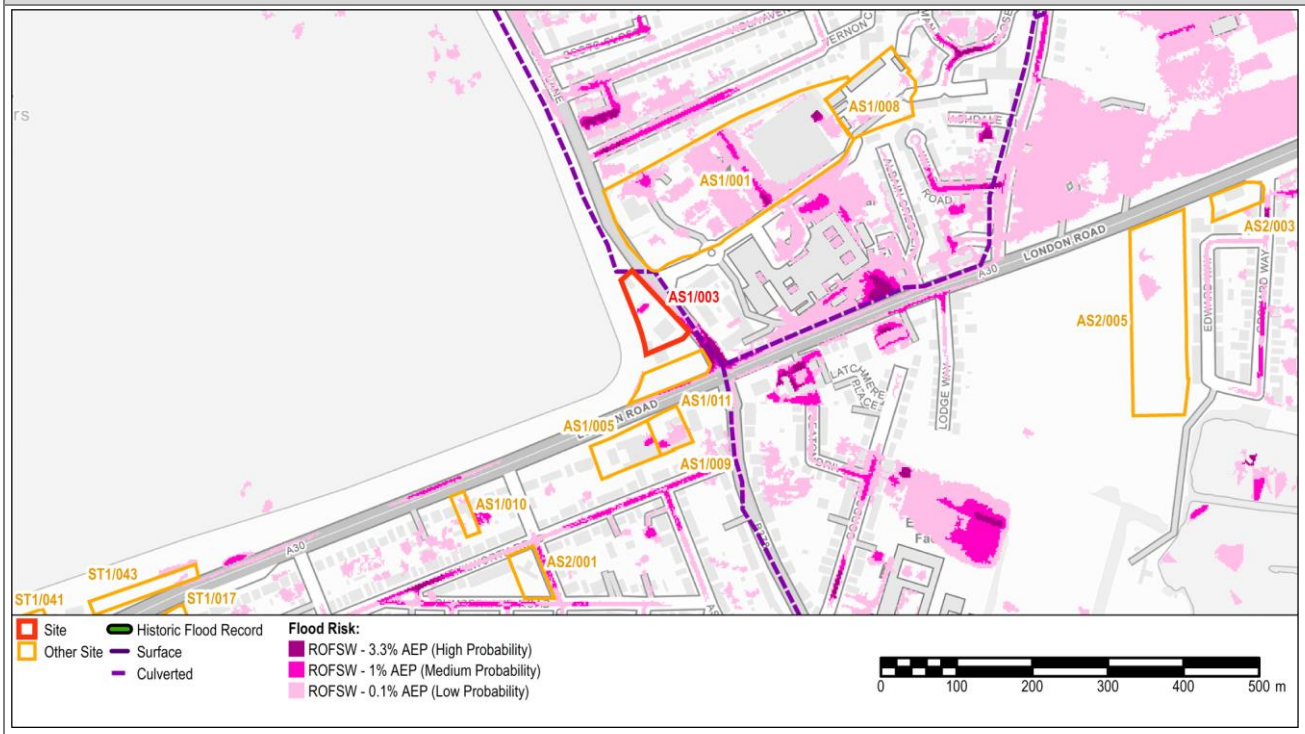
AS1/003 (Former Staines Fire Station, Town Lane)

AS1/003: Staines Fire Station, Town Lane, TW19 7JP				
Site ID:	AS1/003	**Area (ha):**		0.33
Proposed Use: Residential (C3): 50 units (approx.)		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 14; External 3
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low

AS1/003: Staines Fire Station, Town Lane, TW19 7JP



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is adjacent to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be at low risk of flooding from rivers on the Flood Map for Planning. A culverted watercourses passes along the east of the site. This culverted watercourse surfaces just south of Ferndale Road to the north of the A308.

The area to the east of the site along the B378 and along the northern side of the A30, (in the vicinity of the culverted watercourses), are shown to be at risk of surface water flooding on the Risk of Flooding from Surface Water mapping.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area. The site is adjacent to Staines Reservoirs and therefore at residual risk of flooding.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

An 8m buffer zone is required between built development and a culverted main river (measured from edge of culvert). A Flood Risk Activity Permit will be required for any works within 8m of a culverted main river (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

AS1/011 (Land at Former Bulldog Nurseries, Town Lane)

AS1/011: Land at Former Bulldog Nurseries Town Lane				
Site ID:	AS1/011	**Area (ha):**		0.3
Proposed Use:	Residential (C3) 24 units.	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

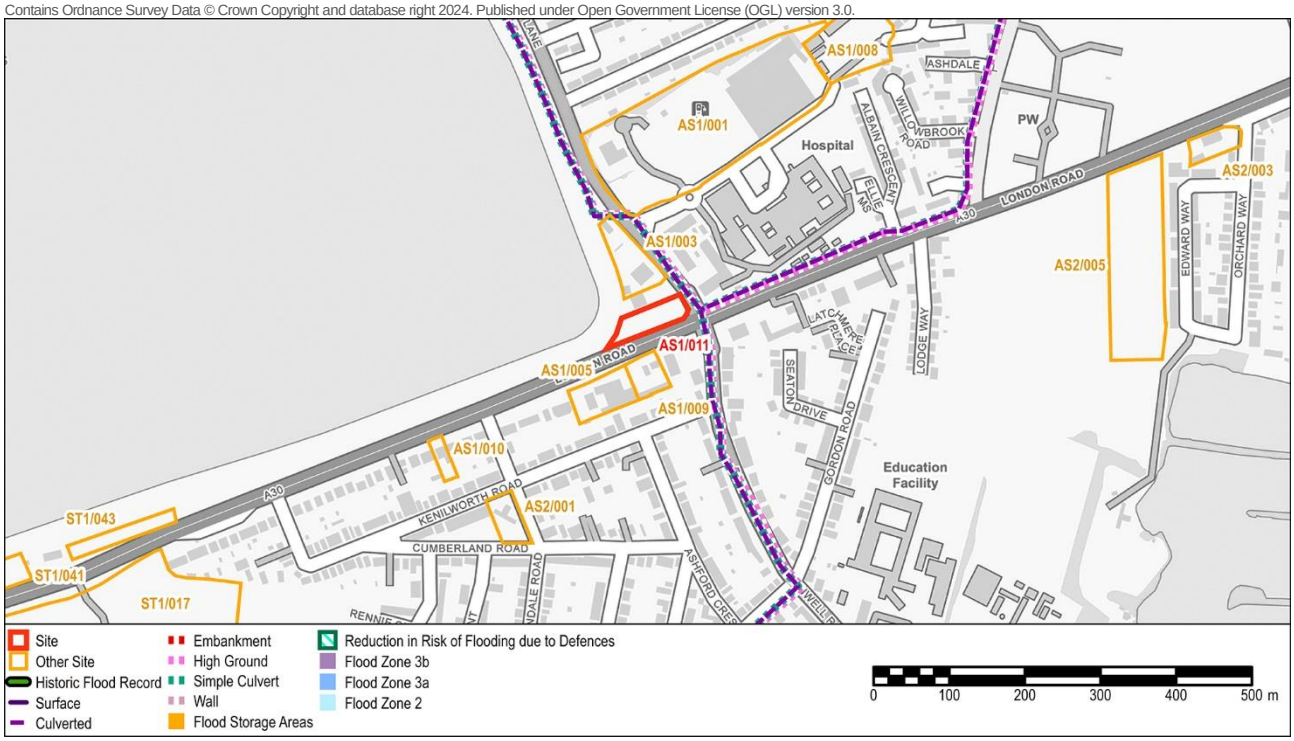


Figure A - Flood Zones and Flood Records

Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or orindary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 14; External 3
Surface Water Flooding	

AS1/011: Land at Former Bulldog Nurseries Town Lane

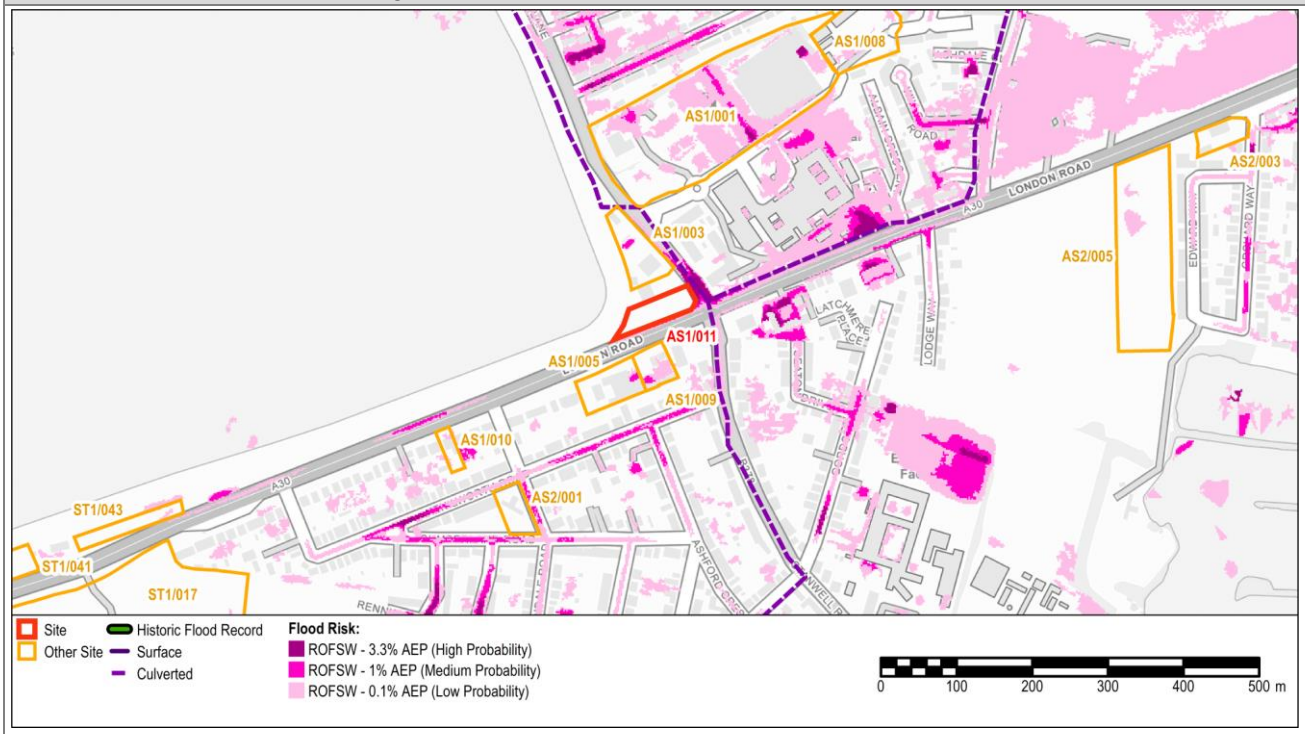


Figure D - Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is adjacent to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be at low risk of flooding from rivers on the Flood Map for Planning. Two culverted watercourses converge adjacent to the site, and then flow south along Stanwell Road before diverting southwest. This culverted watercourse surfaces just south of Ferndale Road to the north of the A308.

The area to the east of the site along the B378 and along the northern side of the A30, (in the vicinity of the culverted watercourses), are shown to be at risk of surface water flooding on the Risk of Flooding from Surface Water mapping.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

The site is adjacent to Staines Reservoirs and therefore at residual risk of flooding.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

An 8m buffer zone is required between built development and a culverted main river (measured from edge of culvert). A Flood Risk Activity Permit will be required for any works within 8m of a culverted main river (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).

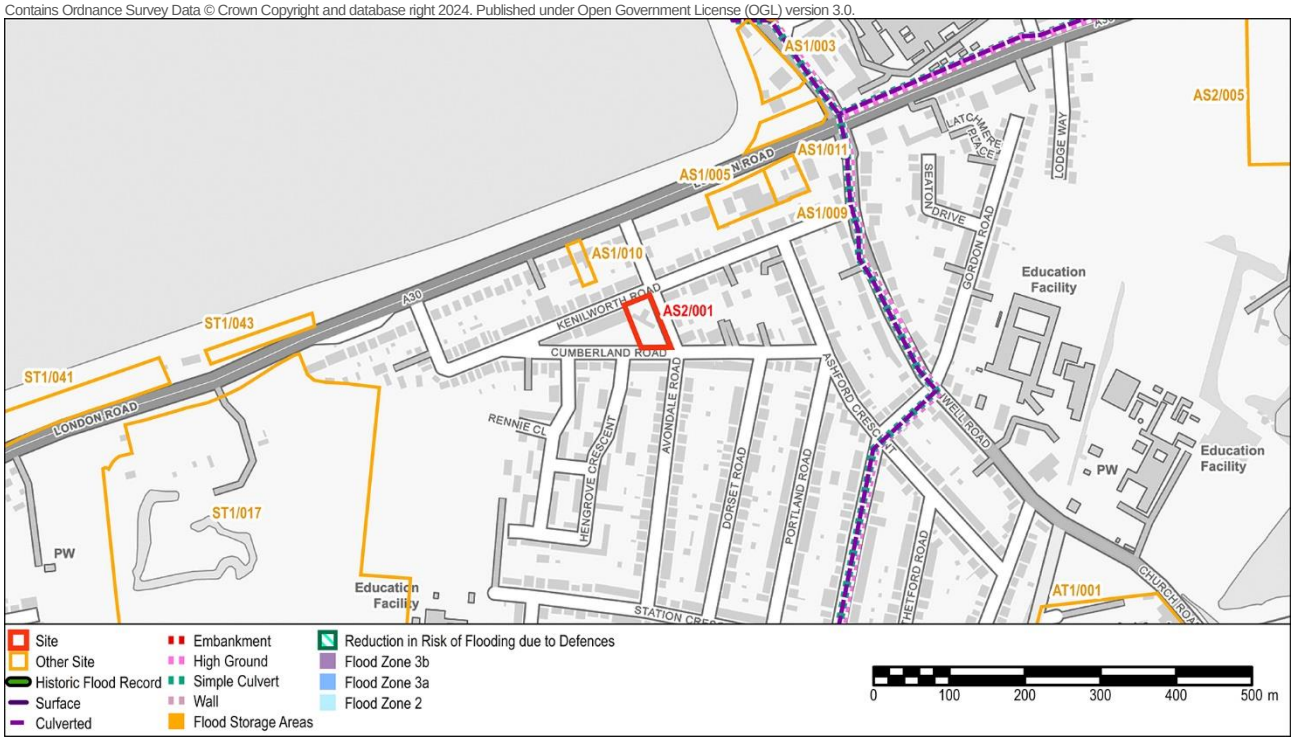
A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

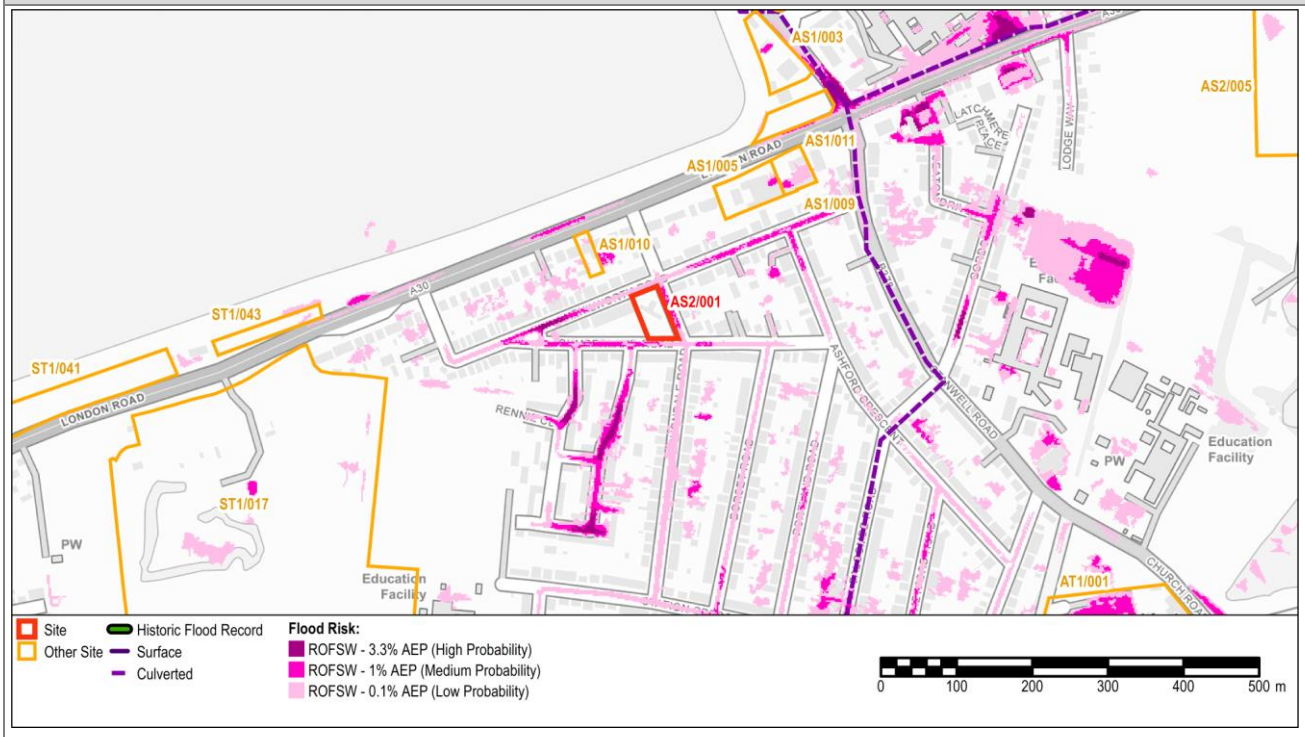
AS2/001 (Ashford Youth Club, Kenilworth Road)

AS2/001: Ashford Youth Club, Kenilworth Road				
Site ID:	AS2/001	**Area (ha):**		0.25
Proposed Use: Local Community F2(b): 500sqm Youth Centre (approx.) Residential (C3): 5 units (approx.)			**Vulnerability Classification:** Less Vulnerable, More Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	
Surface Water Flooding	

AS2/001: Ashford Youth Club, Kenilworth Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel, Unknown Lithology (Give Log Description In Comments Field)

Areas Susceptible to Groundwater Flooding	<25%
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.
Aquifer Designation	Unproductive, Secondary A

Other Sources	
Risk of flooding from reservoirs	The site is close to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be at low risk of flooding from rivers on the Flood Map for Planning.

The local area including Kenilworth Road and Cumberland Road are shown to be at risk of surface water flooding on the Risk of Flooding from Surface Water mapping.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

AS2/006 (Land East of Desford Way)

AS2/006: Land east of Desford Way, Ashford, TW15 3FF			
Site ID:	AS2/006	**Area (ha):**	3.33
Proposed Use:	Travelling show people plots (15)	**Vulnerability Classification:**	Highly Vulnerable

Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

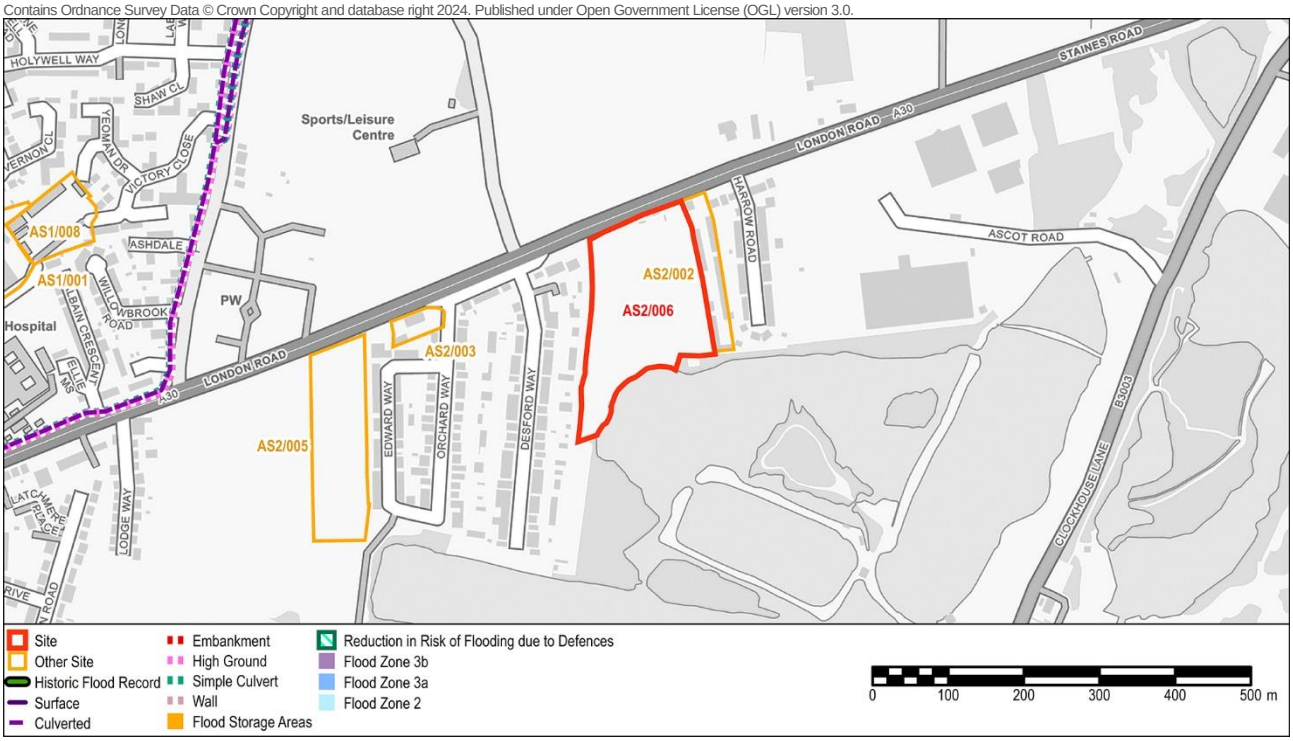


Figure A – Flood Zones and Flood Records

Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

Surface Water Flooding

AS2/006: Land east of Desford Way, Ashford, TW15 3FF

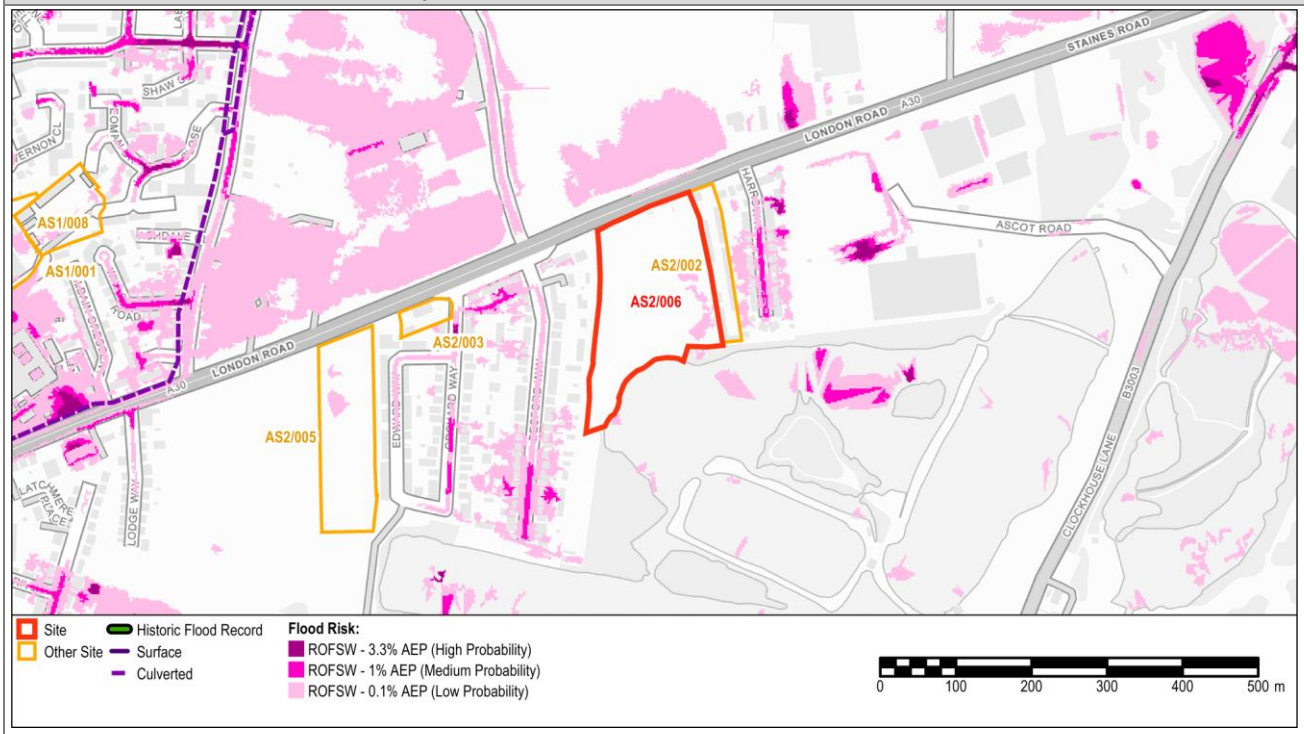


Figure D – Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding of property situated below ground level		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is close to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding. The site is currently greenfield.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, highly vulnerable development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS; and incorporate soft landscaping, planting, and permeable surfacing.

Development proposals for the site should seek to implement flood resilience measures.

Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

AT1/002 (Land East of Ashford Sports Club, Woodthorpe Road)

AT1/002: Land East of Ashford Sports Club, Woodthorpe Road, TW15 3JX				
Site ID:	AT1/002	**Area (ha):**		1.15
Proposed Use:	Residential (C3) 108 Units	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

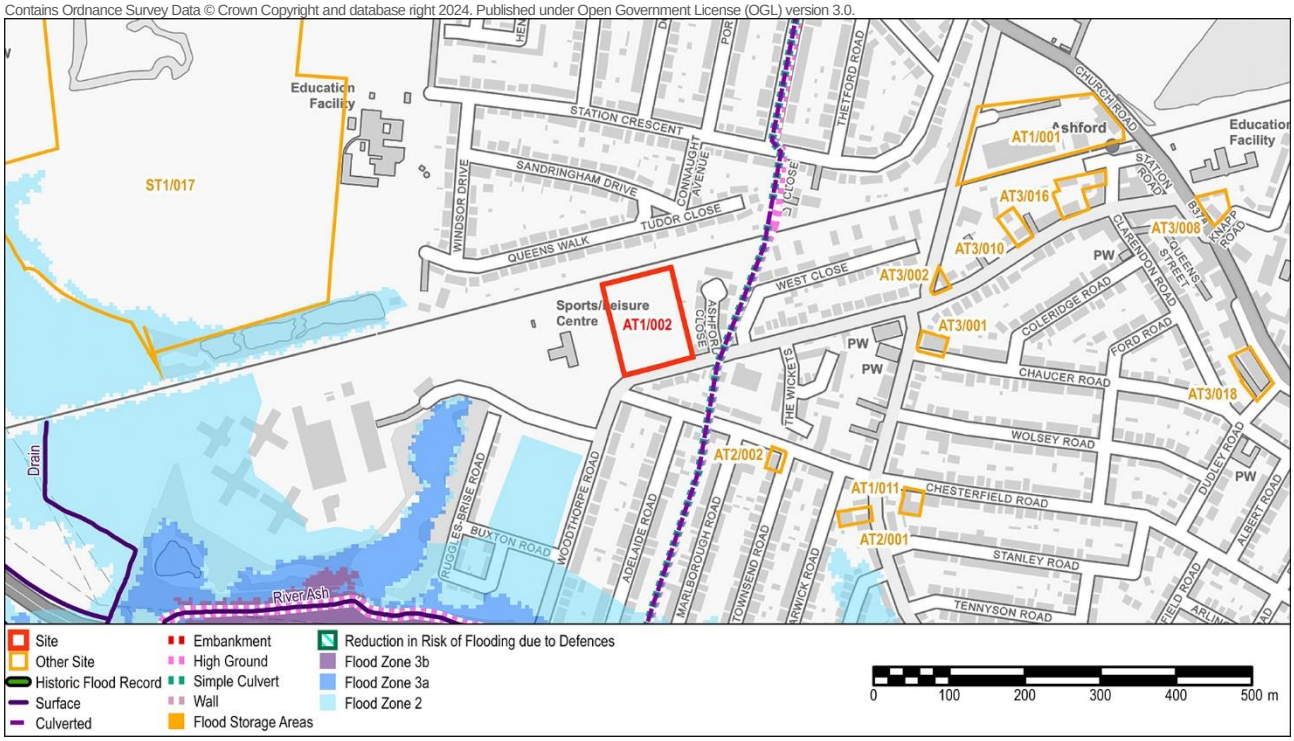


Figure A – Flood Zones and Flood Records

Flood Warning Area	River Ash at Ashford and Staines
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or orindary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

AT1/002: Land East of Ashford Sports Club, Woodthorpe Road, TW15 3JX

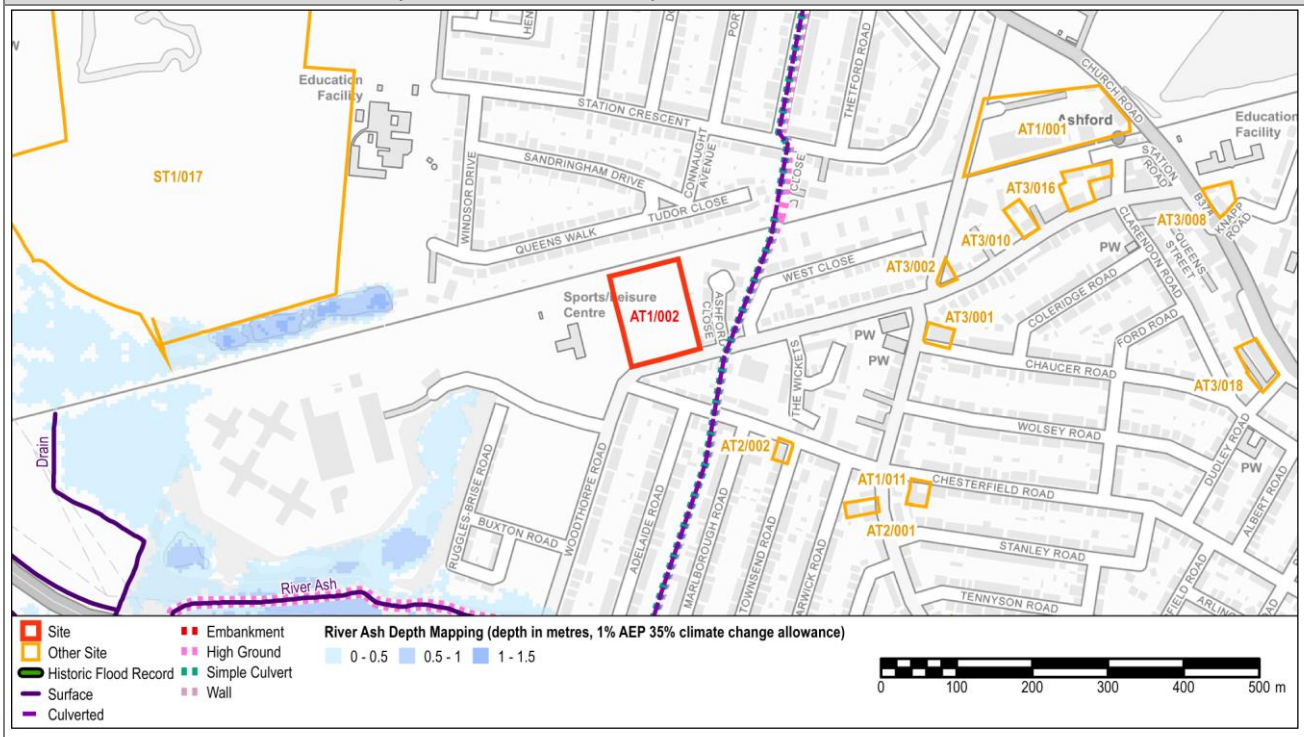


Figure B3 – River Ash Maximum Flood Depth 1% AEP plus 35% climate change

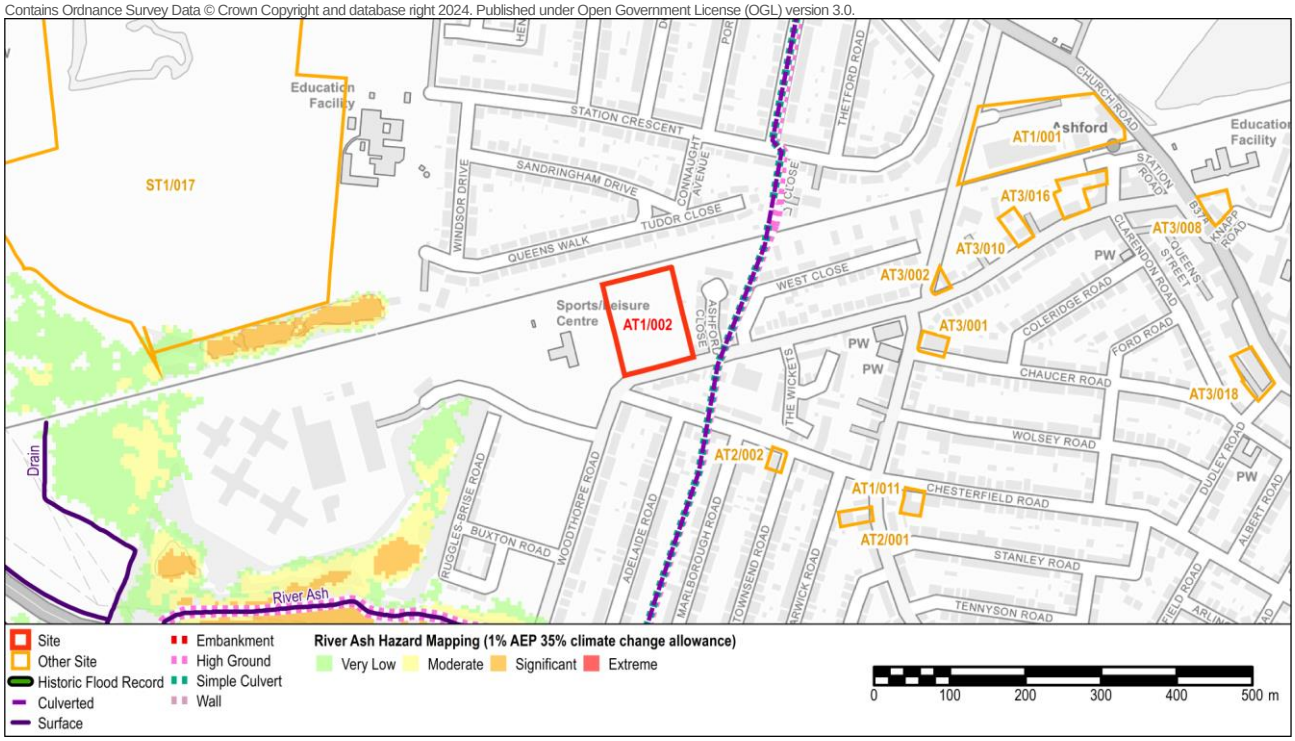


Figure C3 – River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

AT1/002: Land East of Ashford Sports Club, Woodthorpe Road, TW15 3JX

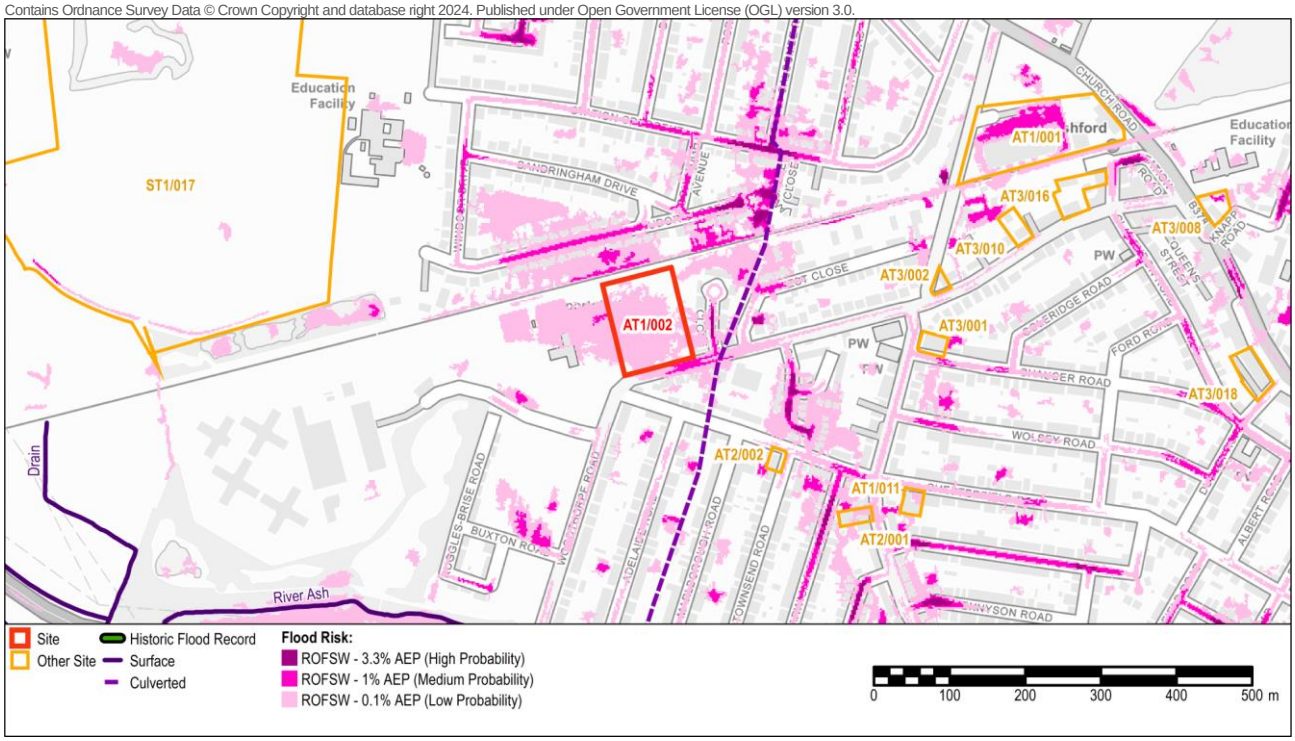


Figure D – Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The site is close to Staines Reservoirs and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers on the Flood Map for Planning. The River Ash is approximately 500m southwest of the site, however flooding from this watercourse does not encroach on to the site or affect the access to and from the site. A culverted watercourse is present to east of the site, which flows south to join the River Ash.

The Risk of Flooding from Surface Water mapping shows that the site may be susceptible to surface water flooding during the 0.1% AEP flood event. The site is currently greenfield. Woodthorpe Road is shown to be at risk of surface water flooding during the 3.3% AEP flood event.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. Development proposals for the site should seek to implement flood resilience measures.

Woodthorpe Road is identified to be susceptible to surface water flooding on the Risk of Flooding from Surface Water mapping. Further investigation should be undertaken in consultation with the Lead Local Flood Authority Surrey County Council to determine whether there are records of flooding in this location. Opportunities should be sought to improve the management of surface water along Woodthorpe Road as part of the new development.

AT1/002: Land East of Ashford Sports Club, Woodthorpe Road, TW15 3JX

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

AT3/007 (Ashford Multi-storey Car Park, Church Road)

AT3/007: Ashford Multi-storey car park, Church Road, TW15 2TY				
Site ID:	AT3/007	**Area (ha):**		0.2
Proposed Use: Residential (C3): 55 units (approx.) Retail/community: 400 sqm (approx.)		**Vulnerability Classification:** More Vulnerable Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

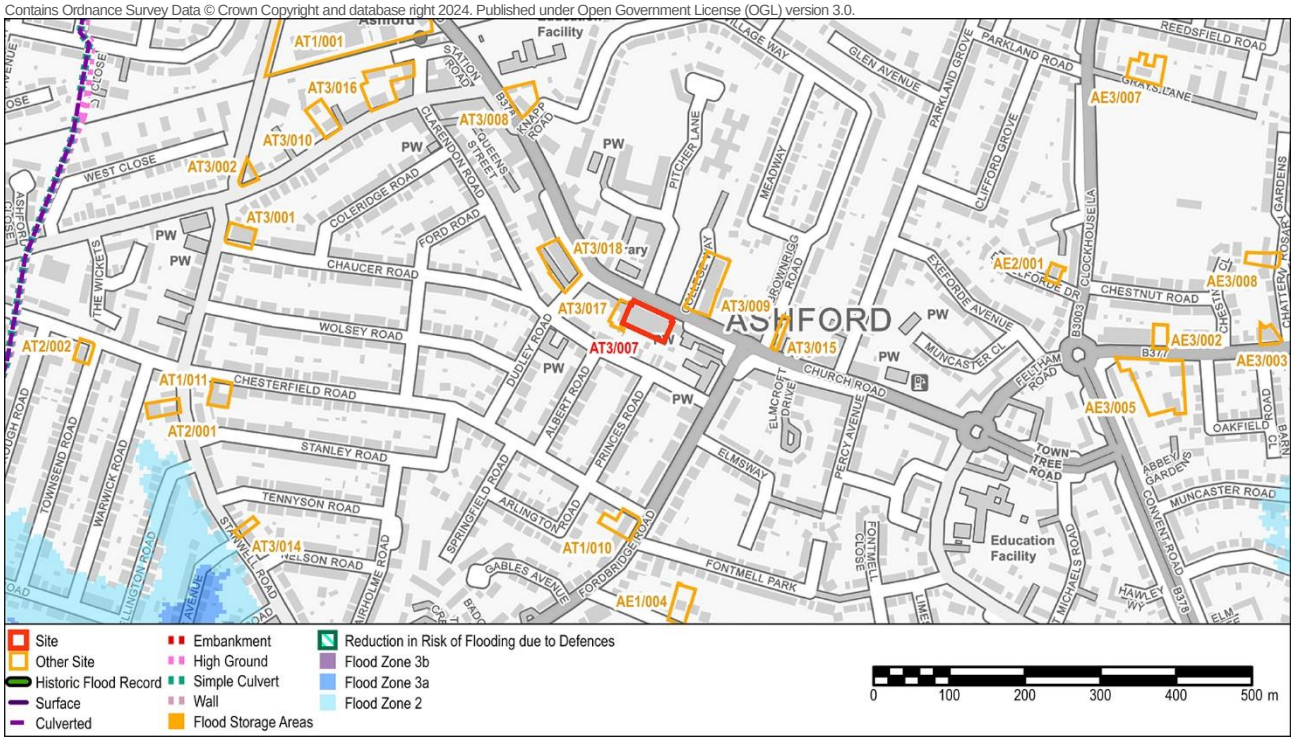


Figure A - Flood Zones and Flood Records

Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or orindary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
Surface Water Flooding	

AT3/007: Ashford Multi-storey car park, Church Road, TW15 2TY

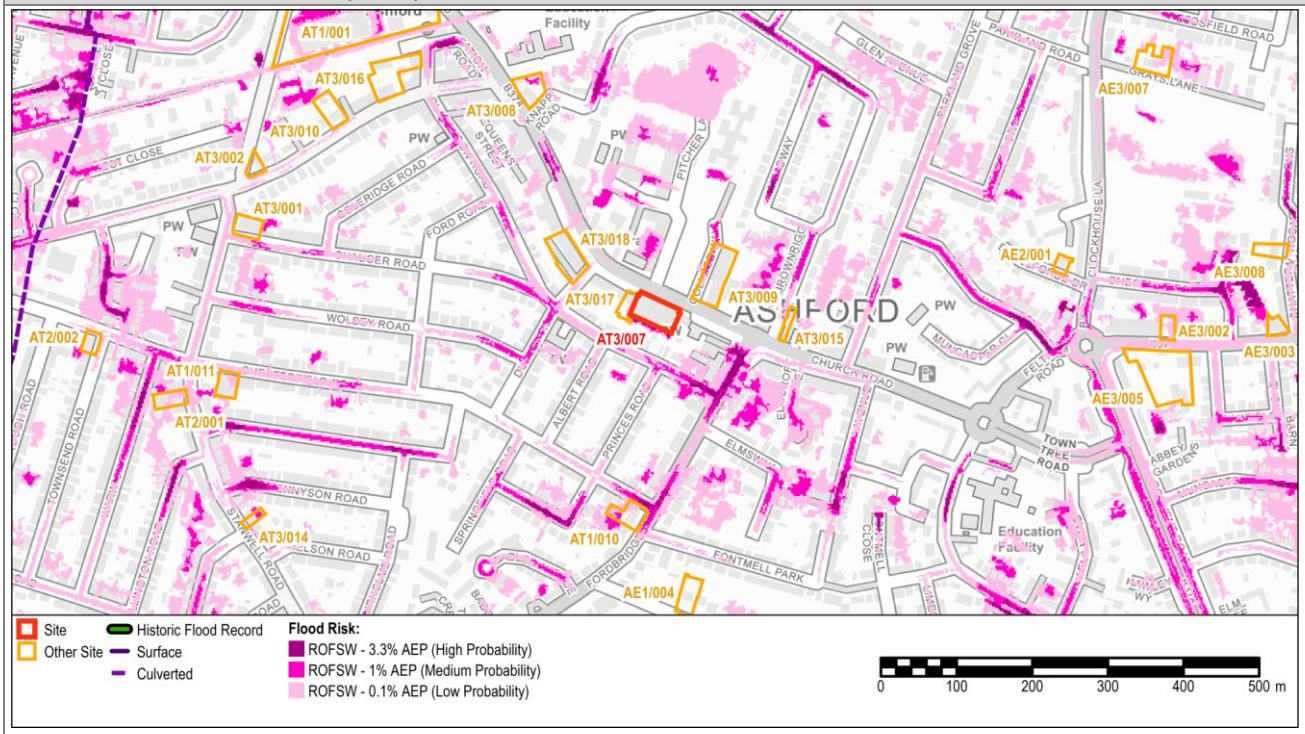


Figure D - Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Staines Reservoirs, King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding. However, the surrounding area including Clarendon Road and Fordbridge Road are shown to be at risk of surface water flooding. The site is currently a multi-storey car park.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Less Vulnerable (retail, community) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

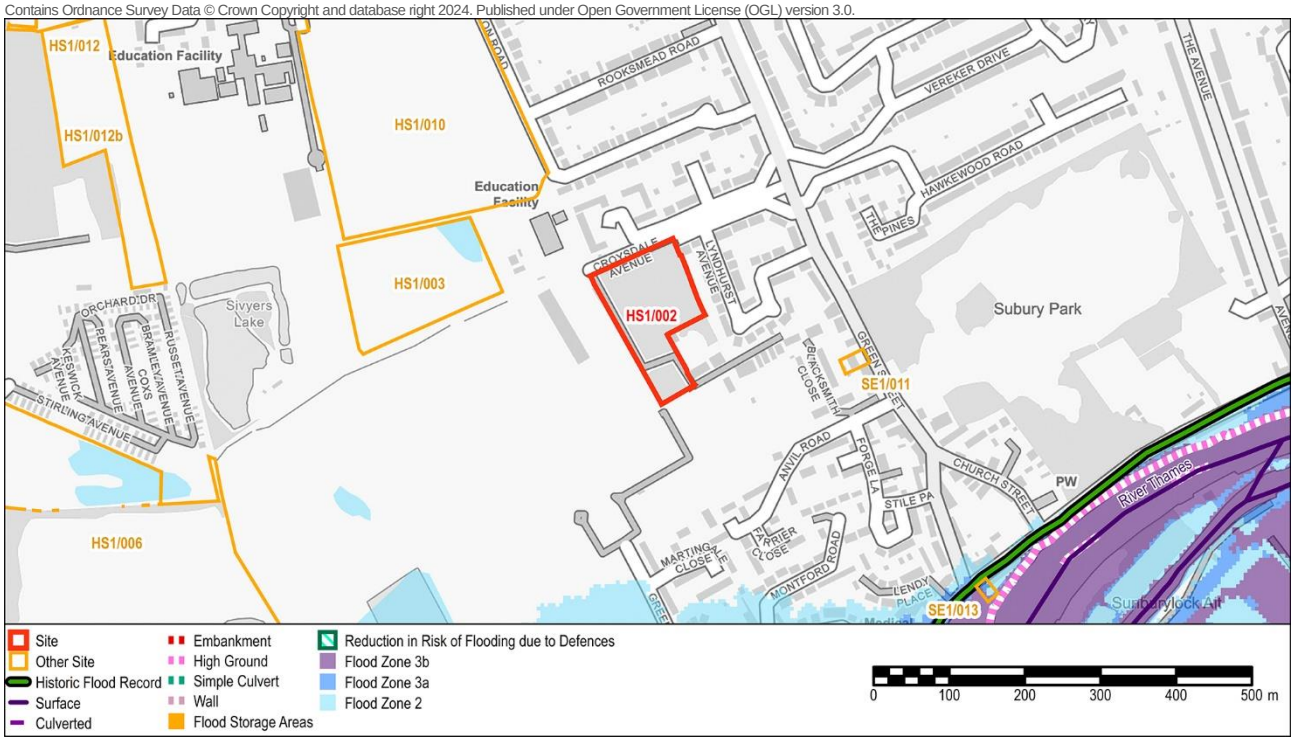
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from the reservoirs.

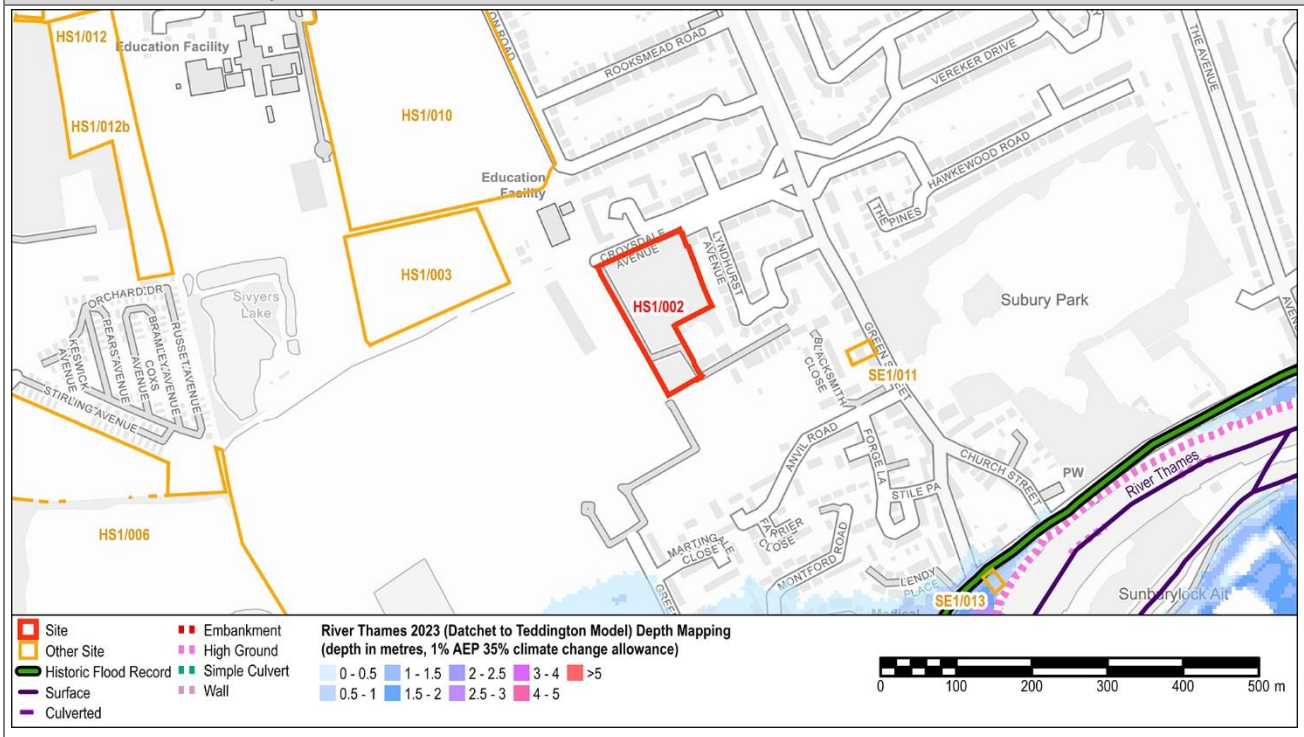
HS1/002 (Land at Croysdale Avenue/ Hazelwood Drive)

HS1/002: Land at Croysdale Avenue, Hazelwood Drive, TW16 6QN				
Site ID:	HS1/002	**Area (ha):**		1.68
Proposed Use:	Residential (C3): 67 units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b :** 0%	**Area with reduced risk of flooding due to defences:** 0%

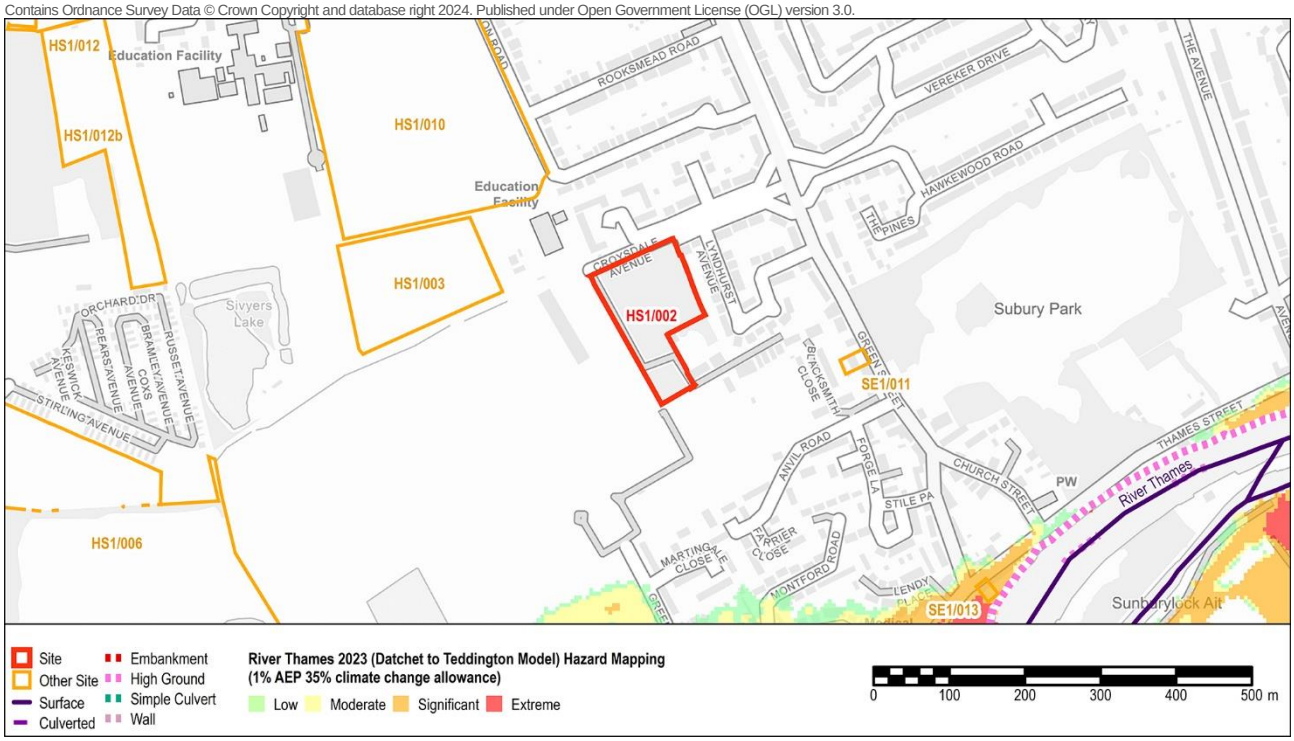


Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 4; External property flooding 0; Section 19 Flood Investigation incident 18; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 0
River Flooding	

HS1/002: Land at Croysdale Avenue, Hazelwood Drive, TW16 6QN



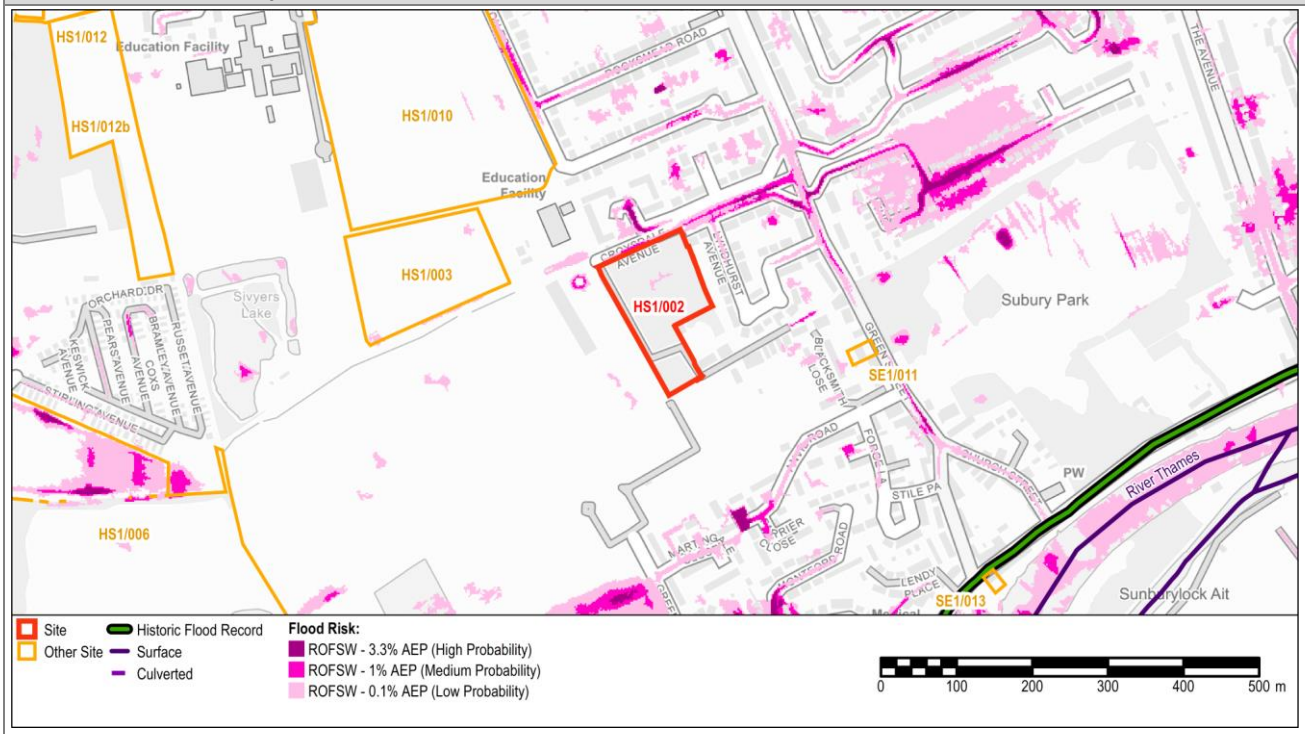
River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

HS1/002: Land at Croysdale Avenue, Hazelwood Drive, TW16 6QN



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur below ground.		
Aquifer Designation	Principal, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers on the Flood Map for Planning.

The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding. The site is currently greenfield land. However, parts of Hazelwood Drive are shown to be potentially susceptible to surface water flooding.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Less Vulnerable (office, retail) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Development proposals for the site should seek to implement flood resilience measures.

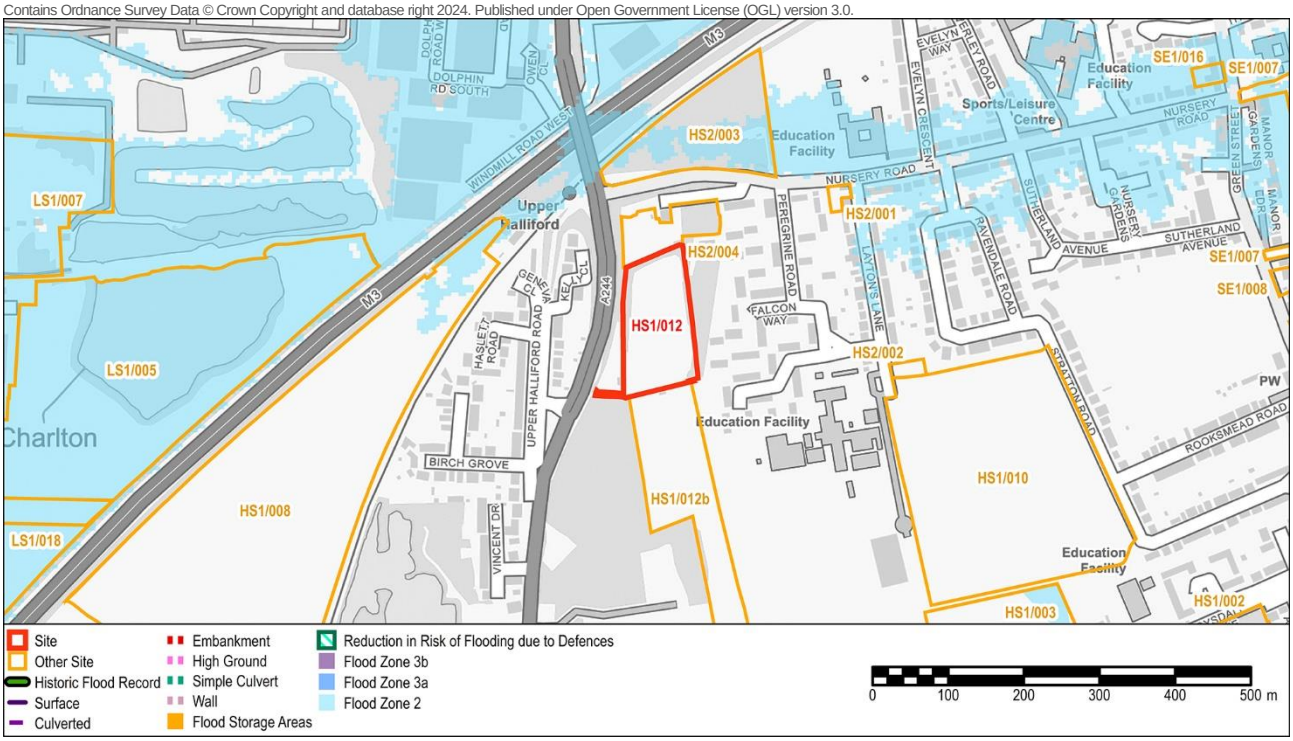
Further assessment of the risk of surface water flooding to Hazelwood Drive should be undertaken, to ensure that the access to and from the proposed development is safe for occupants.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or

HS1/002: Land at Croysdale Avenue, Hazelwood Drive, TW16 6QN
from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report. Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

HS1/012 (Land East of Upper Halliford, Nursery Road)

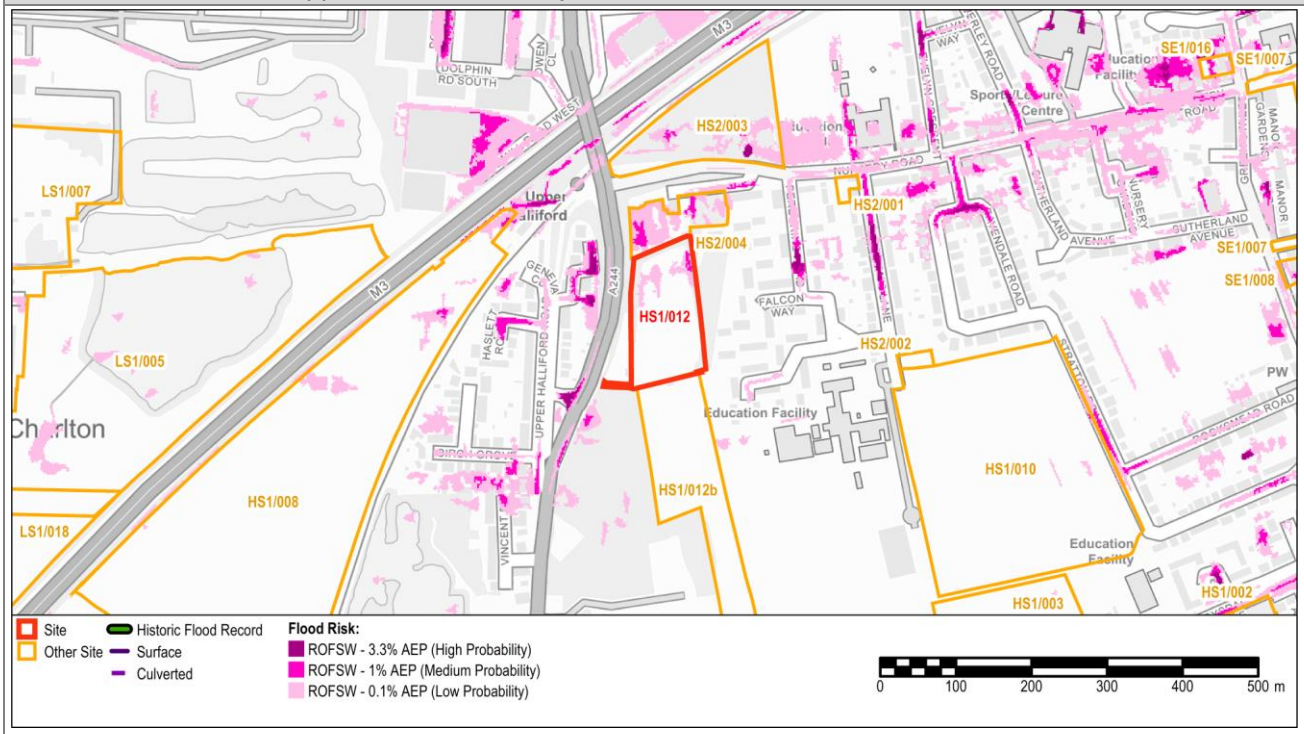
HS1/012: Land East of Upper Halliford, Nursery Road, W1G 0JD				
Site ID:	HS1/012	**Area (ha):**		1.6
Proposed Use:	Residential (C3): 60 units (approx.) Open space provision	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 0

Surface Water Flooding

HS1/012: Land East of Upper Halliford, Nursery Road, W1G 0JD



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	50% to 75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping does not indicate the site is particularly susceptible to surface water flooding. There are some locations of ponding. The site is currently greenfield land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

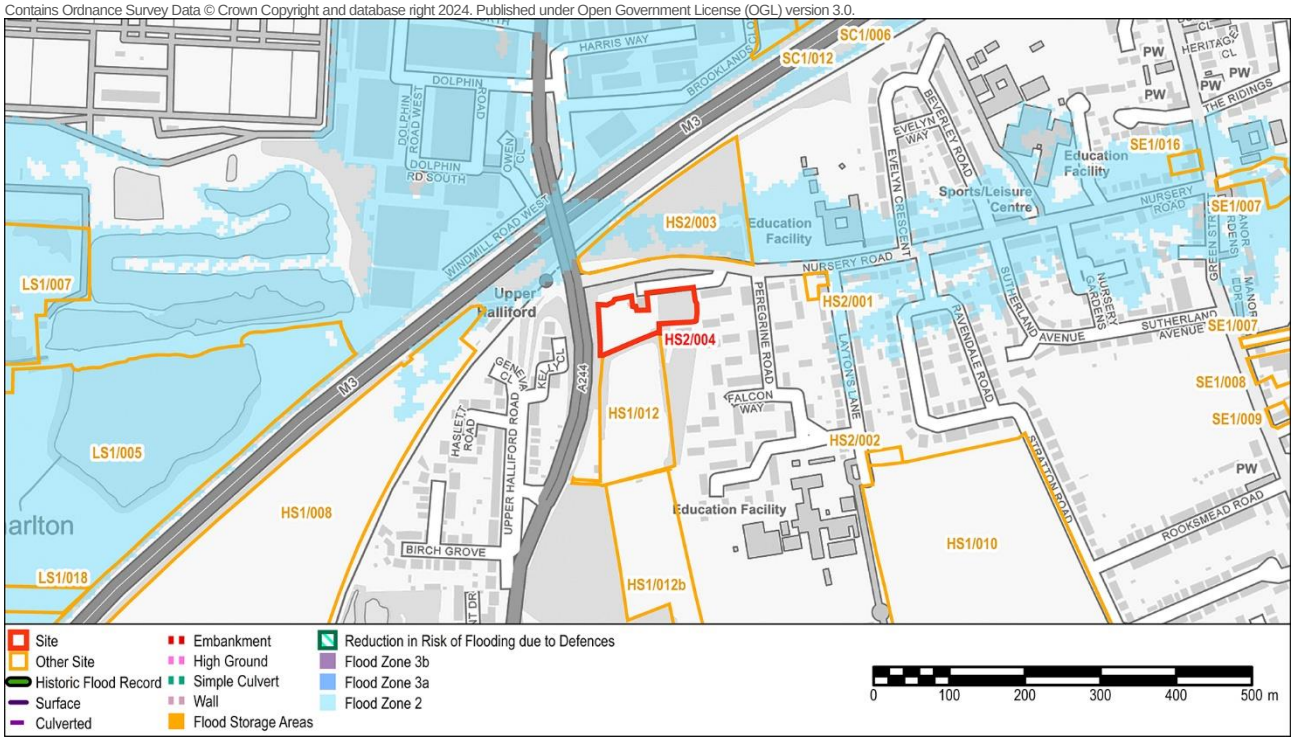
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

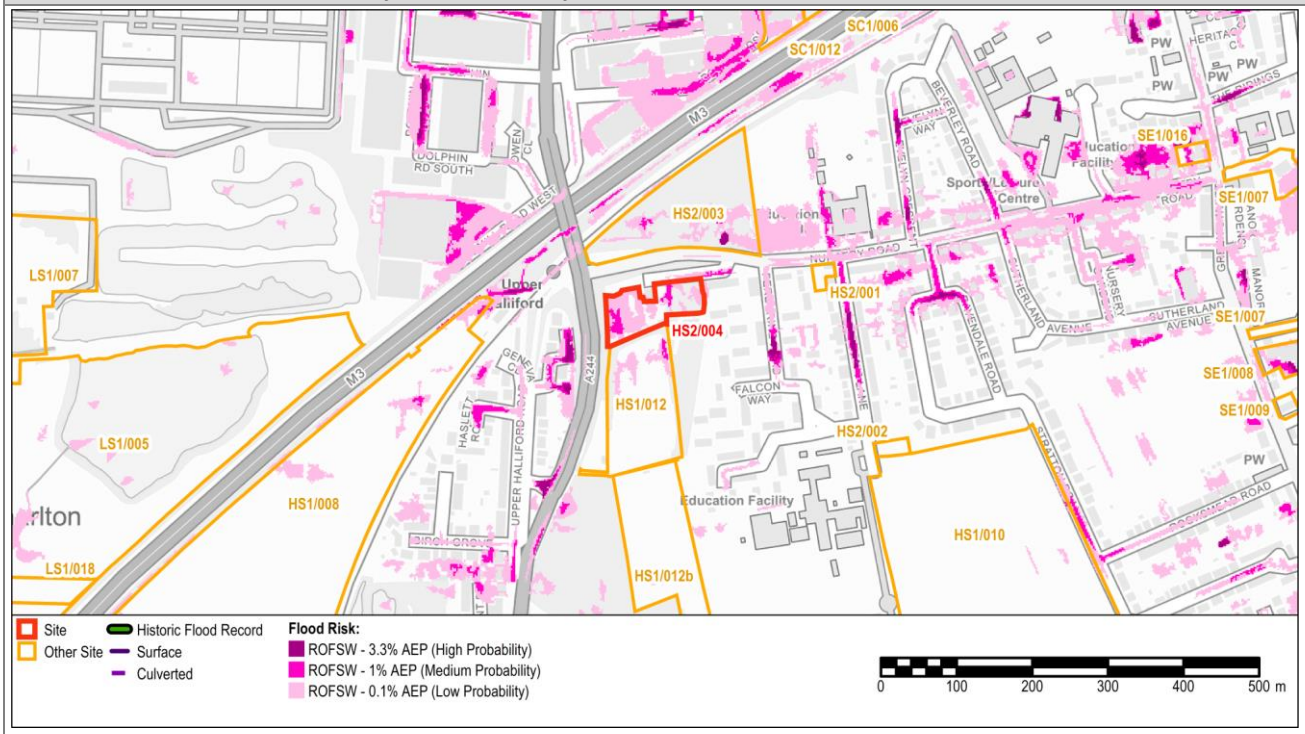
HS2/004 (Land South of Nursery Road)

HS2/004: Land South of Nursery Road, Nursery Road, TW18 6LX				
Site ID:	HS2/004	**Area (ha):**		0.66
Proposed Use:	Residential (Use Class C3): 41 units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 0
Surface Water Flooding	

HS2/004: Land South of Nursery Road, Nursery Road, TW18 6LX



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	50% to 75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping identifies the site is susceptible to surface water flooding. The site is currently greenfield land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is less than 1 hectare but introduces a more vulnerable development class and is at risk of surface water flooding.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

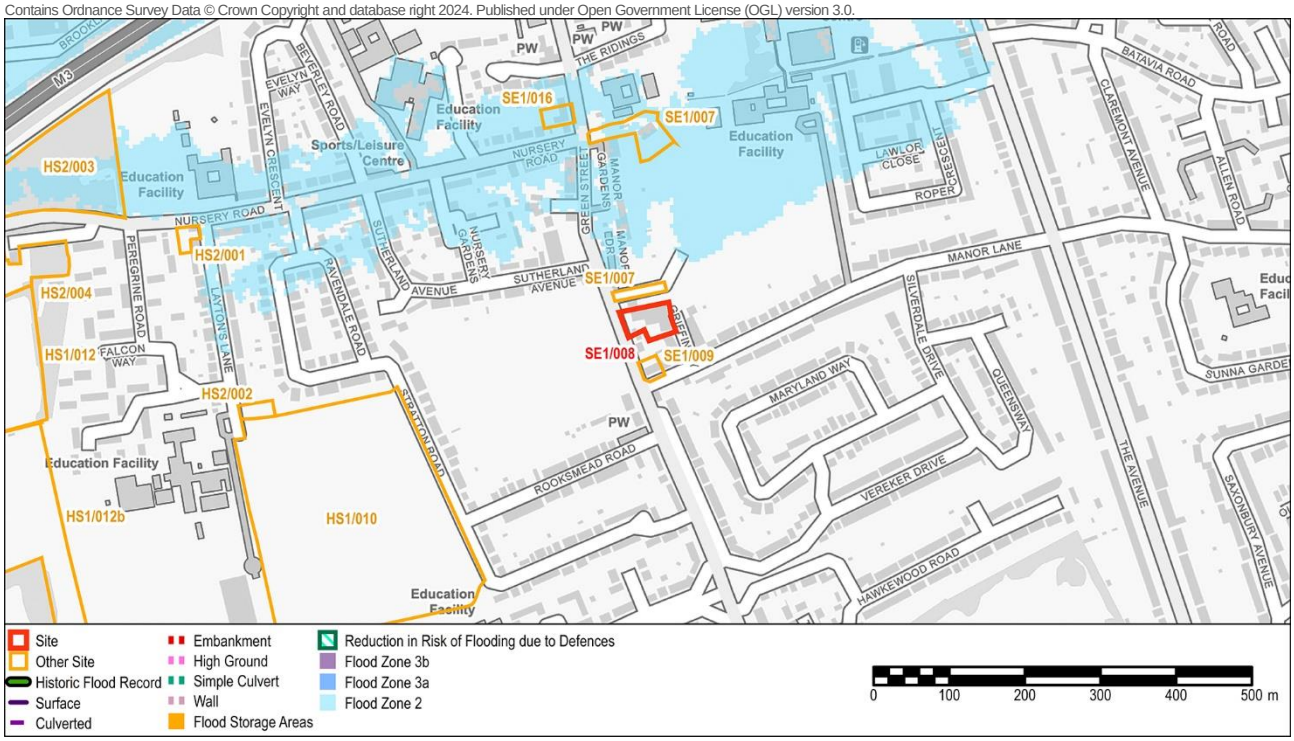
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

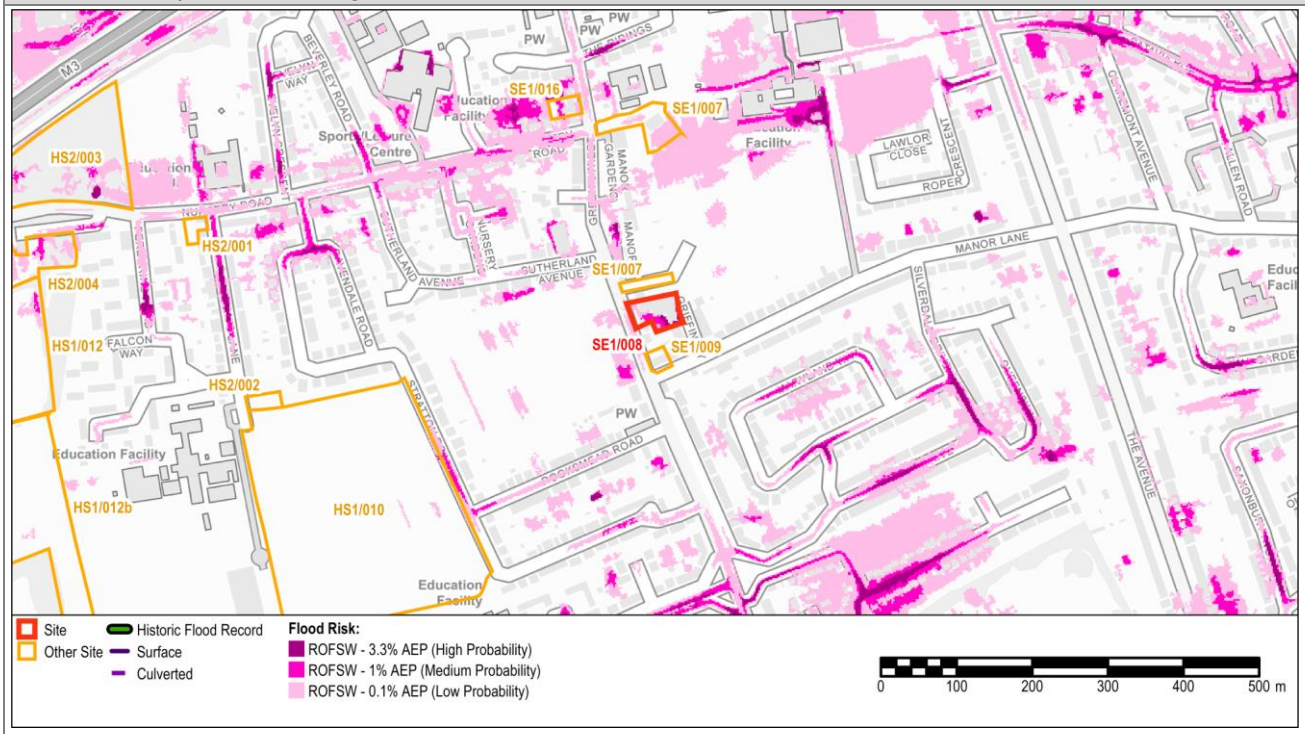
SE1/008 (Telephone Exchange, Green Street)

SE1/008: Telephone Exchange, Green Street, TW16 6QJ				
Site ID:	SE1/008	**Area (ha):**		0.25
Proposed Use: Residential (C3): 14 units (approx.)		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 1; External 0
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SE1/008: Telephone Exchange, Green Street, TW16 6QJ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Principal, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low probability of flooding from rivers, on the Flood Map for Planning.
The Risk of Flooding from Surface Water mapping identifies that the site may be susceptible to surface water flooding. The LLFA SCC have records of flooding within 500m of the site. The site is previously developed land. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

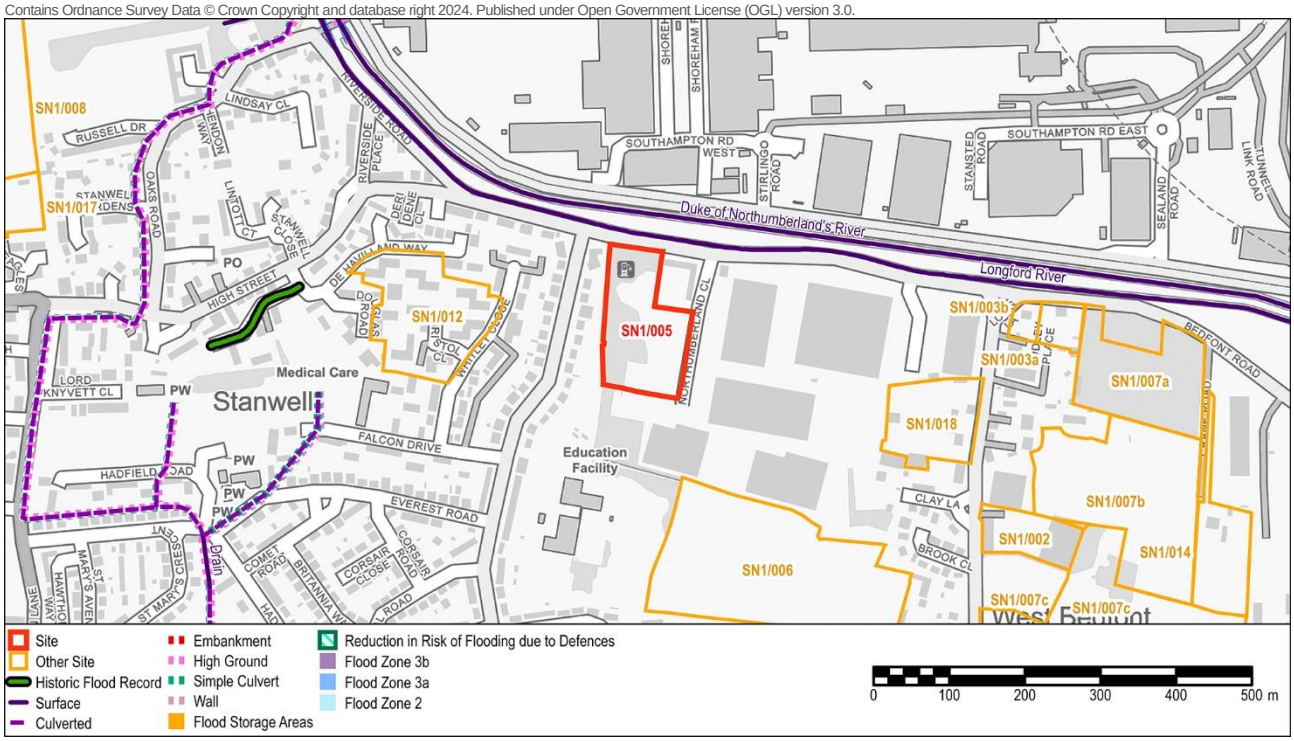
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

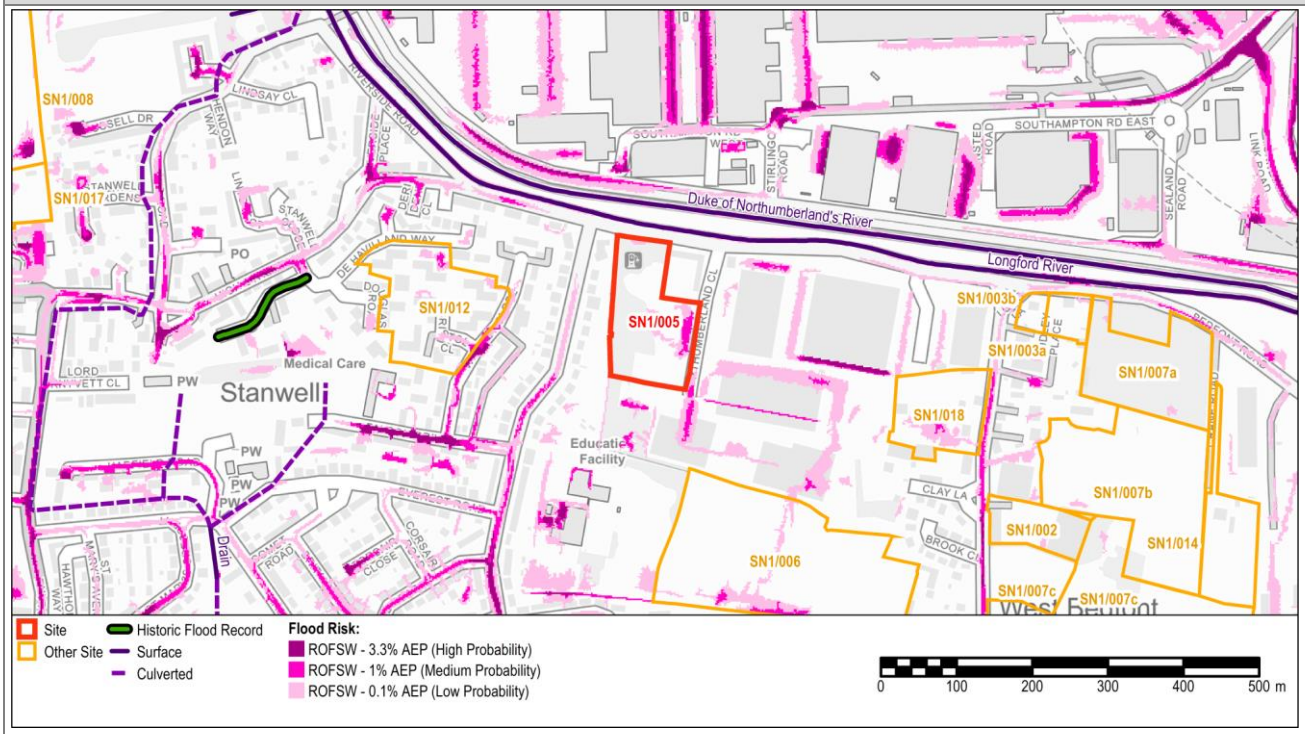
SN1/005 (Land at Northumberland Close)

SN1/005: Land at Northumberland Close				
Site ID:	SN1/005	**Area (ha):**		1.75
Proposed Use: Residential (C3): 80 units (approx.)		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 2; External property flooding 0; Section 19 Flood Investigation incident 2; Surrey County Council Wetspots 4
Sewer flooding records within the post code area in which the site is located:	Internal 14; External 3
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SN1/005: Land at Northumberland Close



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding of property below ground.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. The Longford River and Duke of Northumberland's River are just to the north of the site on the northern side of Riverside Road.
The Risk of Flooding from Surface Water mapping identifies that the site may be susceptible to surface water ponding on the eastern side. The site is currently greenfield.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

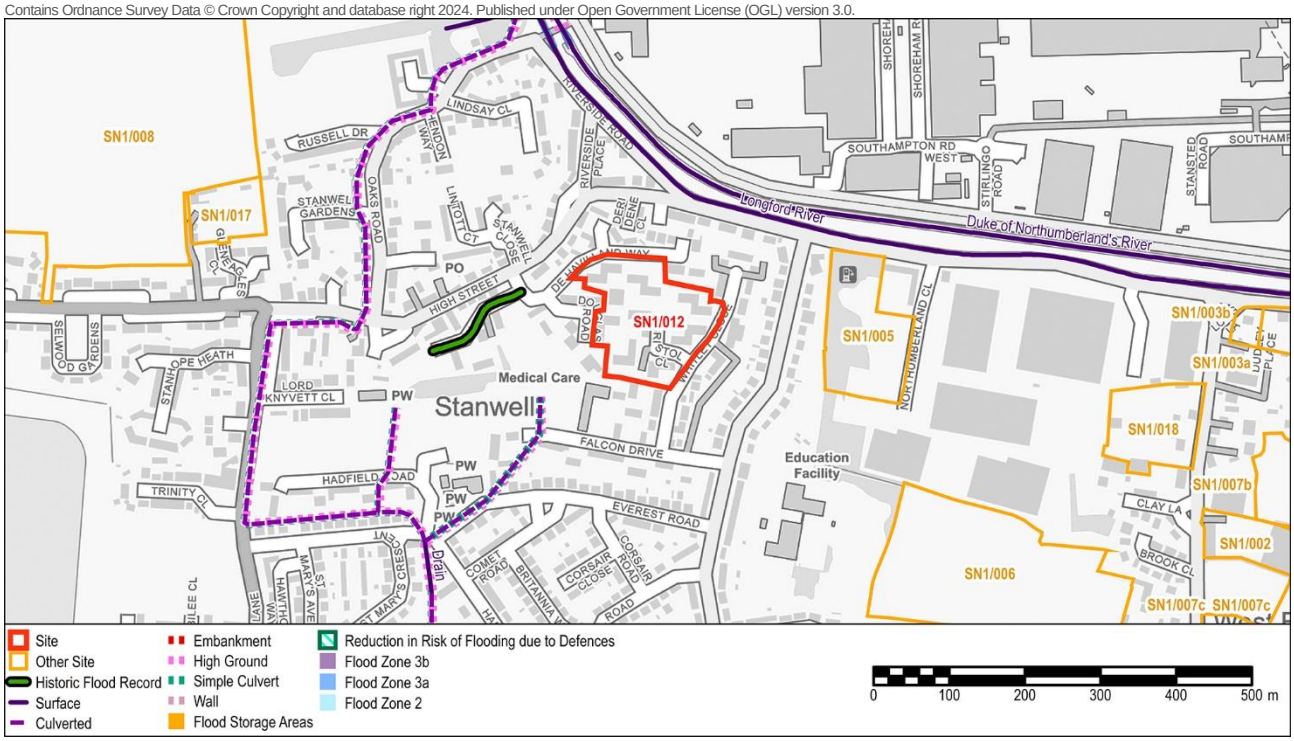
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

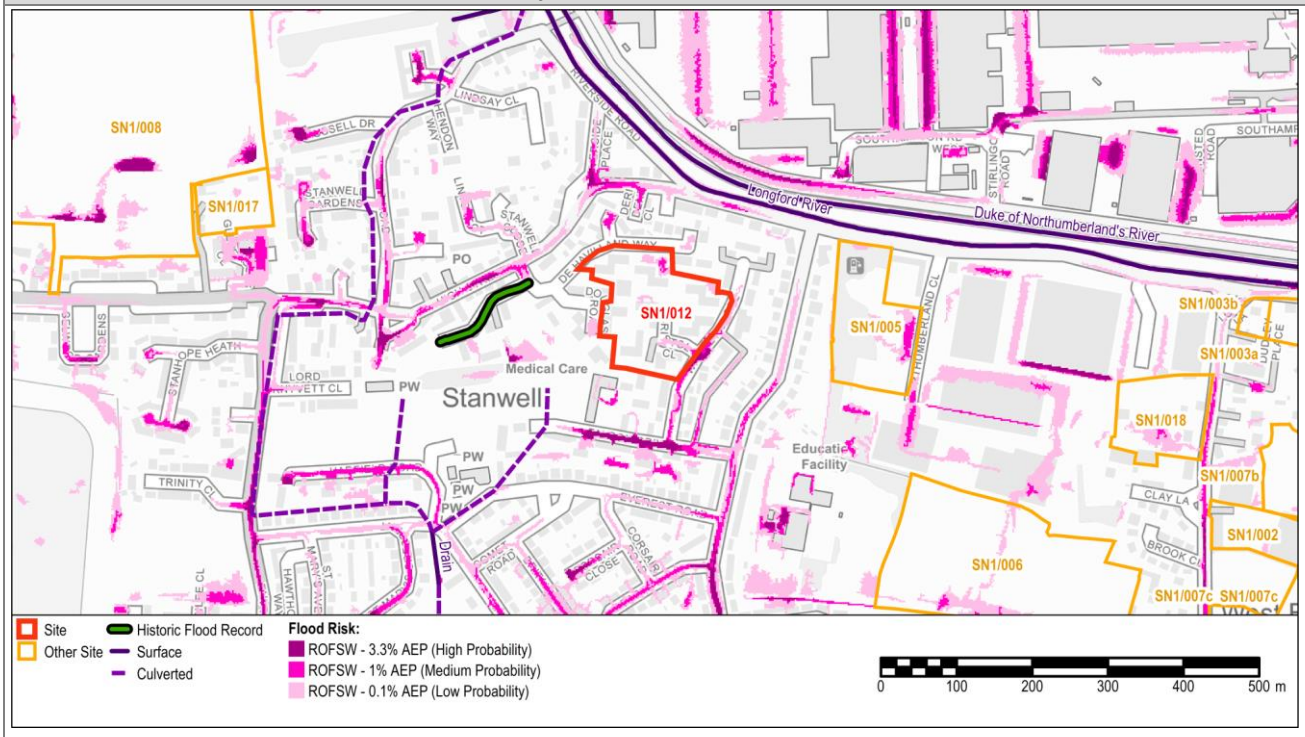
SN1/012 (Stanwell Bedsits, De Havilland Way)

SN1/012: Stanwell Bedsits, De Havilland Way				
Site ID:	SN1/012	**Area (ha):**		2.19
Proposed Use: Residential (C3): 175 units (net)		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 2; External property flooding 0; Section 19 Flood Investigation incident 2; Surrey County Council Wetspots 3
Sewer flooding records within the post code area in which the site is located:	Internal 14; External 3
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SN1/012: Stanwell Bedsits, De Havilland Way



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding of property situated below ground level.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, on the Flood Map for Planning. The Longford River and Duke of Northumberland's River are 150m to the north of the site on the northern side of Riverside Road.

The Risk of Flooding from Surface Water mapping identifies that the site may be susceptible to surface water ponding on the eastern side along Whitley Close. The site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC. The site is previously developed land.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required in line with the NPPF as the site is more than 1 hectare in Flood Zone 1.

A sequential approach should be used to locate development in those areas at lower risk of surface water flooding.

The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Development proposals for the site should seek to implement flood resilience measures.

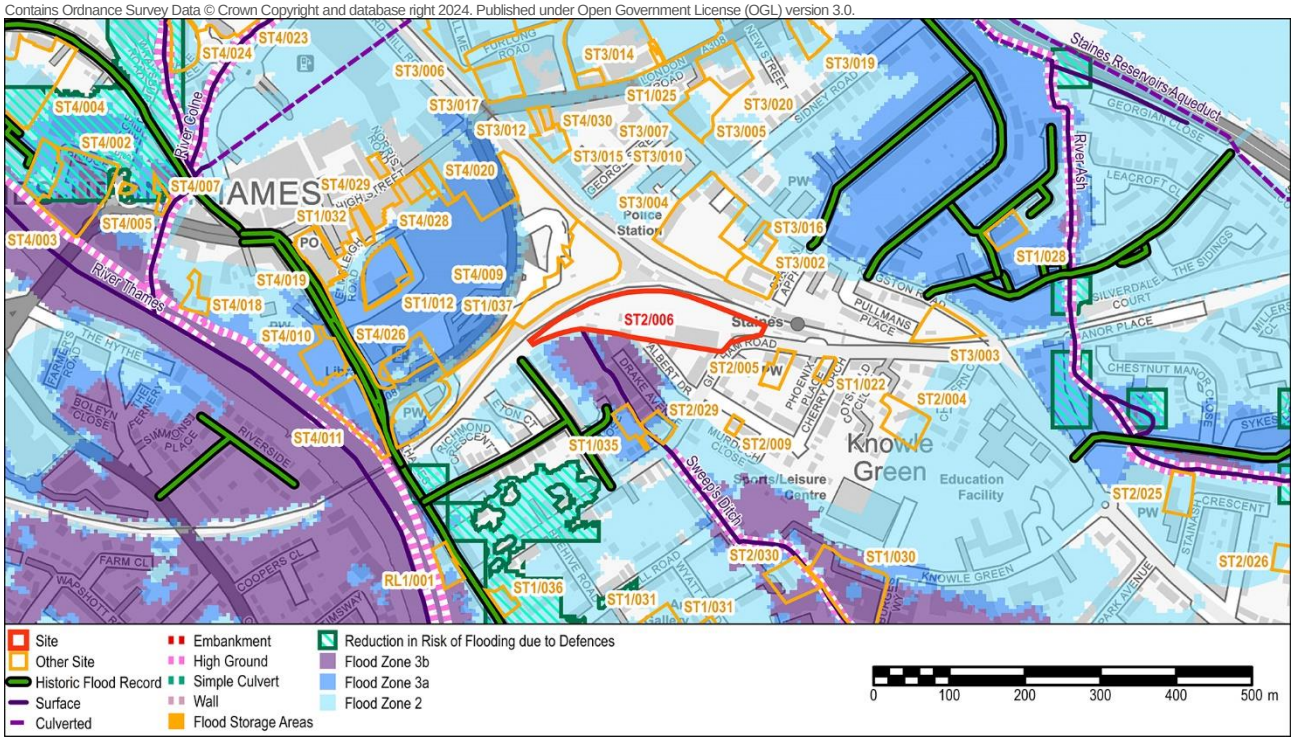
A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or

SN1/012: Stanwell Bedsits, De Havilland Way
from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report. Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

ST2/006 (Builders Yard, Gresham Road)

ST2/006: Builders Yard, Gresham Road, TW18 2BE			
Site ID:	ST2/006	**Area (ha):**	1.36
Proposed Use: Residential (C3): 343 units (approx.)		**Vulnerability Classification:** More Vulnerable	

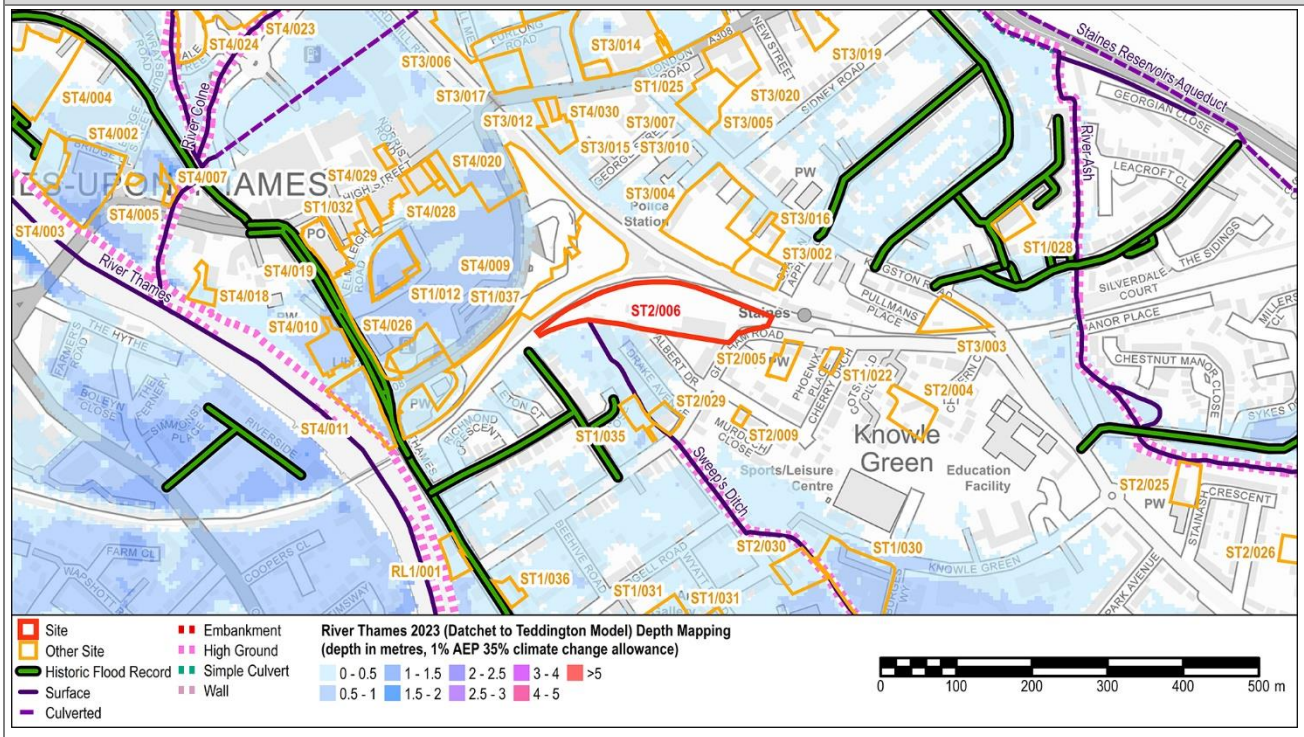
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



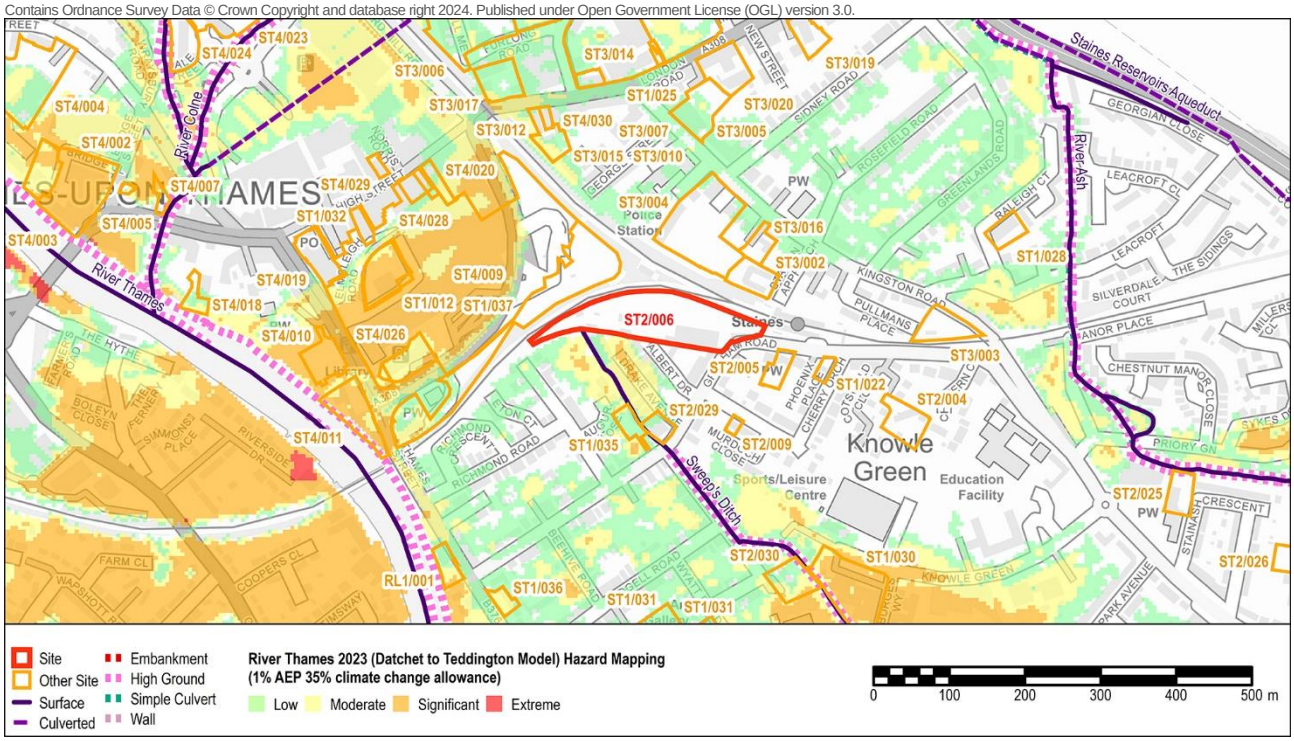
Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 50; External property flooding 0; Section 19 Flood Investigation incident 52; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 9

River Flooding

ST2/006: Builders Yard, Gresham Road, TW18 2BE

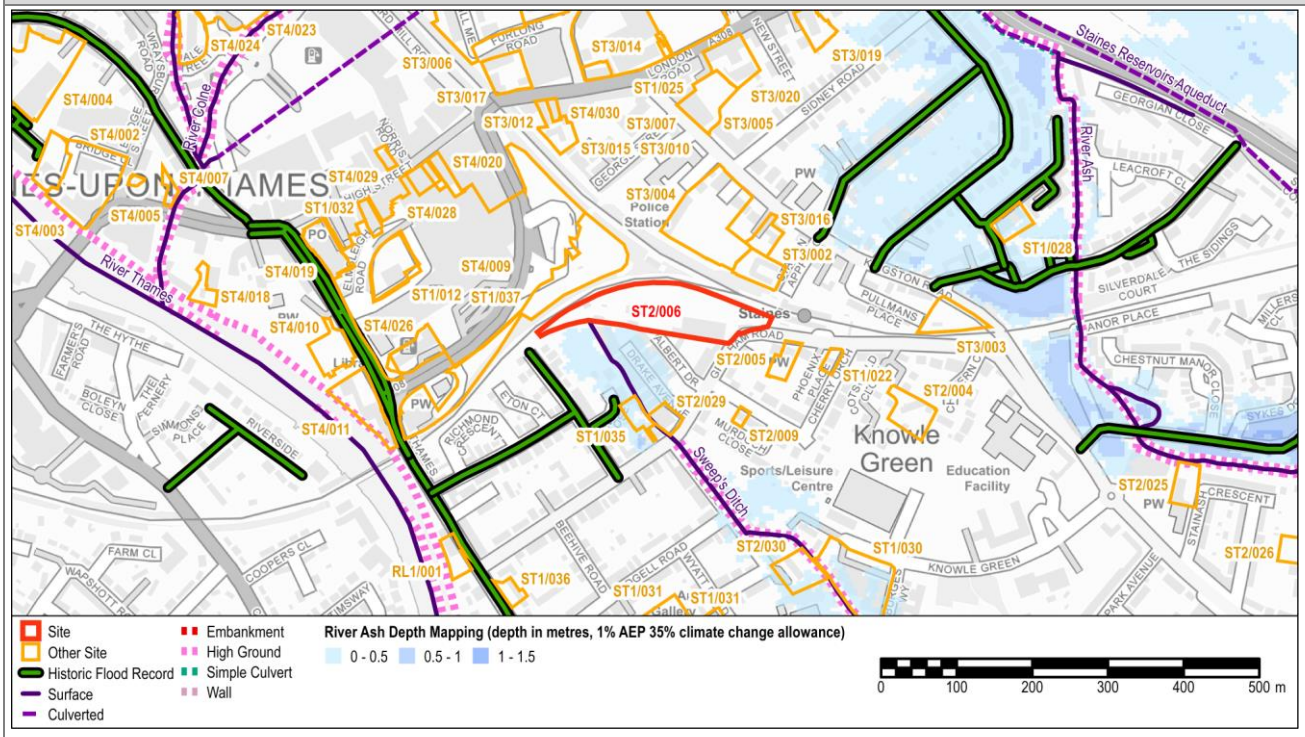


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

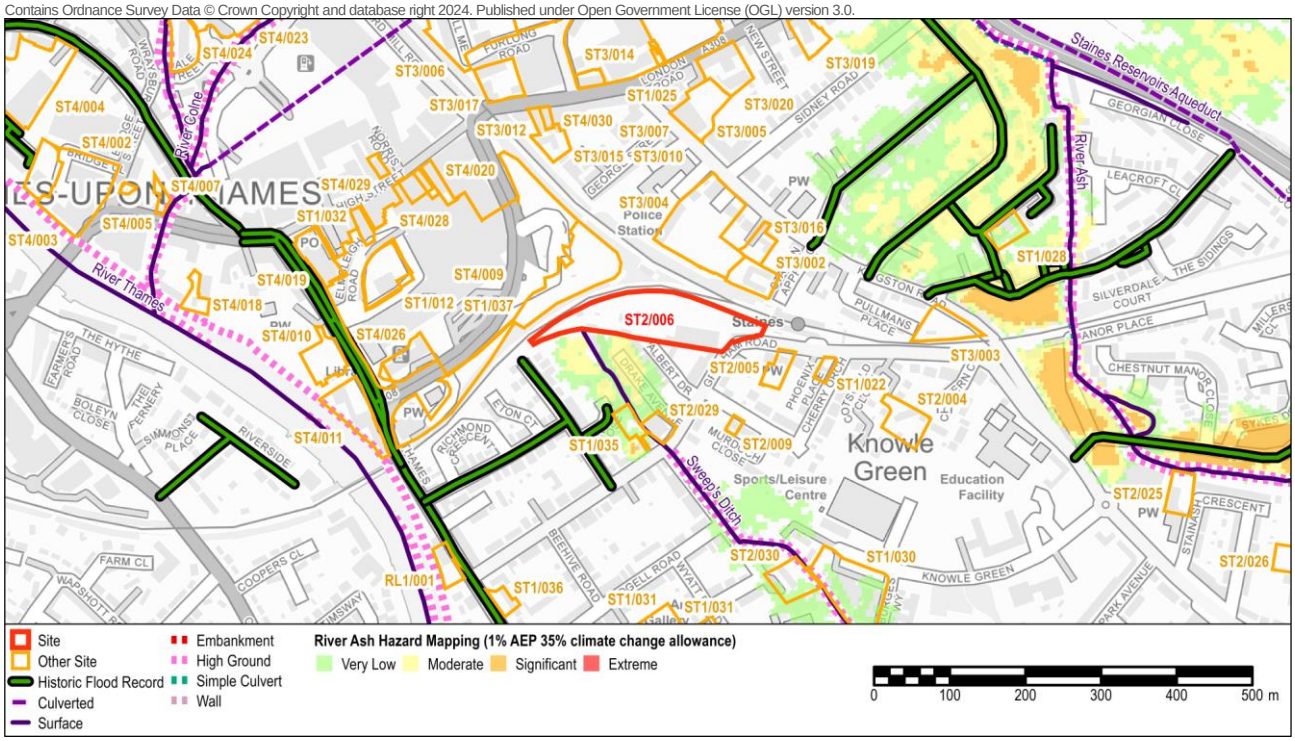


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST2/006: Builders Yard, Gresham Road, TW18 2BE



River Ash Maximum Flood Depth 1% AEP plus 35% climate change

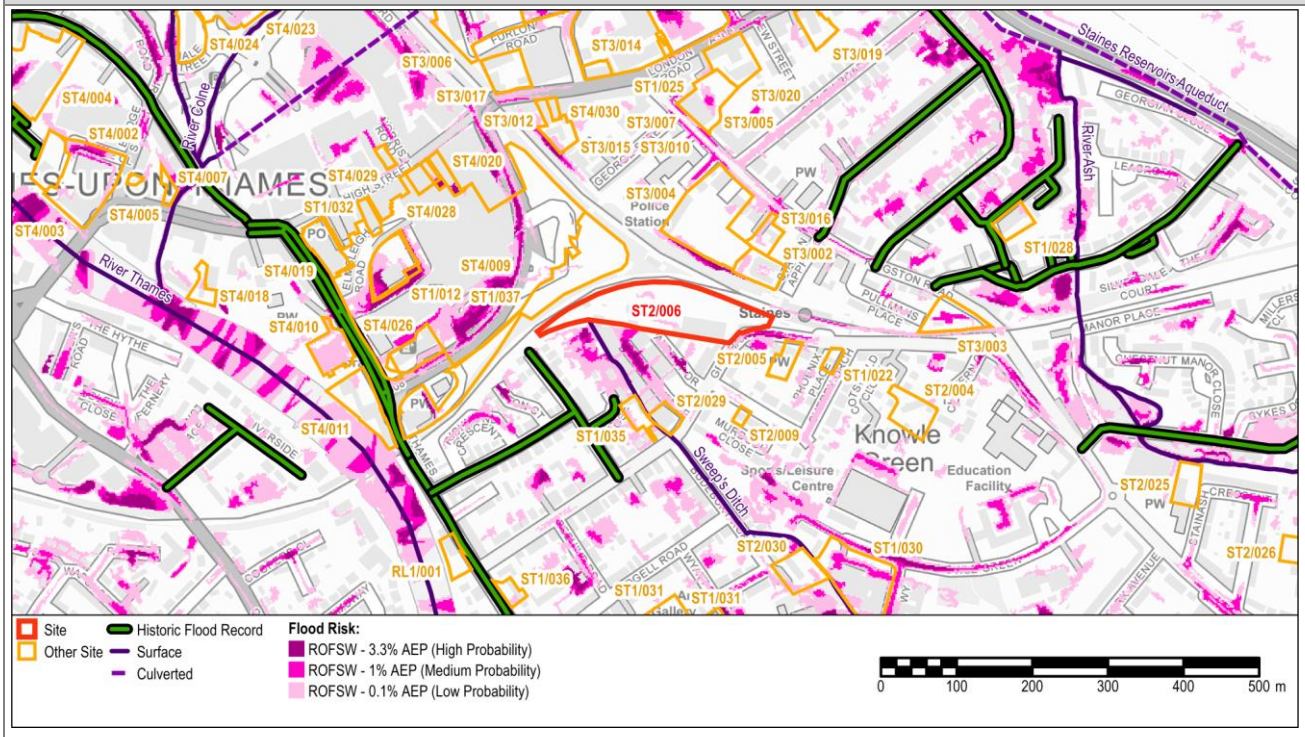


River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Medium

ST2/006: Builders Yard, Gresham Road, TW18 2BE



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Staines Reservoirs, King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that the eastern part of the site and the wider area could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The River Thames flows south east approximately 300m to the south west of the site. The site is located within Flood Zone 1, Low probability of flooding from rivers.

Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates that the site and access along Gresham Road is not at risk of flooding, but land immediately to the south of the site is at risk with hazard ratings of Moderate (Danger for Some).

The Risk of Flooding from Surface Water Map identifies the potential for surface water to pond along the nearby roadways. There are records of flooding in close proximity to the site.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable development is permitted in Flood Zone 1, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central). Given the risk of flooding to the site and surrounding area in the future as a result of climate change the following recommendations are made:

• Safe access/egress that is dry during the 1% AEP event including 35% climate change allowance is achievable along Gresham Road and Kingston Road.

• Finished floor levels for must be set 300mm above the design flood level (1% AEP including climate change).

ST2/006: Builders Yard, Gresham Road, TW18 2BE

• The site is located within the Flood Warning Areas for the River Thames (River Thames at Staines and Egham). Given the risk of flooding to the local area an Emergency Plan should be prepared for the site and places of safe refuge should also be identified outside the flood extent of the design event (1% AEP including climate change).

• The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

• Development proposals for the site should seek to implement flood resilience measures.

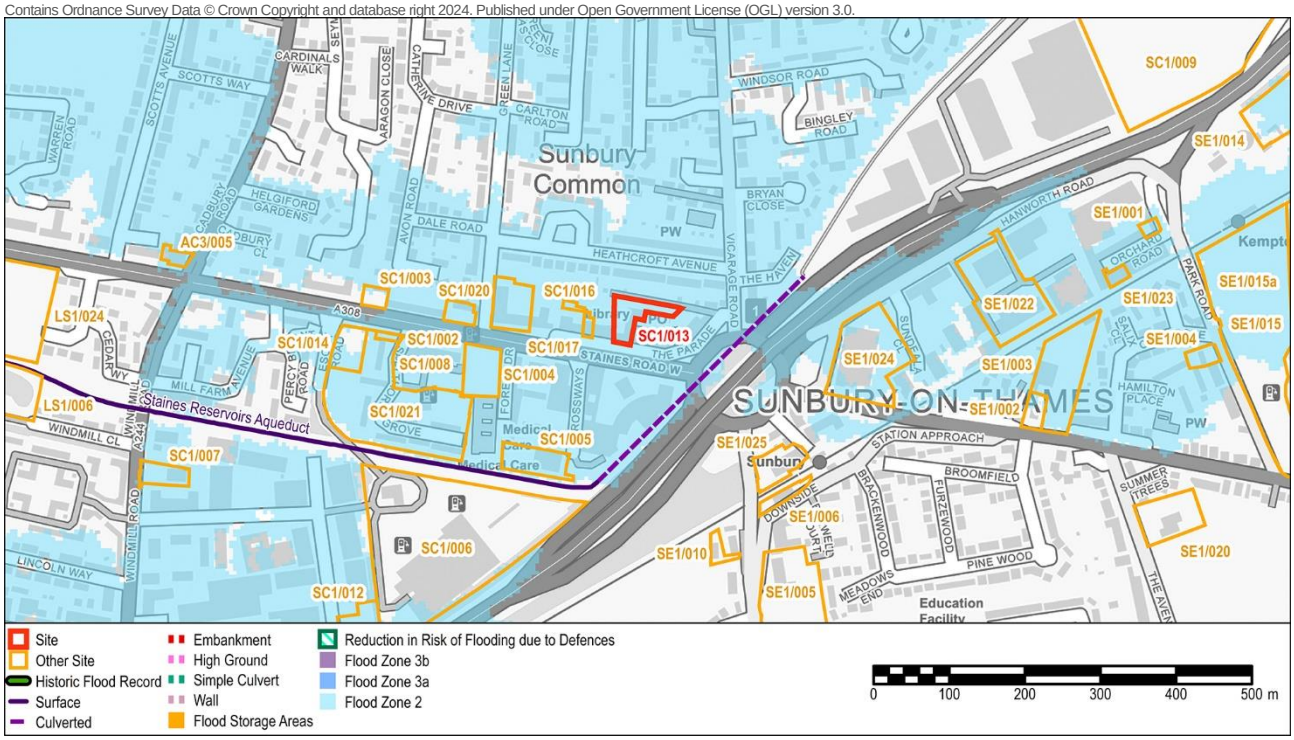
• A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

• Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

Group 4 Sites within Flood Zone 2 extent but not within design flood extent

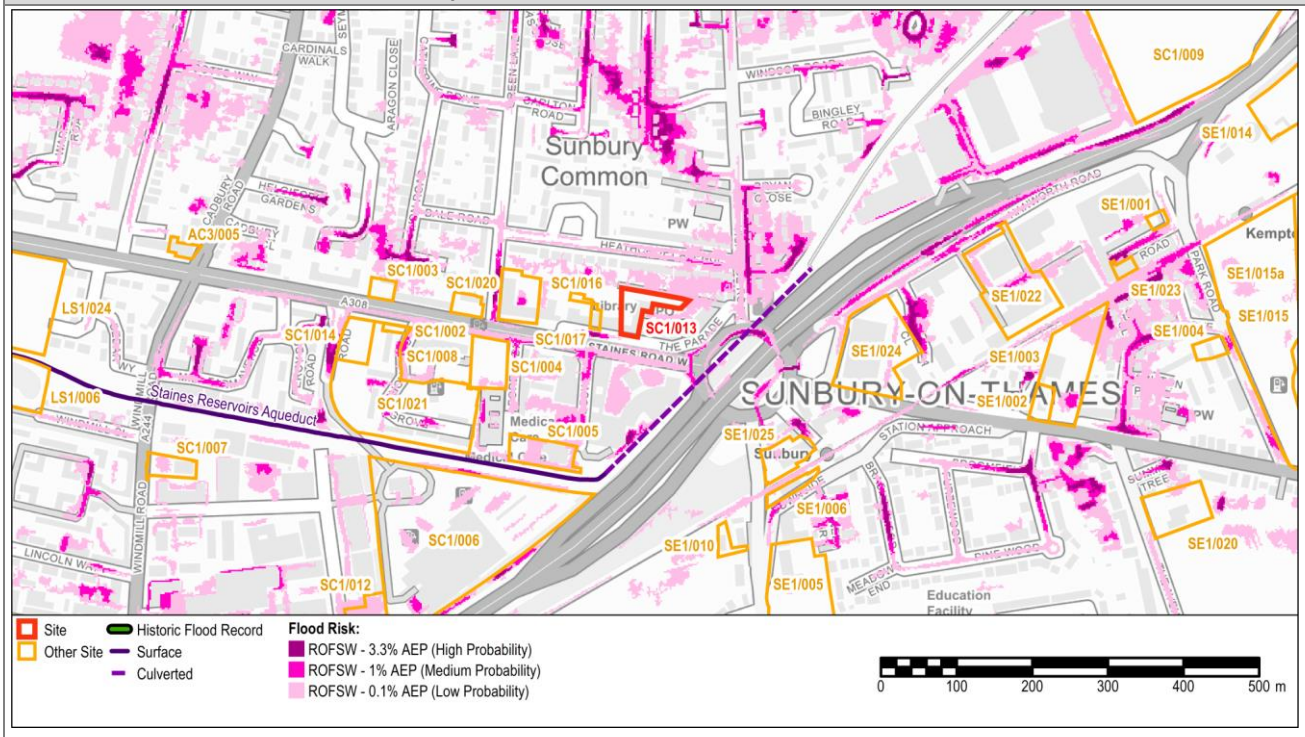
SC1/013 (RMG Warehouse & Delivery Office, Staines Road West)

SC1/013: RMG Warehouse & Delivery Office, Staines Road West				
Site ID:	SC1/013	**Area (ha):**		0.25
Proposed Use: Residential (C3): 22 units (approx.) Ground floor office/retail (Class E): 500 sqm (approx.)		**Vulnerability Classification:** More Vulnerable Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 100%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 3
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SC1/013: RMG Warehouse & Delivery Office, Staines Road West



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 2, medium risk of flooding from rivers, on the Flood Map for Planning, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping shows that the local area is susceptible to surface water flooding. The site is previously developed land. To the north and east of the site the mapping shows an increased risk of surface water flooding.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Less Vulnerable (retail) development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

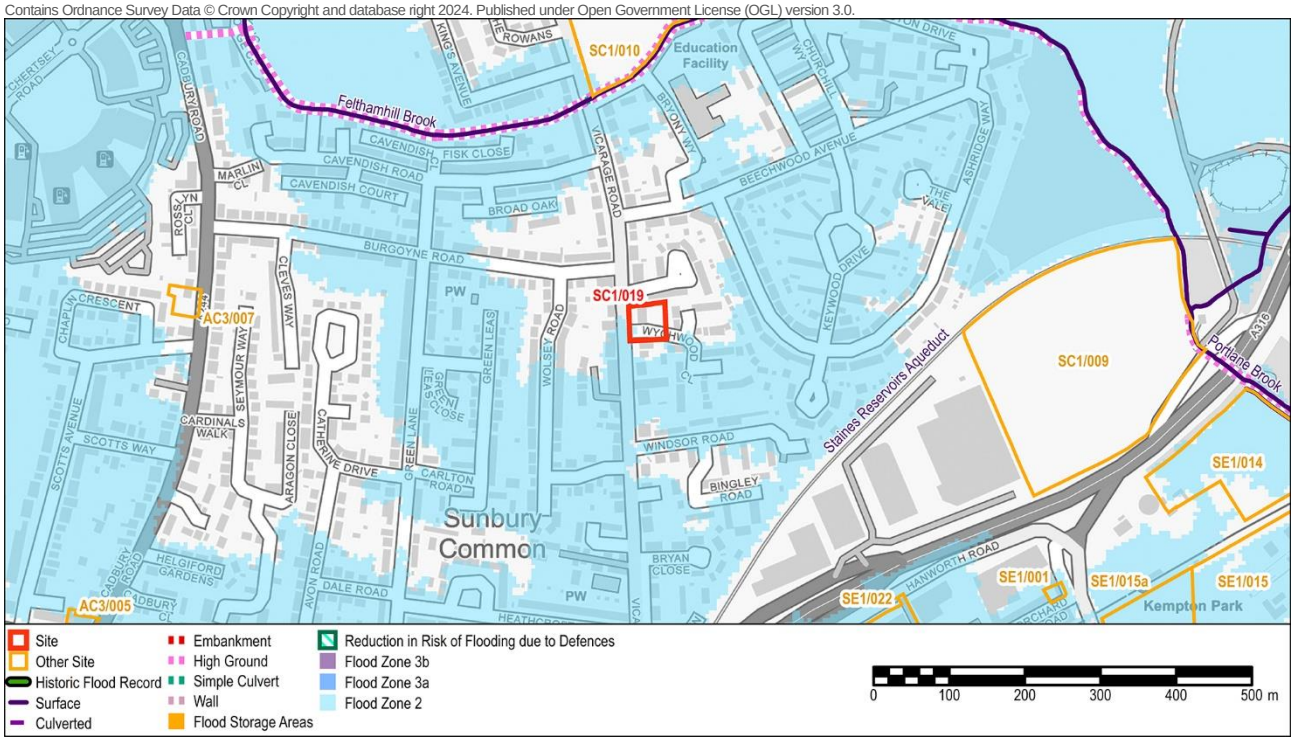
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

SC1/019 (Sunbury Social Services Centre, Vicarage Road)

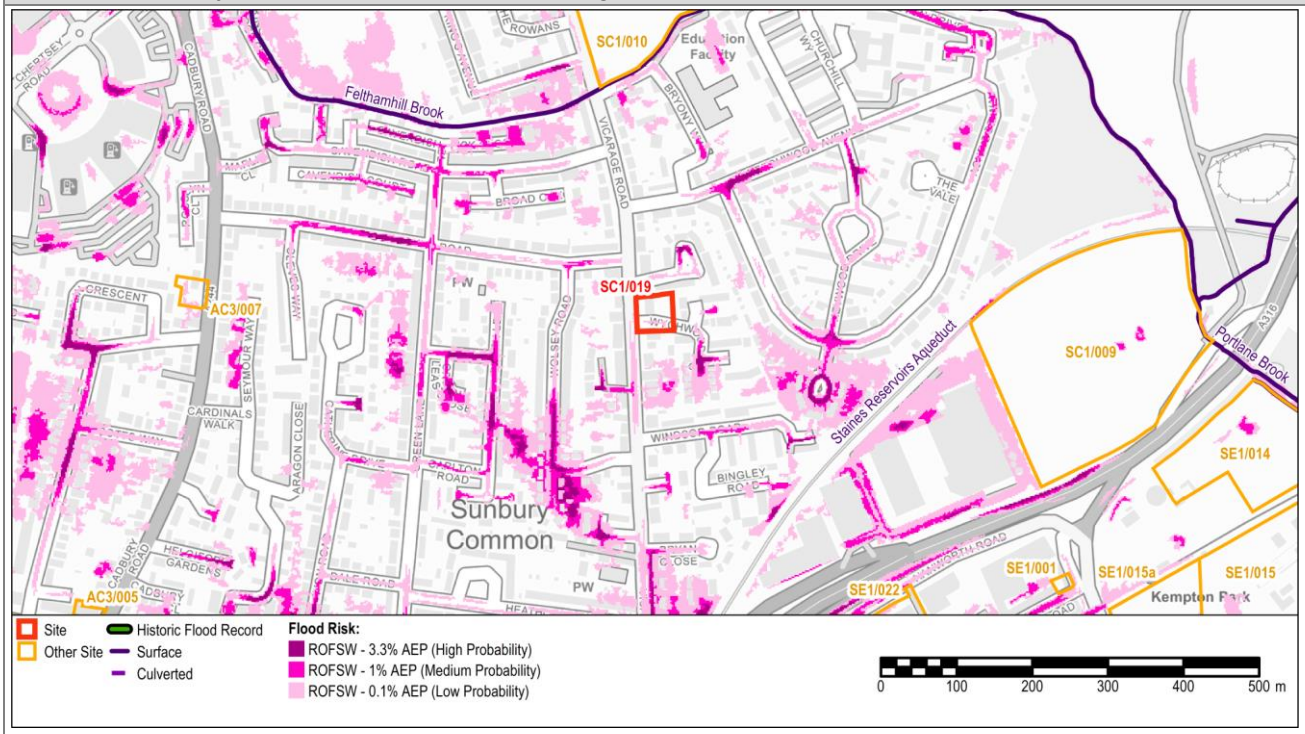
SC1/019: Sunbury Social Services Centre, Vicarage Road				
Site ID:	SC1/019	**Area (ha):**		0.23
Proposed Use: Residential (C3): 11 units (approx.) Ground floor community units or re-provision off site		**Vulnerability Classification:** More Vulnerable, Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 94%	**Flood Zone 2 (0.1% AEP):** 6%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 5
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

Surface Water Flooding

SC1/019: Sunbury Social Services Centre, Vicarage Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Principal, Unproductive		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 1 and Flood Zone 2, low and medium risk of flooding from rivers, on the Flood Map for Planning, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Less Vulnerable (community use) development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

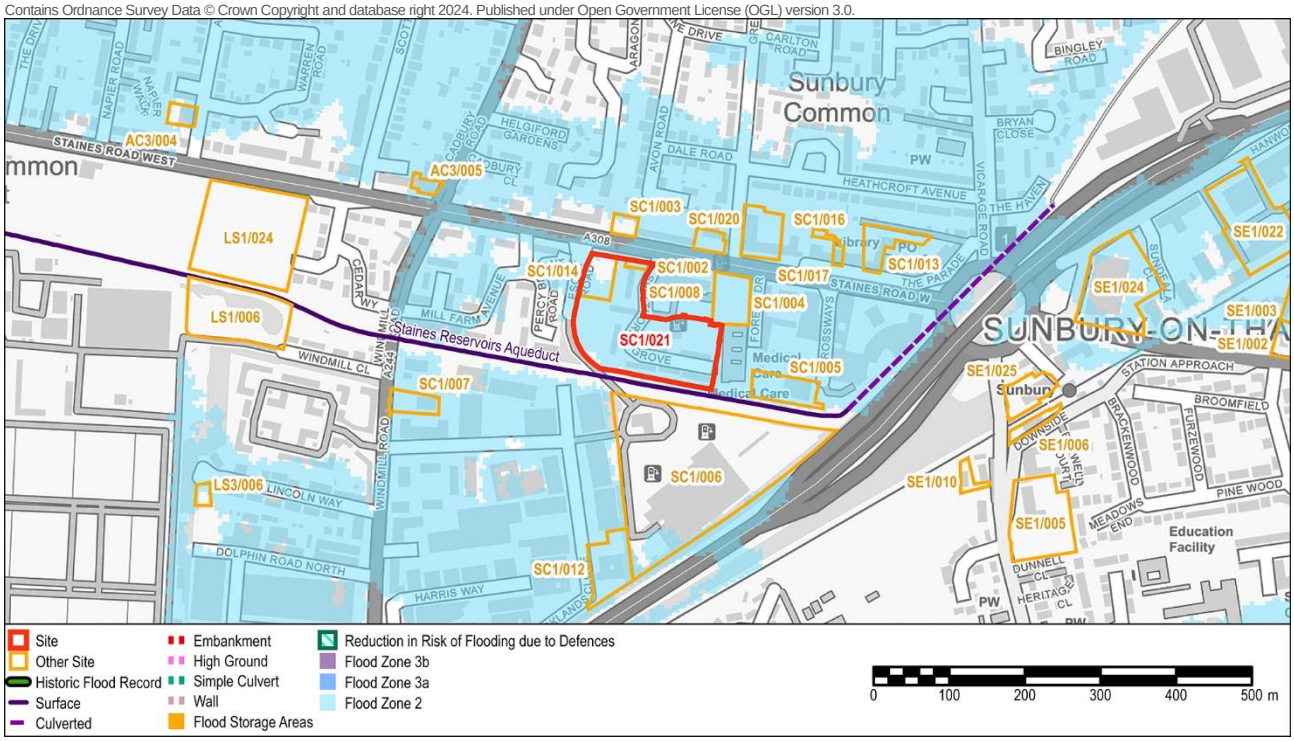
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

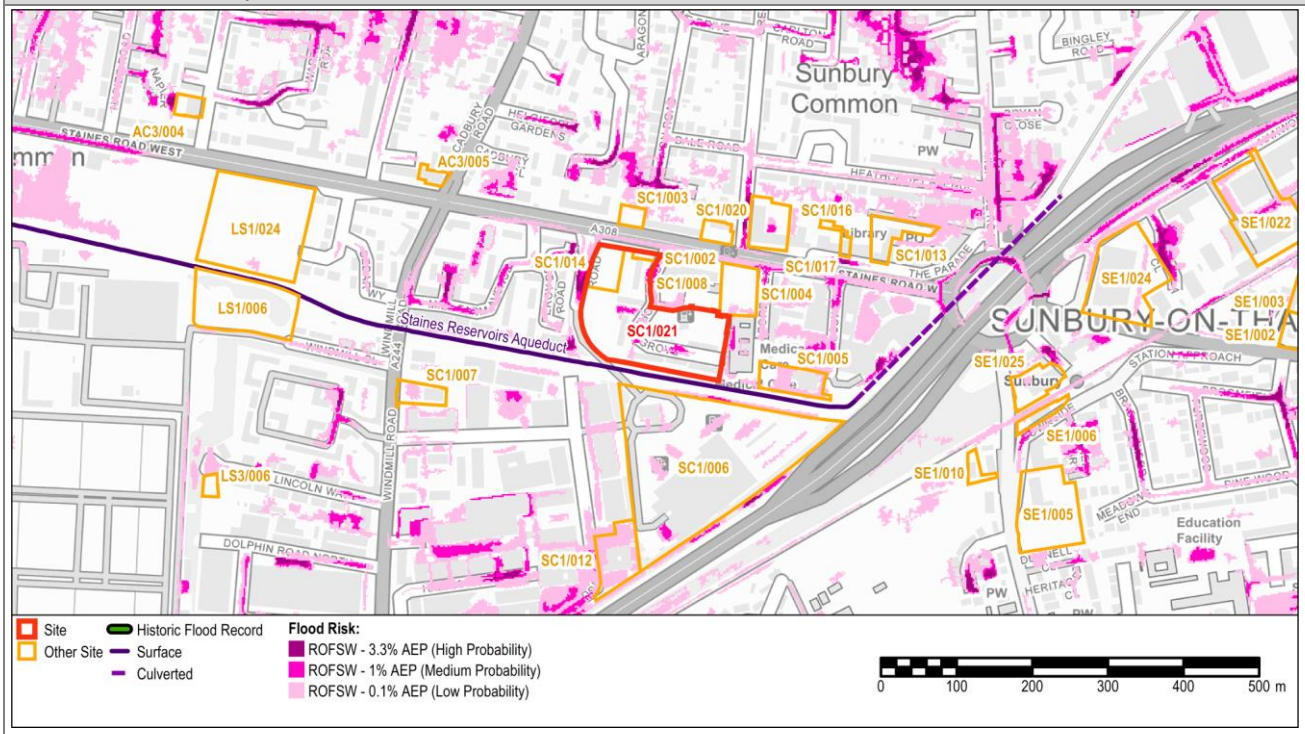
SC1/021 (Land at Spelthorne Grove)

SC1/021: Land at Spelthorne Grove				
Site ID:	SC1/021	**Area (ha):**		2.1
Proposed Use: Residential (C3): 250 net units (approx.) Open space: Retention of existing or reprovision within the wider site.			**Vulnerability Classification:** More Vulnerable Water Compatible	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 6%	**Flood Zone 2 (0.1% AEP):** 94%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 4
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SC1/021: Land at Spelthorne Grove



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 2, medium risk of flooding from rivers, on the Flood Map for Planning, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping shows that the local area including the Escot Road to the west of the site may be susceptible to surface water flooding. The site is previously developed land.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Water Compatible (open space) development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

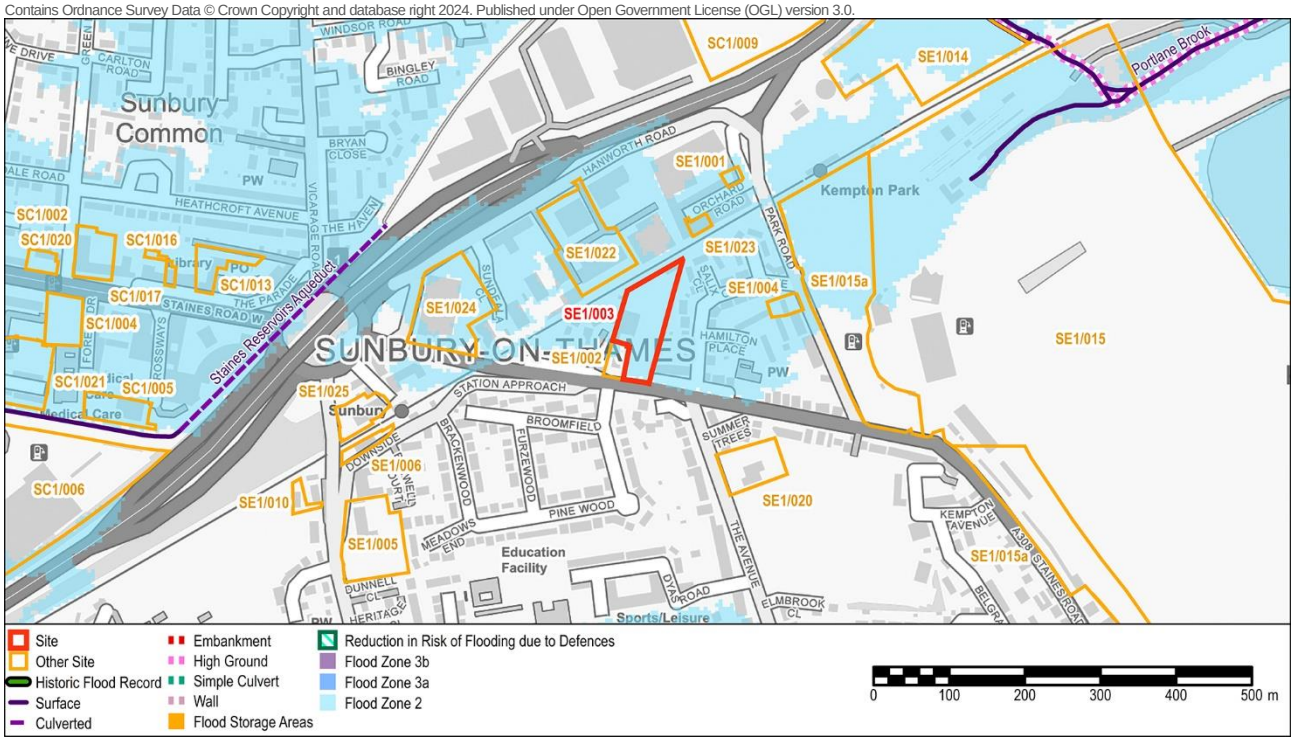
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

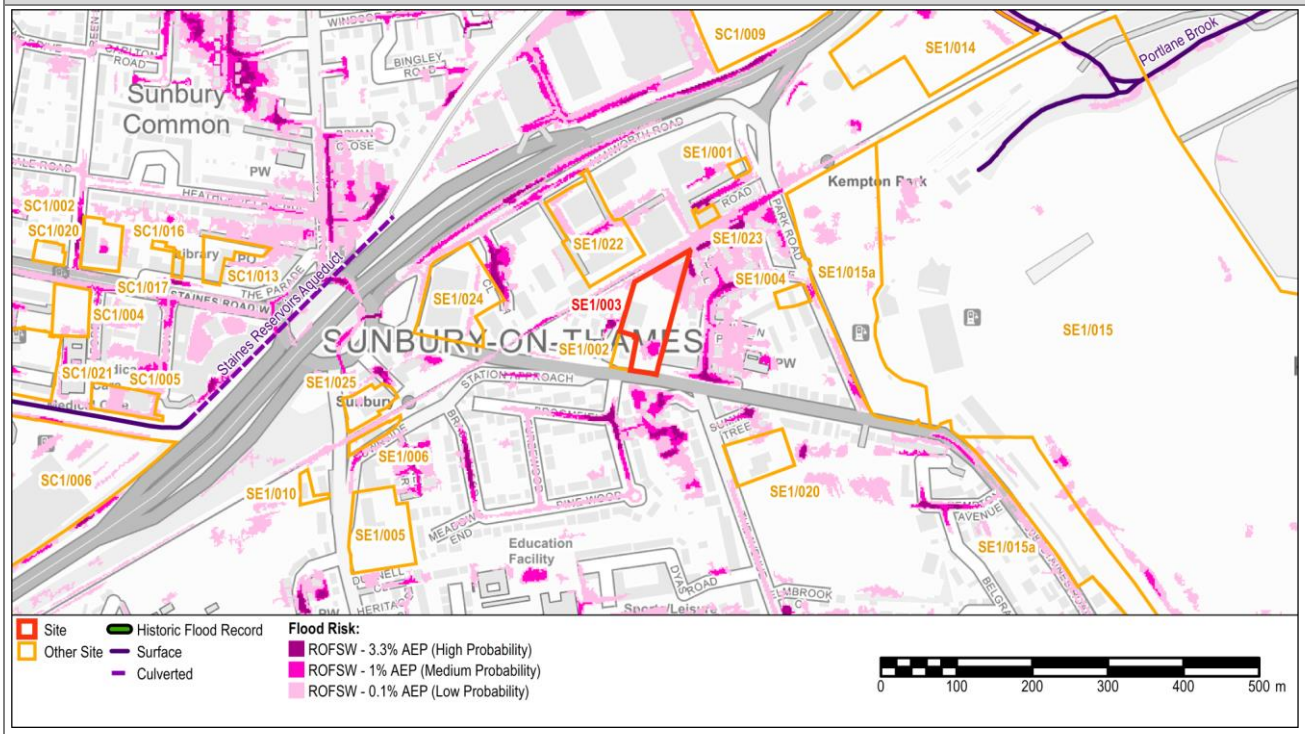
SE1/003 (Builder's Yard, Staines Road East)

SE1/003: Builder's Yard, Staines Road East, TW16 5AD				
Site ID:	SE1/003	**Area (ha):**		0.75
Proposed Use: Residential (C3): 75 units (approx.)			**Vulnerability Classification:** More Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 3%	**Flood Zone 2 (0.1% AEP):** 97%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 4
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	
Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

SE1/003: Builder's Yard, Staines Road East, TW16 5AD



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Principal, Unproductive		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is shown to be within Flood Zone 2, medium risk of flooding from rivers, on the Flood Map for Planning, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping identifies that the area to the east of the site and adjacent to the railway line may be susceptible to surface water flooding. The LLFA SCC have records of flooding within 500m of the site. The site is previously developed land. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

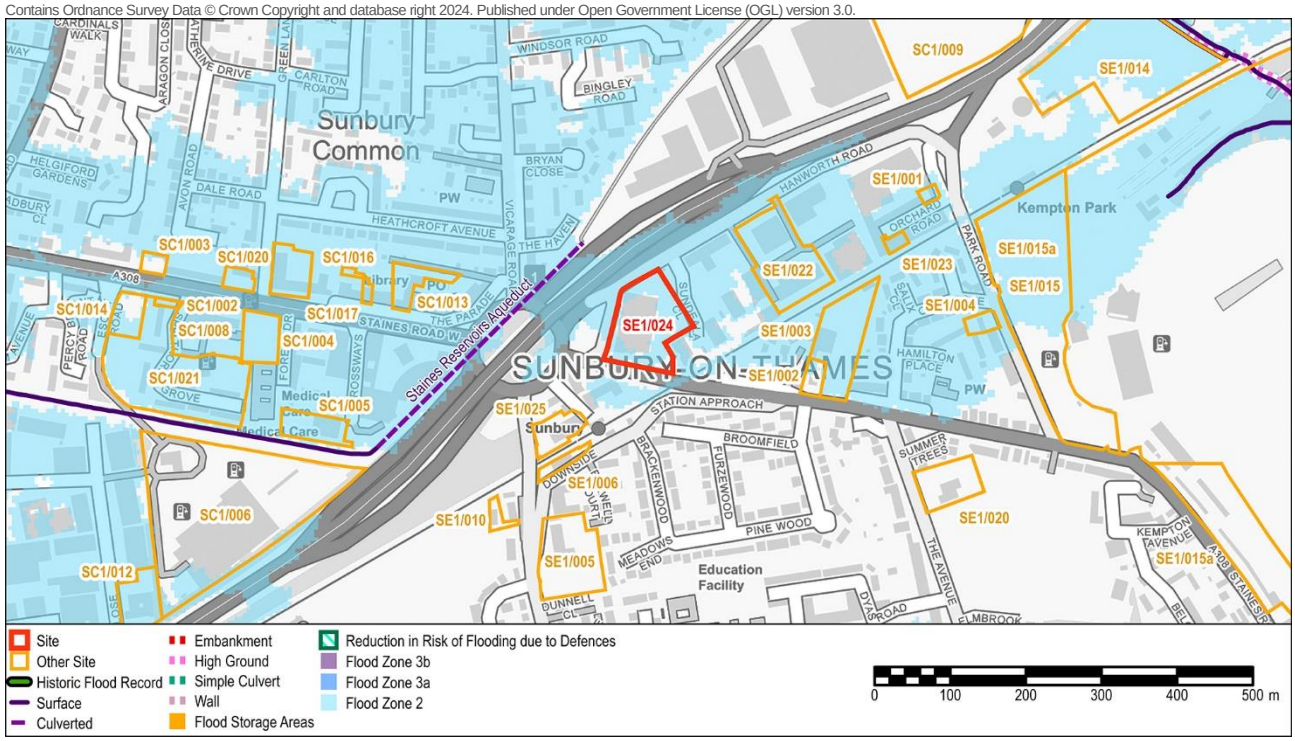
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

SE1/024 (Annandale House, Hanworth Road)

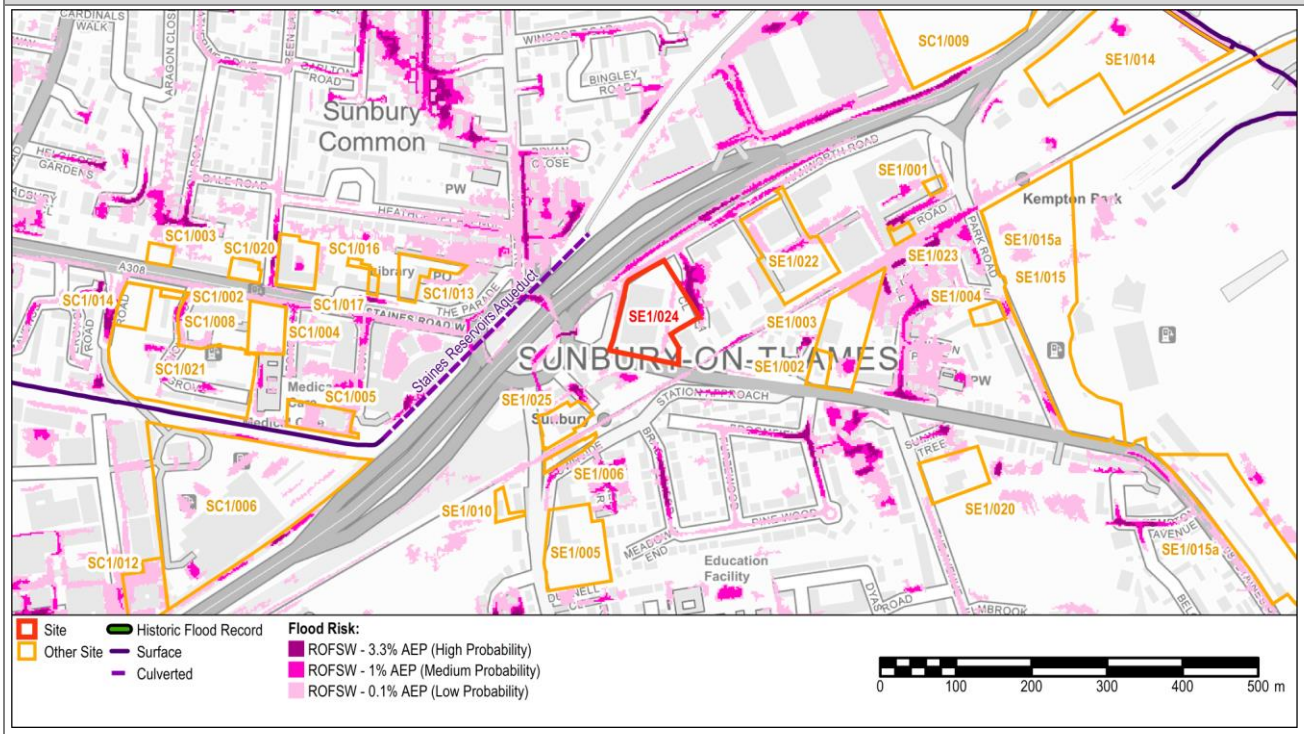
SE1/024: Annandale House, 1, Hanworth Road, TW16 5DJ				
Site ID:	SE1/024	**Area (ha):**		0.97
Proposed Use:	Residential (C3): 295 units (approx.) Ground floor retail (Class E): 450 sqm (approx.)	**Vulnerability Classification:**		More Vulnerable Less Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 41%	**Flood Zone 2 (0.1% AEP):** 59%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



Flood Zones and Flood Records

Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 5
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
Surface Water Flooding	

SE1/024: Annandale House, 1, Hanworth Road, TW16 5DJ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel

Areas Susceptible to Groundwater Flooding	>75%
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.
Aquifer Designation	Principal, Unproductive

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Summary

The site is shown to be within Flood Zone 1, low risk of flooding from rivers, and Flood Zone 2, medium risk of flooding from rivers, on the Flood Map for Planning, however, is not shown to be within defended modelled extents. The site and surrounding area are not shown to be at risk from the River Thames during the 1% AEP including 35% climate change flood event.
The Risk of Flooding from Surface Water mapping does not identify that the site is susceptible to surface water flooding. The site is previously developed land. To the north and east, along Hanworth Road and Sundeala Close, the mapping shows an increased risk of surface water flooding.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) and Less Vulnerable (retail) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Development proposals for the site should seek to implement flood resilience measures.

Further investigation should be undertaken in consultation with the Lead Local Flood Authority Surrey County Council to determine whether there are records of flooding to the north and east of the site along Hanworth Road and Sundeala Close. Opportunities should be sought to improve the management of surface water in these locations as part of the new development.

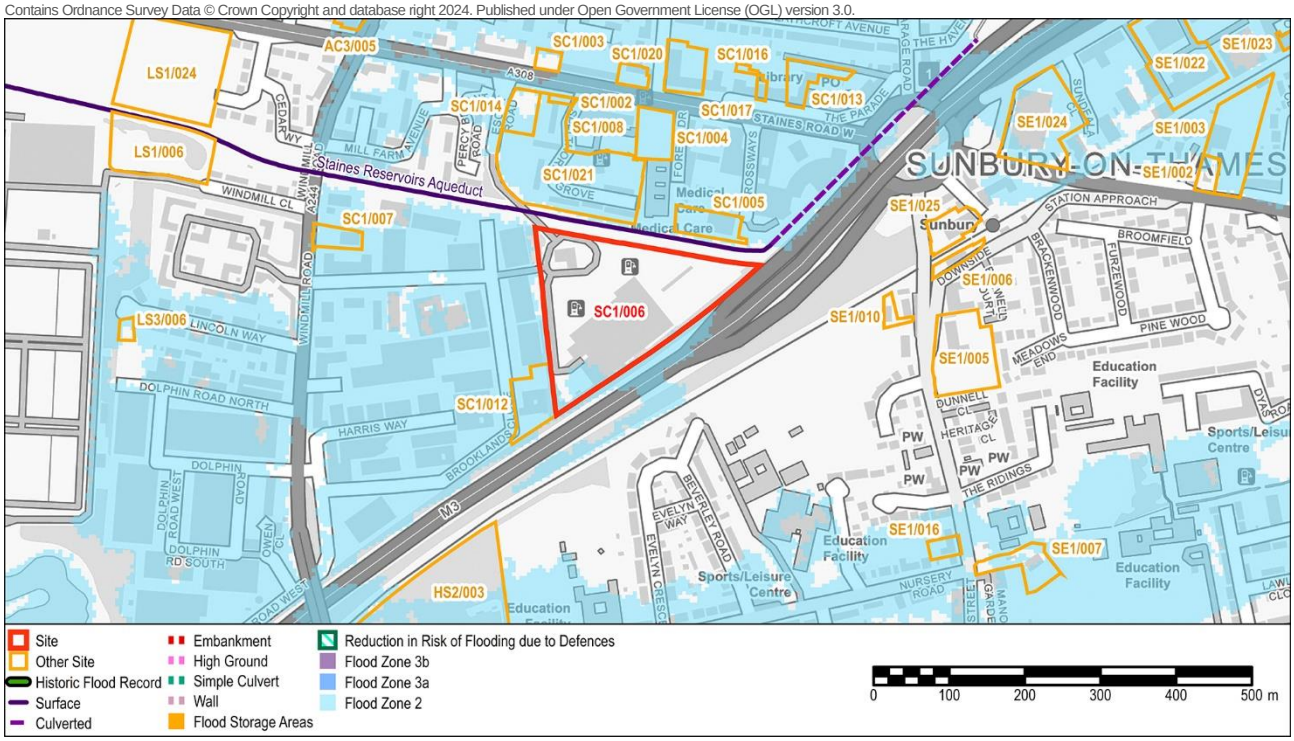
A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

Group 5 Sites at risk of flooding from rivers (Flood Zone 2 or 3), with access that is dry, or at low hazard rating

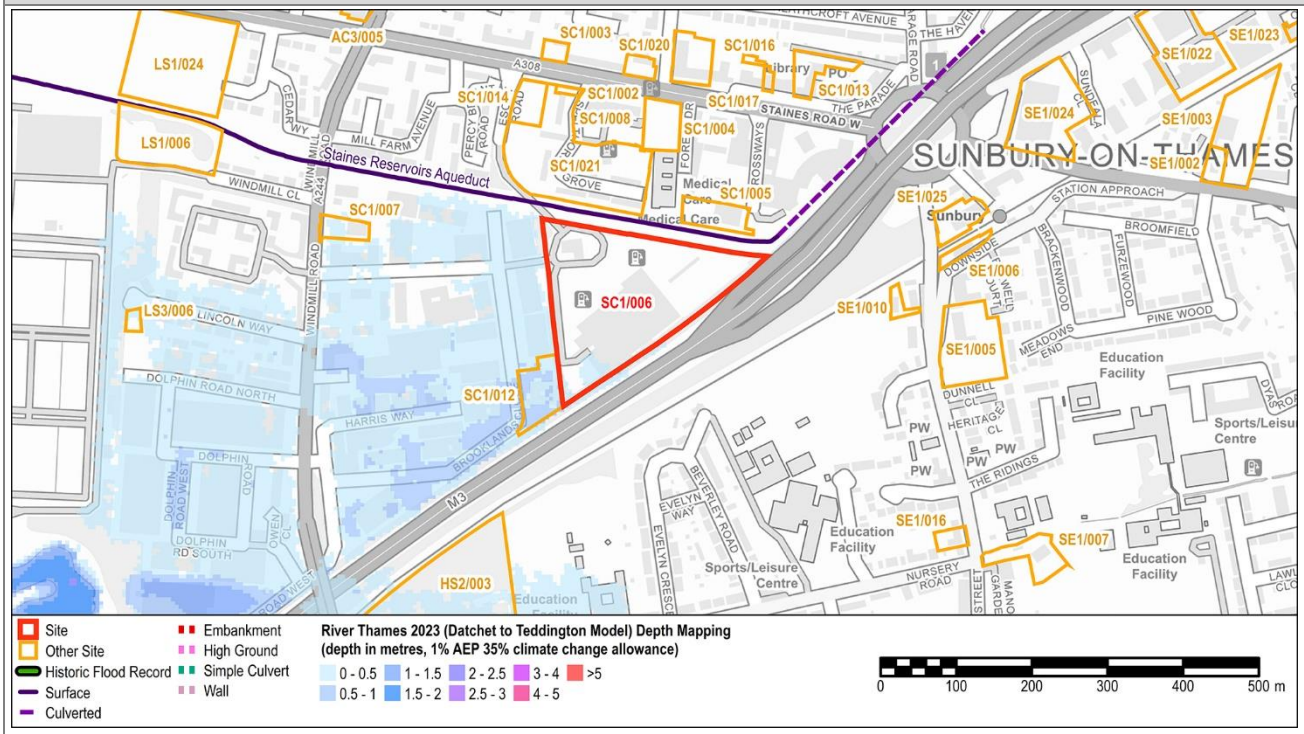
SC1/006 (Tesco Extra, Escot Road)

SC1/006: Tesco Extra, Escot Road				
Site ID:	SC1/006	**Area (ha):**		3.75
Proposed Use: Retail: Retention of the existing superstore on site. Residential (C3): 225 units (approx.)		**Vulnerability Classification:** Less Vulnerable More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 92%	**Flood Zone 2 (0.1% AEP):** 8%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

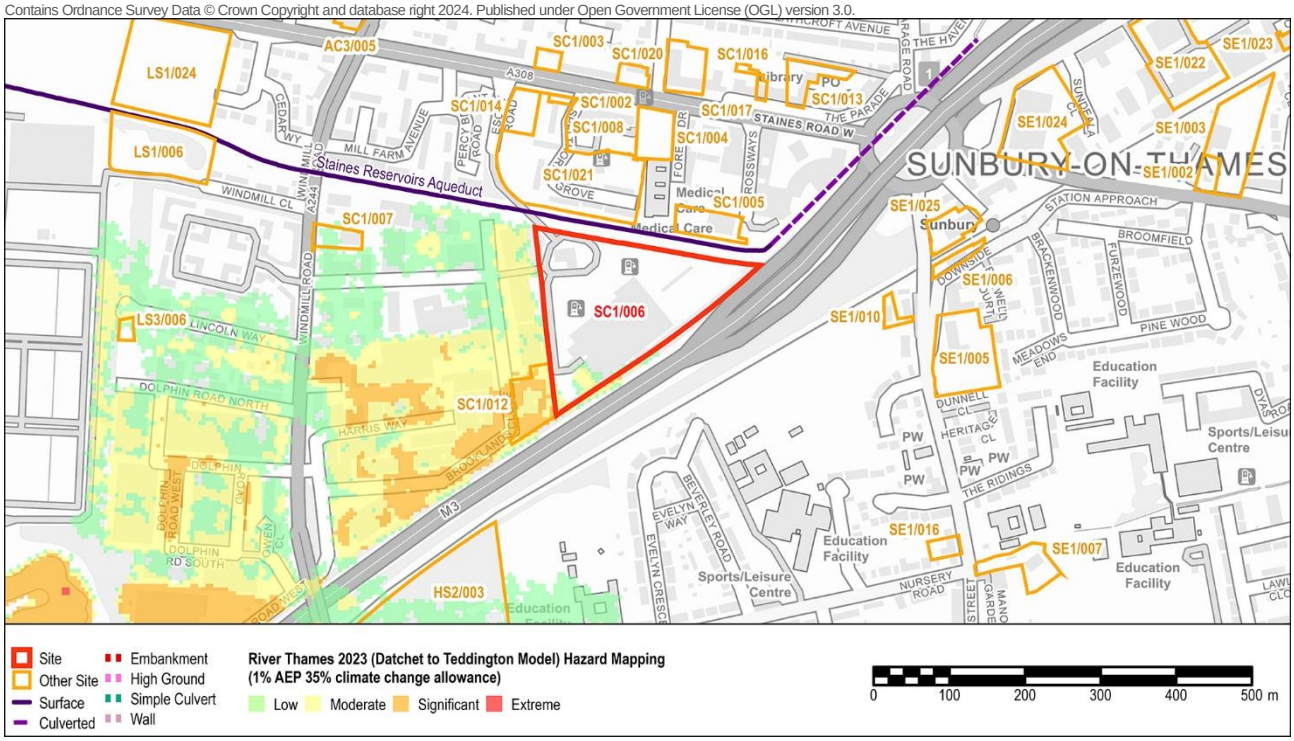


Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 6
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

SC1/006: Tesco Extra, Escot Road



River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

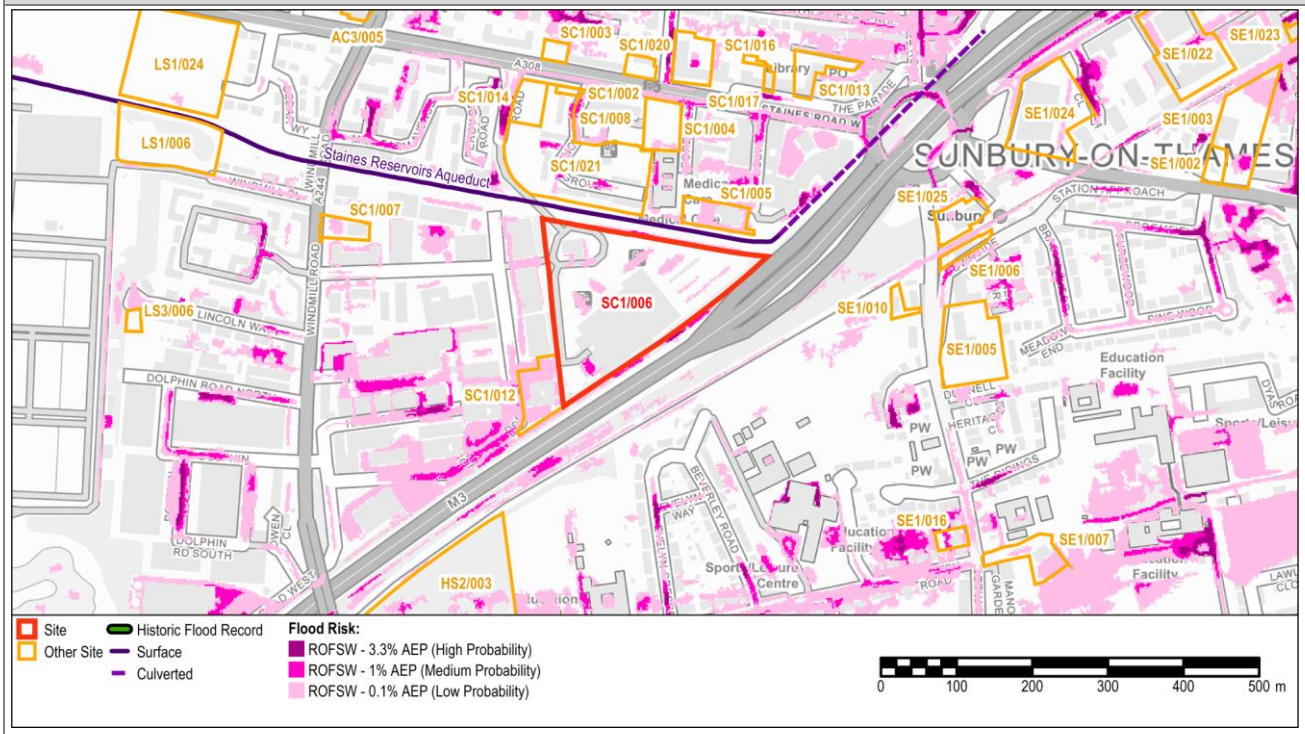


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Low

SC1/006: Tesco Extra, Escot Road



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel

Areas Susceptible to Groundwater Flooding	>=50% <75%
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.
Aquifer Designation	Unproductive, Secondary A

Other Sources

Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is primarily within Flood Zone 1, low probability of flooding from rivers. A small area in the south is within Flood Zone 2, medium probability of flooding. This area, as well as land to the west of the site, is at risk of flooding from the River Thames during the 1% AEP including 35% climate change flood event, flood depths of 0-0.5m are modelled to occur in the south west of the site, with a corresponding hazard rating of Very Low to Moderate (Danger for Some).

The Risk of Flooding from Surface Water mapping does not identify that the site is susceptible to surface water flooding. There are some small areas of ponding. The site is previously developed land. Access along Escot Road is shown to be susceptible to surface water flooding. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding to occur in this area.

Access/Egress Summary

Access route to the north onto Escot Road not at risk of flooding during the 1% AEP plus 35% climate change allowance.

(Alternative routes are not appropriate; via Brooklands Close to the west of the site at Moderate hazard (50m) and Low hazard (100m); Or via Brooklands Close to the south onto Windmill Road, at Significant hazard (260m), Moderate hazard (170m), and Low hazard (240m).

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and where possible reduce flood risk overall.

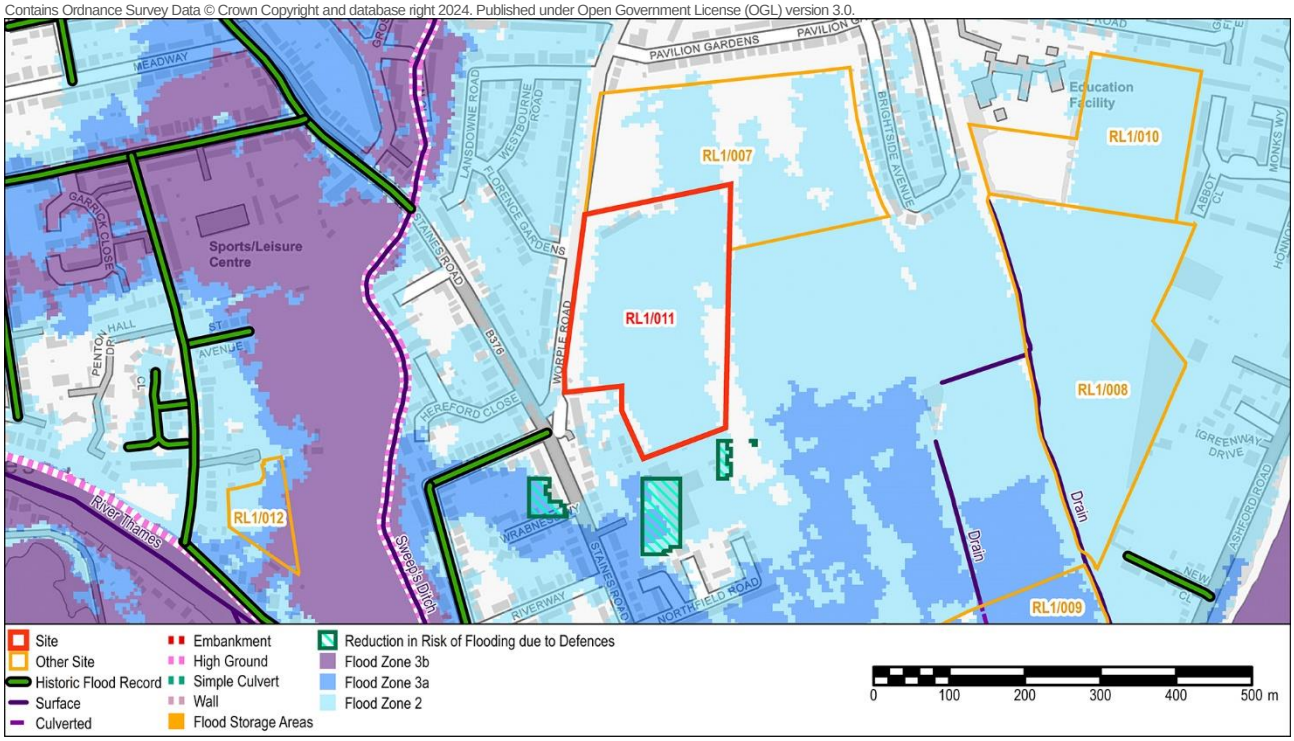
The following recommendations are made for this site:

- Development should be steered away from the southern edge which is shown to be at risk of flooding during the design event.

SC1/006: Tesco Extra, Escot Road
• Access/egress that is dry during the 1% AEP event including 35% climate change allowance is available for the site, along Escot Road to the north. (Routes along Brooklands Close to the west of the site are at risk of flooding during this event and are not safe routes). • Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. • A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report. • Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

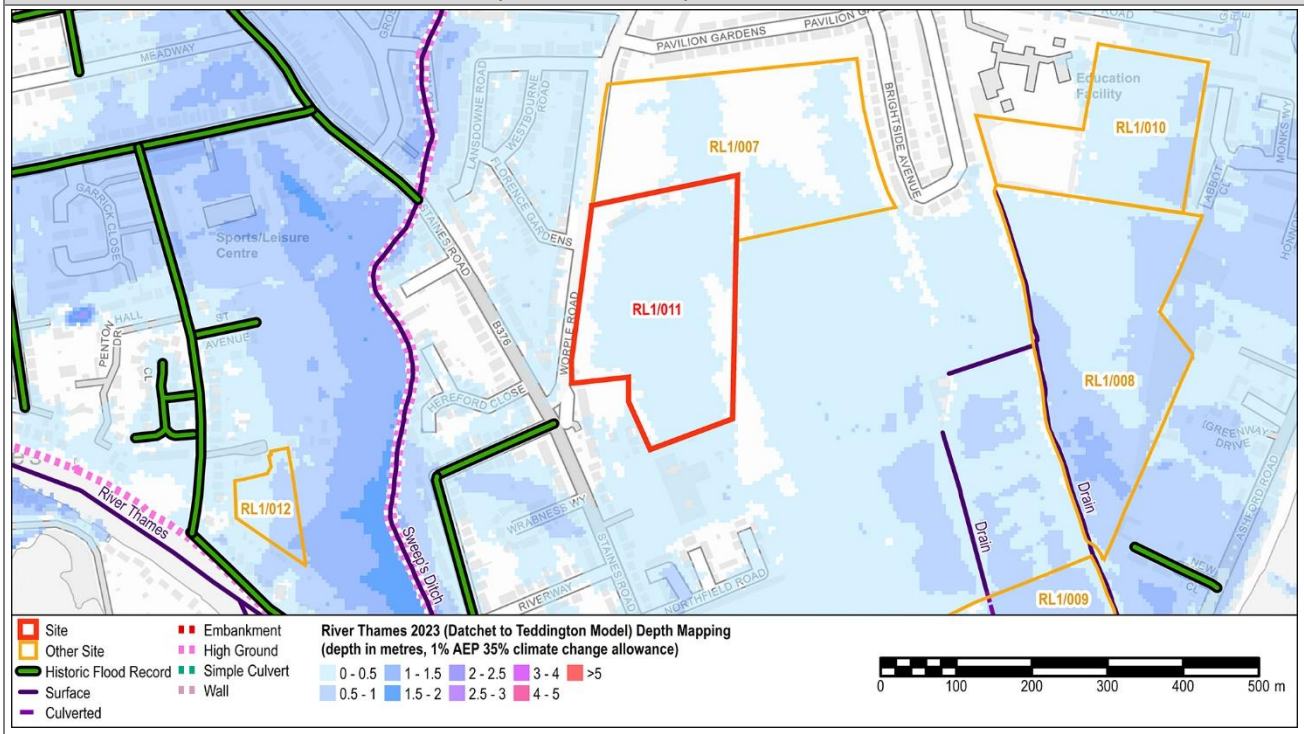
RL1/011 (Land at Staines and Laleham Sports Club, Worple Road)

RL1/011: Land at Staines and Laleham Sports Club, Worple Road, TW18 1HR				
Site ID:	RL1/011	**Area (ha):**		6.03
Proposed Use:	Residential (C3): 52 units (approx.) Upgraded sports facilities (Class F2)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 20%	**Flood Zone 2 (0.1% AEP):** 80%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

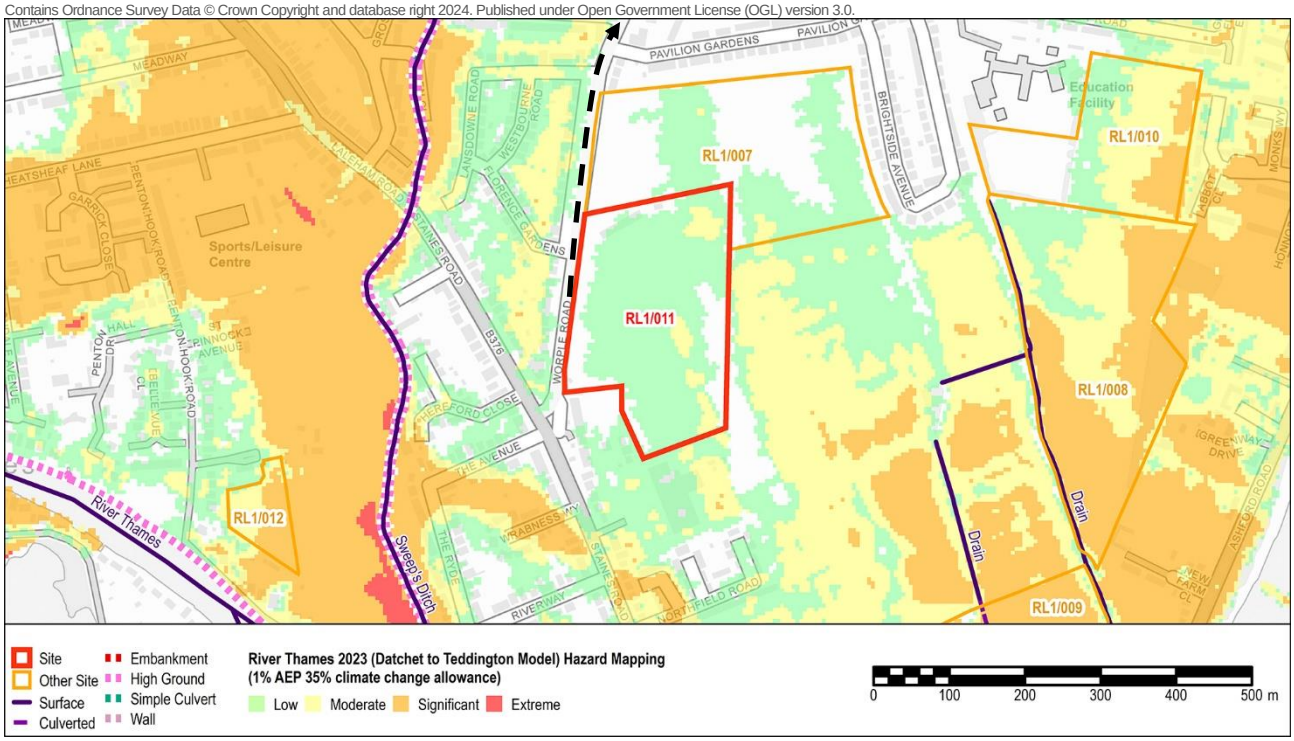


Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 18; External property flooding 8; Section 19 Flood Investigation incident 42; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 15
River Flooding	

RL1/011: Land at Staines and Laleham Sports Club, Worple Road, TW18 1HR



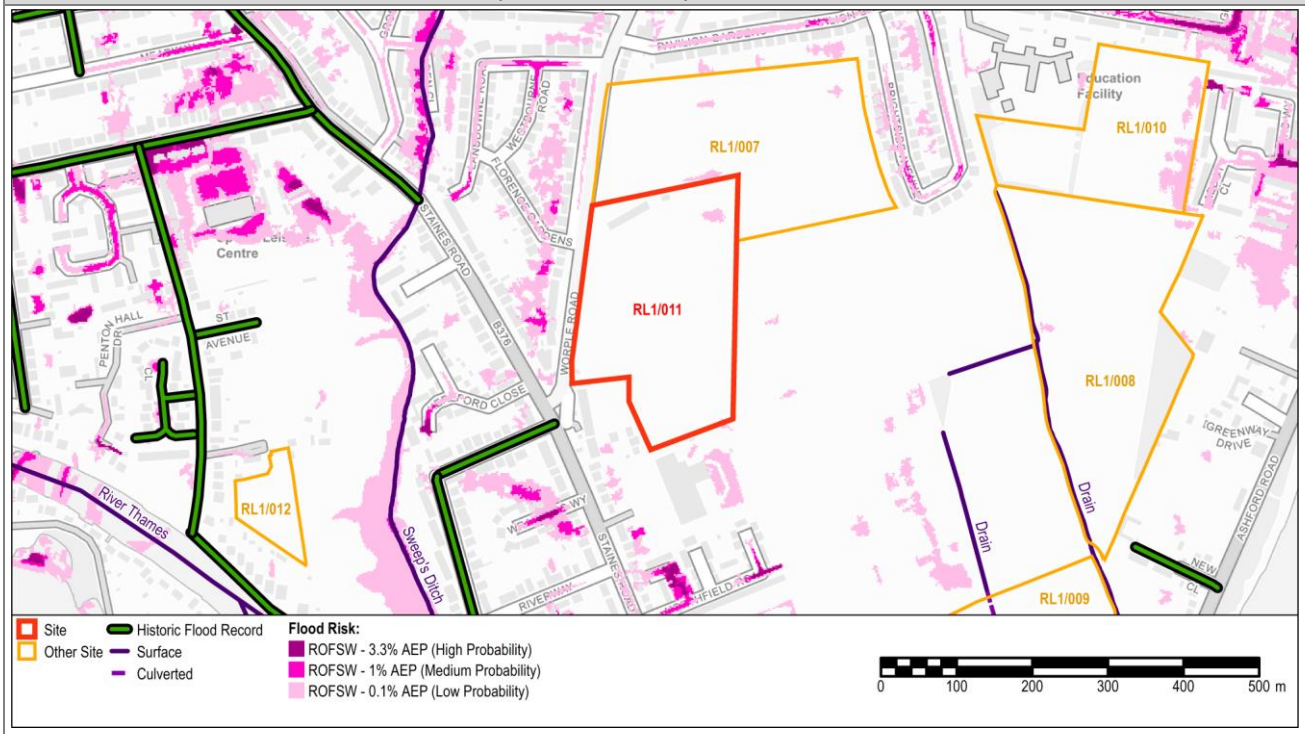
River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low

RL1/011: Land at Staines and Laleham Sports Club, Worple Road, TW18 1HR



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Unproductive, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the Queen Mary Reservoir.

Summary

Sweep's Ditch flows south approximately 200m west of the south. It joins the River Thames 1km south of the site. The majority of the site (72%) is defined as Flood Zone 2 with 17% defined as Flood Zone 1 and 10% defined as Flood Zone 3.

Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates flood depths of 0-0.5m. The hazard rating is Very Low with some areas of Moderate (Danger for Some) towards the east.

The Risk of Flooding from Surface Water Map does not indicate the site to be at particular risk, however the site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

1.1km north along Worple Road – not at risk of flooding. Then 1.5km length east along Kingston Road – not at risk of flooding. A 45m section at Low hazard, east along B377 before junction with A308. A308 not at risk of flooding.

Site Specific Recommendations

It is proposed to redevelop the site for an improved sports club (Less Vulnerable) and residential development (More Vulnerable). Subject to the satisfaction of the Sequential Test, Less Vulnerable and More Vulnerable development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and where possible reduce flood risk overall.

The site is located within the River Colne Management Catchment, however, the dominant flood source in this location is the River Thames within the neighbouring Management Catchment for Maidenhead and Sunbury, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant.

RL1/011: Land at Staines and Laleham Sports Club, Worple Road, TW18 1HR

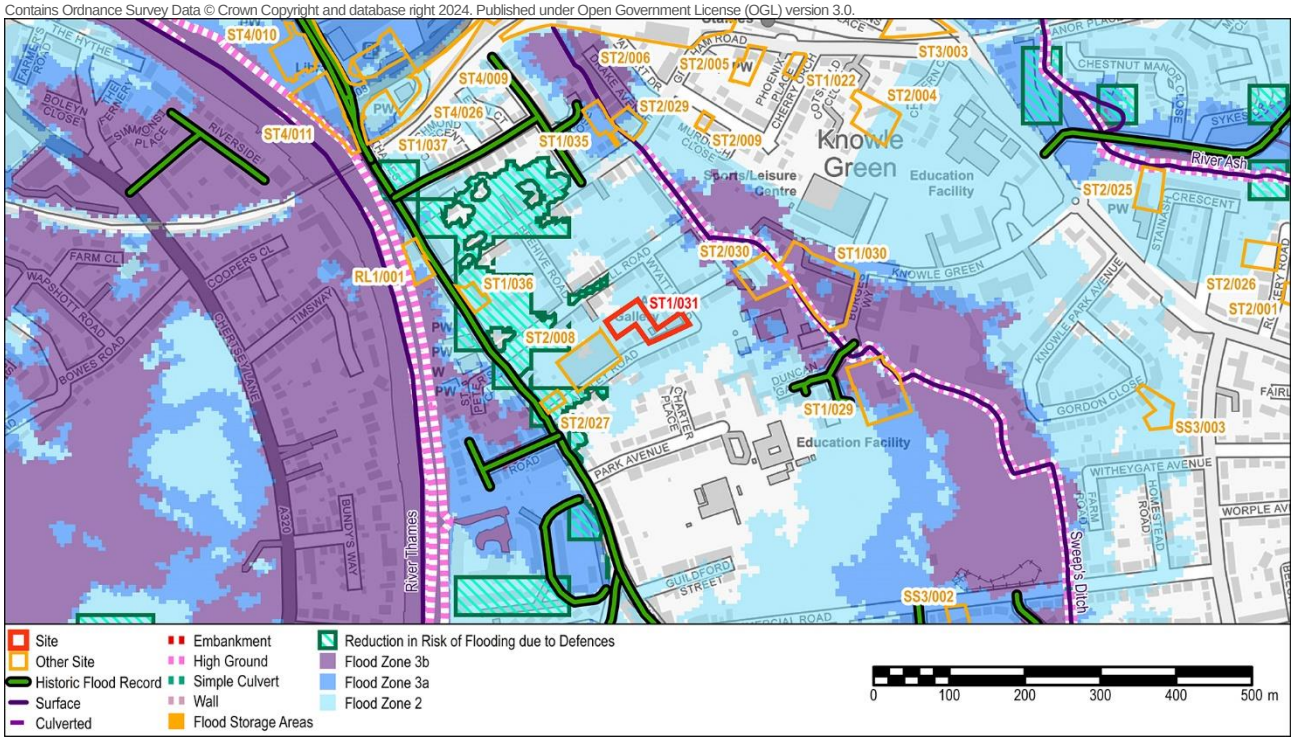
The following recommendations are made for this site:

- Access/egress that is either dry, or at low hazard, during the 1% AEP event including 35% climate change allowance is available for the site, along Worple Road north to Kingston Road, and then east to the A308 which may be safe depending on the vulnerability of the site users.
- A sequential approach should be used to locate residential development in those areas at lower risk of river flooding around the eastern and western boundaries of the site (Flood Zone 1) rather than the areas of Flood Zone 2.
- Development of the site must ensure that the risk of flooding to surrounding areas is not increased, and where possible is reduced. Therefore, any increase in building footprint within the design flood extent (1% AEP including climate change) will need to be compensated on a level for level and volume for volume basis within the site.
- Finished floor levels must be set 300mm above the design flood event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST1/031 (Thameside Arts Centre, Wyatt Road)

ST1/031: Thameside Arts Centre, Wyatt Road, TW18 2AY			
Site ID:	ST1/031	**Area (ha):**	0.26
Proposed Use: Residential (C3): 19 units (approx.) Ground floor community units or re-provision off site		**Vulnerability Classification:** More Vulnerable Less Vulnerable	

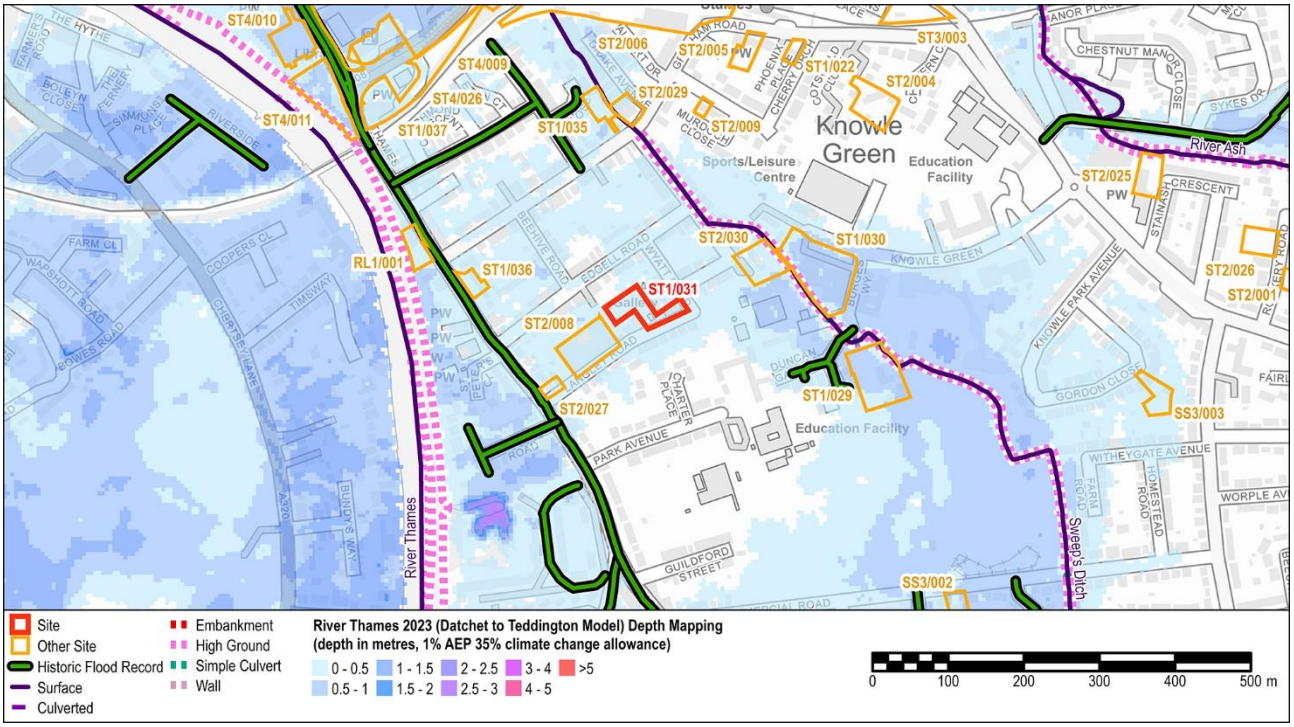
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 100%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



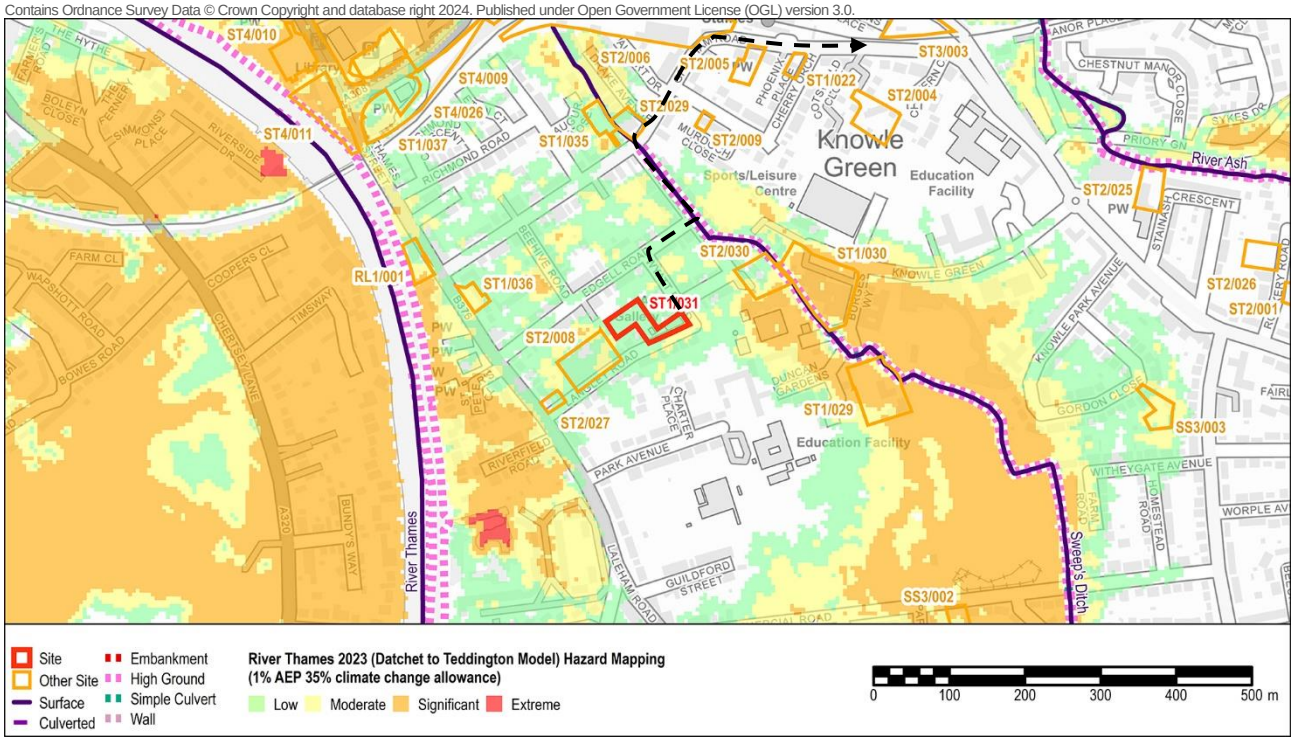
Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 34; External property flooding 2; Section 19 Flood Investigation incident 44; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 9

River Flooding

ST1/031: Thameside Arts Centre, Wyatt Road, TW18 2AY

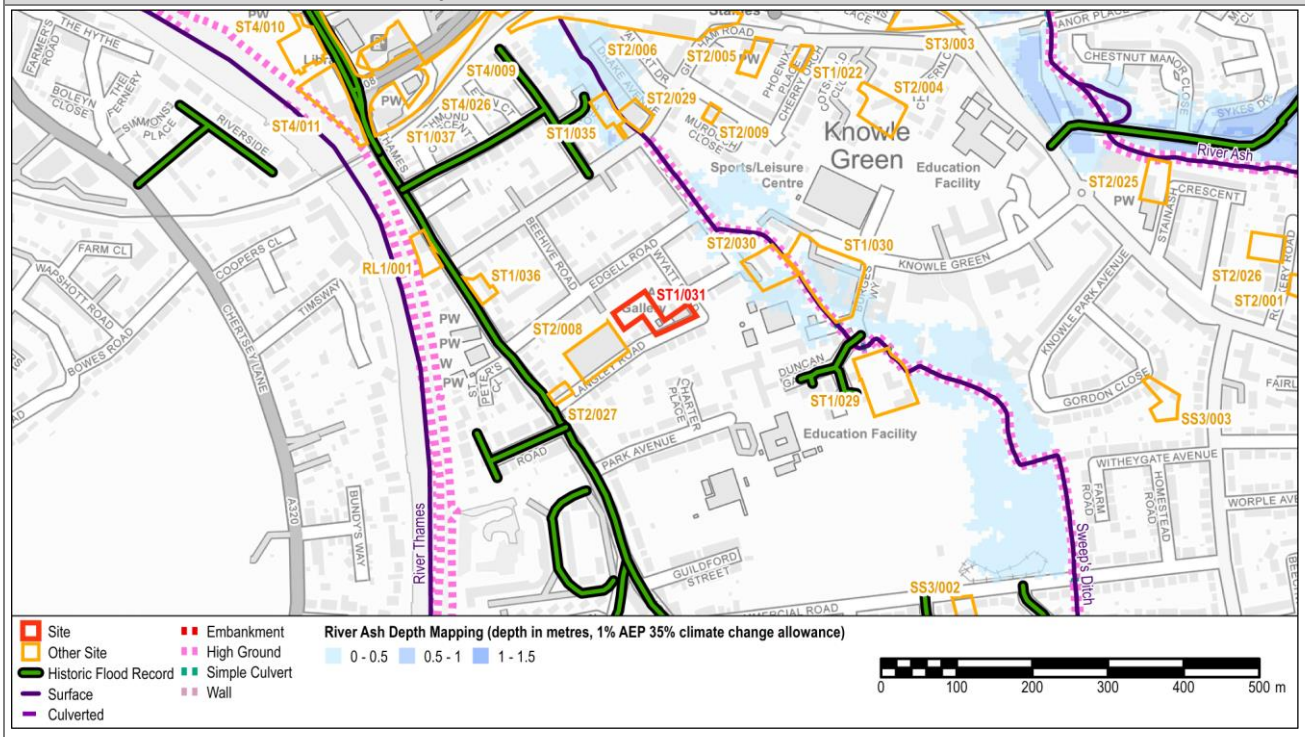


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

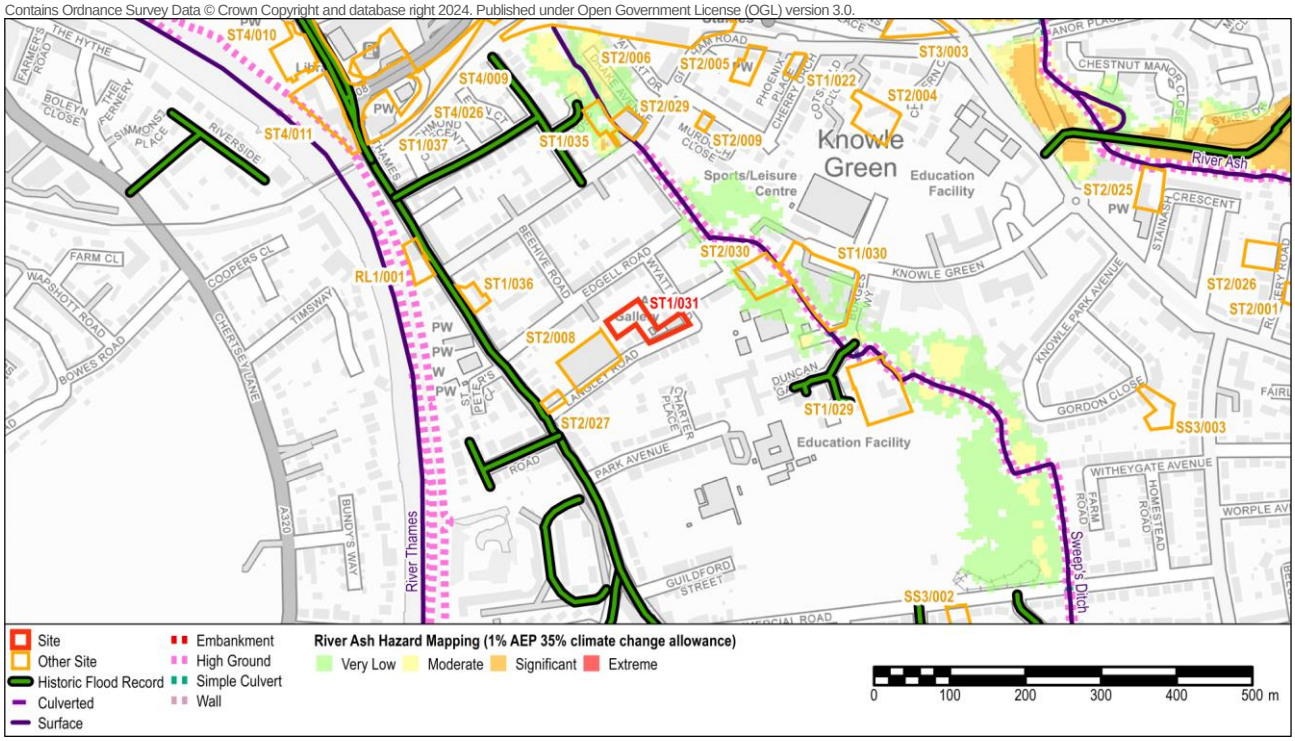


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST1/031: Thameside Arts Centre, Wyatt Road, TW18 2AY



River Ash Maximum Flood Depth 1% AEP plus 35% climate change

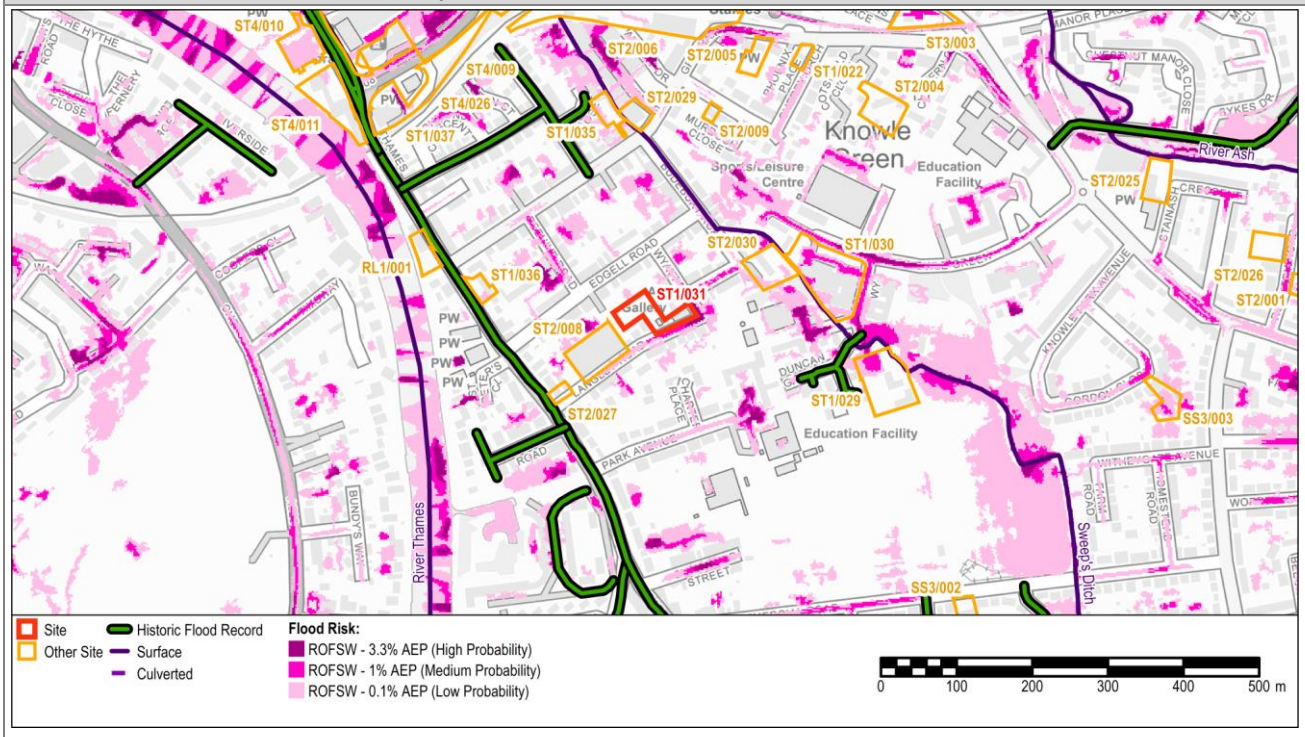


River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Medium

ST1/031: Thameside Arts Centre, Wyatt Road, TW18 2AY



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames flows south approximately 300m to the west of the site and Sweep's Ditch is 200m to the east of the site. The whole site is defined as Flood Zone 2, Medium probability of river flooding.
Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicate flood depths on the site of 0-0.5m. The majority of the site has a hazard rating of Very Low with a small area to the south east with a hazard rating of Moderate (Danger for Some).
The site is not at risk of flooding from the River Ash for the 1% AEP event plus 35% climate change.
The Risk of Flooding from Surface Water Map shows that the local area is susceptible to some surface water ponding. There are records of flooding in proximity to the site.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, suggests that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

250m at Low hazard, along Wyatt Road, Edgell Road, Budebury Road. Then, 2.5km length not at risk of flooding, along Budebury Road, Gresham Road, Kingston Road. A 45m section at Low hazard, east along B377 before junction with A308. Route along A308 not at risk of flooding.

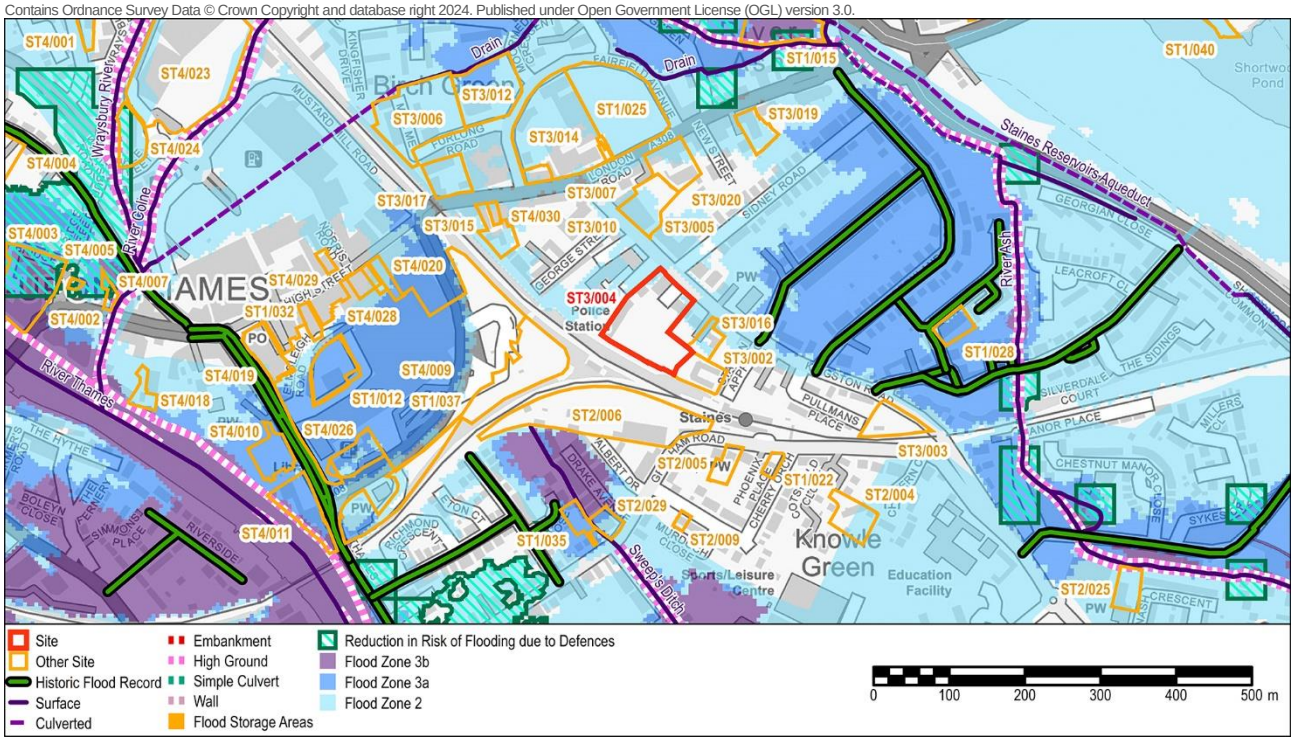
Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable development is permitted in Flood Zone 2, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central). Given the risk of flooding to the site and surrounding area in the future as a result of climate change the following recommendations are made:

ST1/031: Thameside Arts Centre, Wyatt Road, TW18 2AY
• Access/egress that is at low hazard during the 1% AEP event including 35% climate change allowance is available for the site via Wyatt Road or Edgell Road, onto Budebury Road and then Gresham road onto Kingston Road which may be safe depending on the vulnerability of the site users. • There is built development on the existing site. In order to ensure that future development does not increase the risk of flooding, the built footprint of new development of the site should not exceed that of the existing building and where possible should be reduced. • Finished floor levels for must be set 300mm above the design flood level (1% AEP including climate change). • The site is located within the Flood Warning Areas for the River Thames (River Thames at Staines and Egham). An Emergency Plan should be prepared for the site and places of safe refuge should also be identified outside the flood extent of the design event (1% AEP including climate change). • The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. • Development proposals for the site should seek to implement flood resilience measures. • A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report. • Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

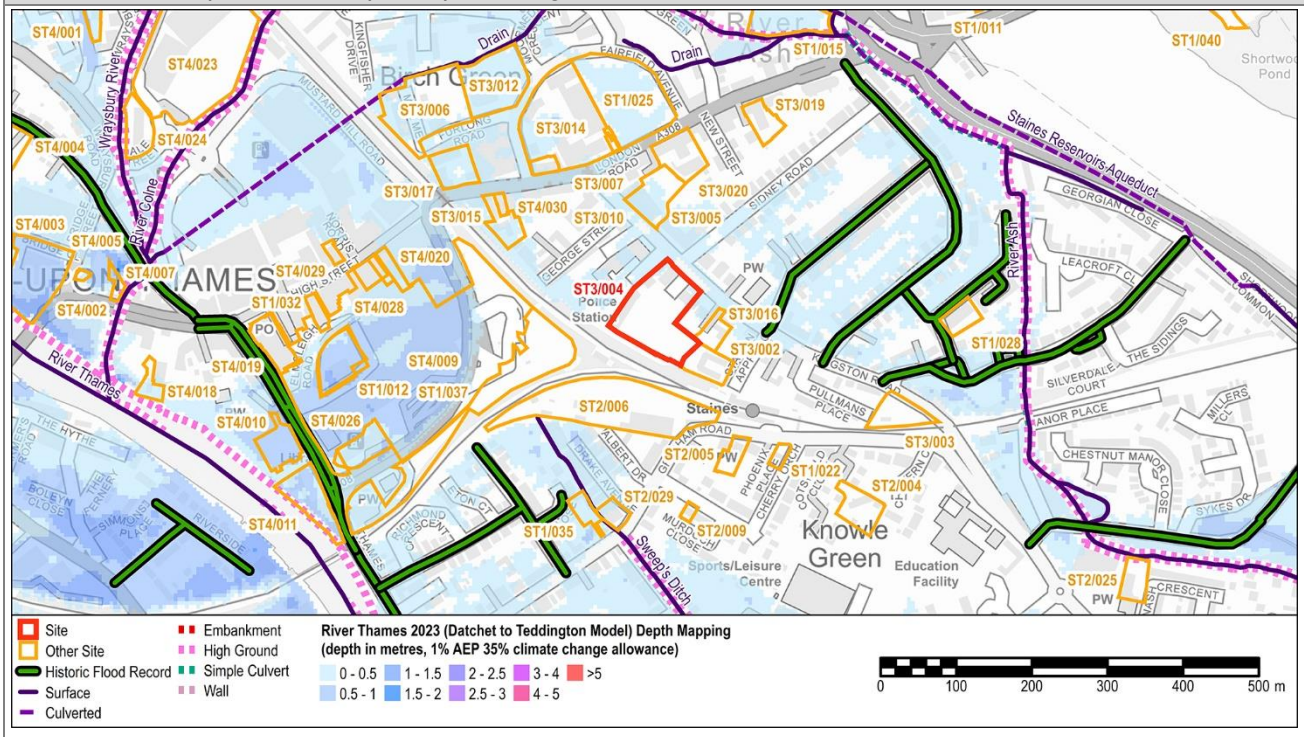
ST3/004 (Oast House, Kingston Road)

ST3/004: 34-36 (OAST House) /Car park, Kingston Road, TW18 4LN				
Site ID:	ST3/004	**Area (ha):**		0.92
Proposed Use: Residential (C3): 180 units (approx.) Community/Healthcare use: 4500 sqm		**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 94%	**Flood Zone 2 (0.1% AEP):** 6%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

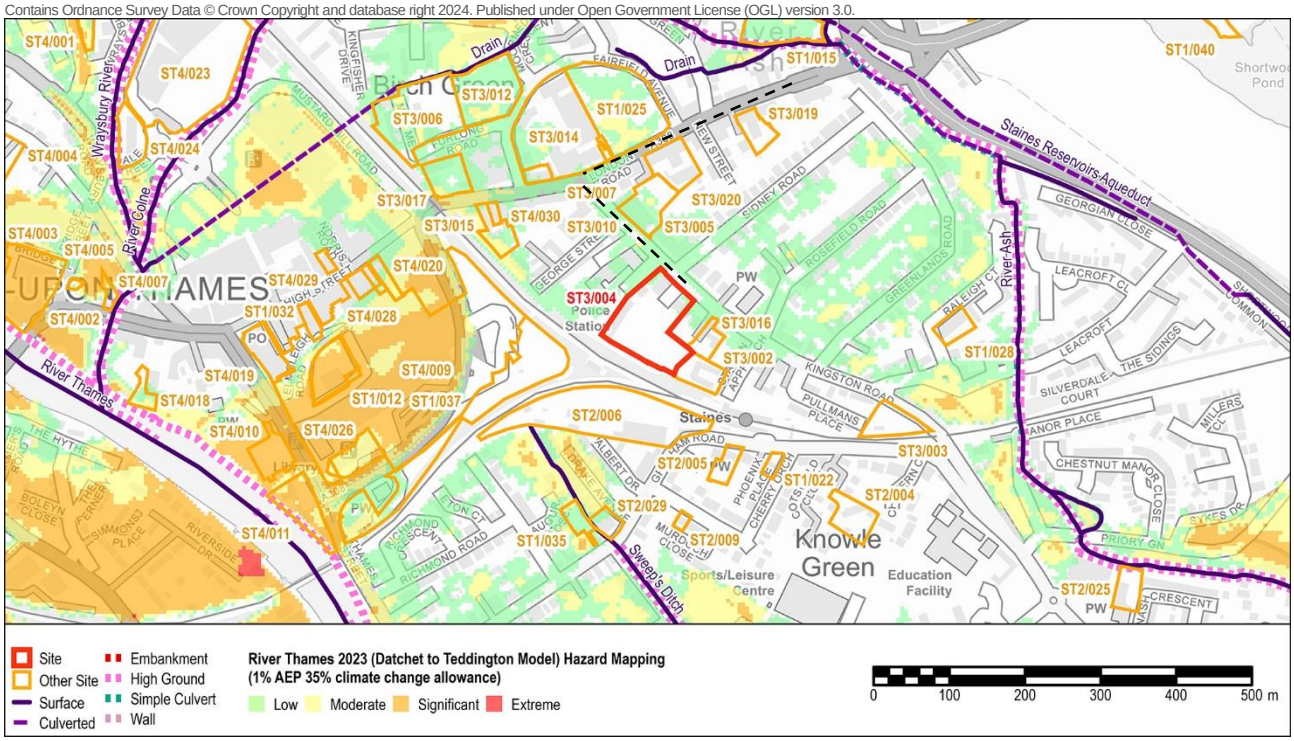


Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 48; External property flooding 0; Section 19 Flood Investigation incident 42; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST3/004: 34-36 (OAST House) /Car park, Kingston Road, TW18 4LN

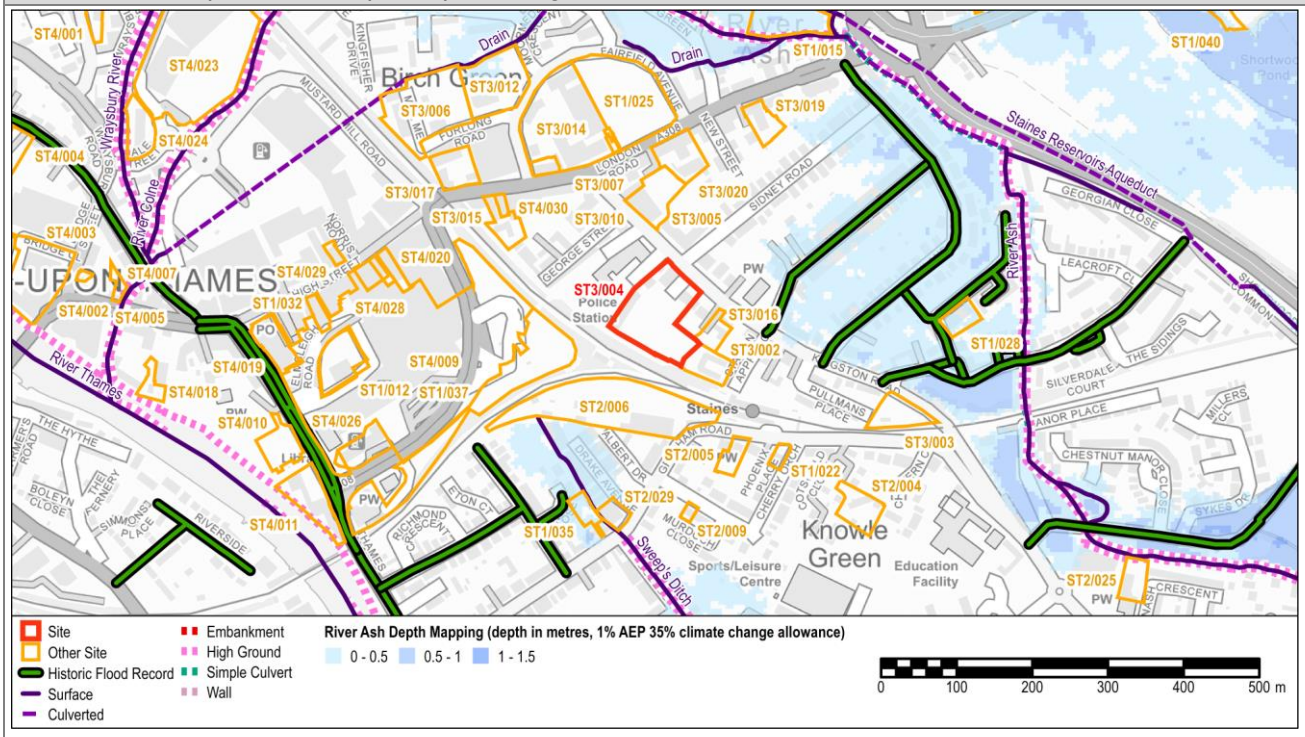


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

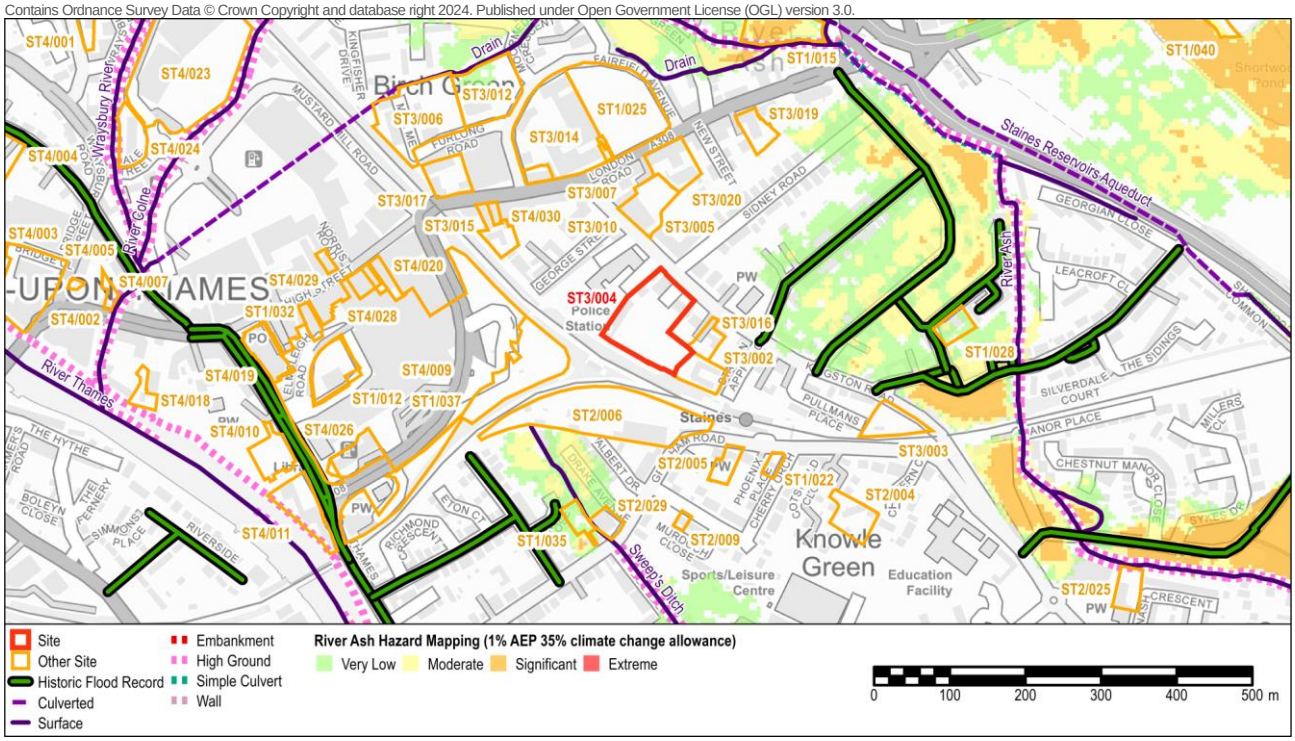


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST3/004: 34-36 (OAST House) /Car park, Kingston Road, TW18 4LN



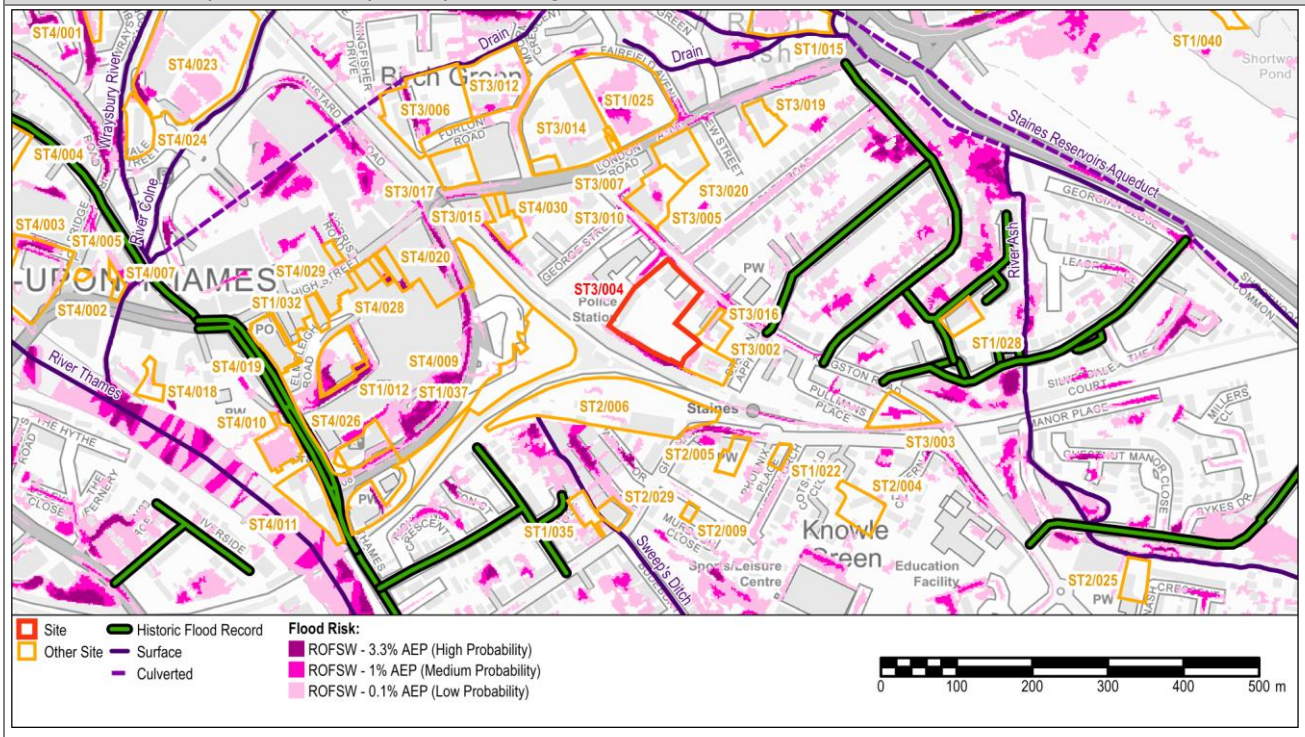
River Ash Maximum Flood Depth 1% AEP plus 35% climate change



River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

ST3/004: 34-36 (OAST House) /Car park, Kingston Road, TW18 4LN



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Not considered to be prone to groundwater flooding.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames is located 600m west of the site. The site is located primarily in Flood Zone 1 Low probability of river flooding (94%), and 6% of the site is defined as Flood Zone 2, Medium probability of river flooding.
Modelling outputs for the River Thames show that during the 1% AEP flood event including a 35% increase in peak river flow as a result of climate change, the fringe of the site and Kingston Road along the north eastern edge of the site are at risk of flooding. Flood depths of 0-0.5m are modelled to occur, with corresponding hazard rating of Very Low.
The Risk of Flooding from Surface Water mapping identifies the potential for overland flow along Kingston Road and adjacent to the railway line in the southern part of the site. There are numerous records of flooding from the River Thames and surface water within close proximity to the site. The site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC.

Access/Egress Route Summary

Route **east** along Kingston Road 130m at Low hazard, 2.2km not at risk of flooding; a 45m section at Low hazard, east along B377 before junction with A308. Route along A308 not at risk of flooding.

Route **west** along Kingston Road, 120m at Low hazard, 70m not at risk. Then north west along London Road, 70m at Low hazard. Remainder not at risk of flooding.

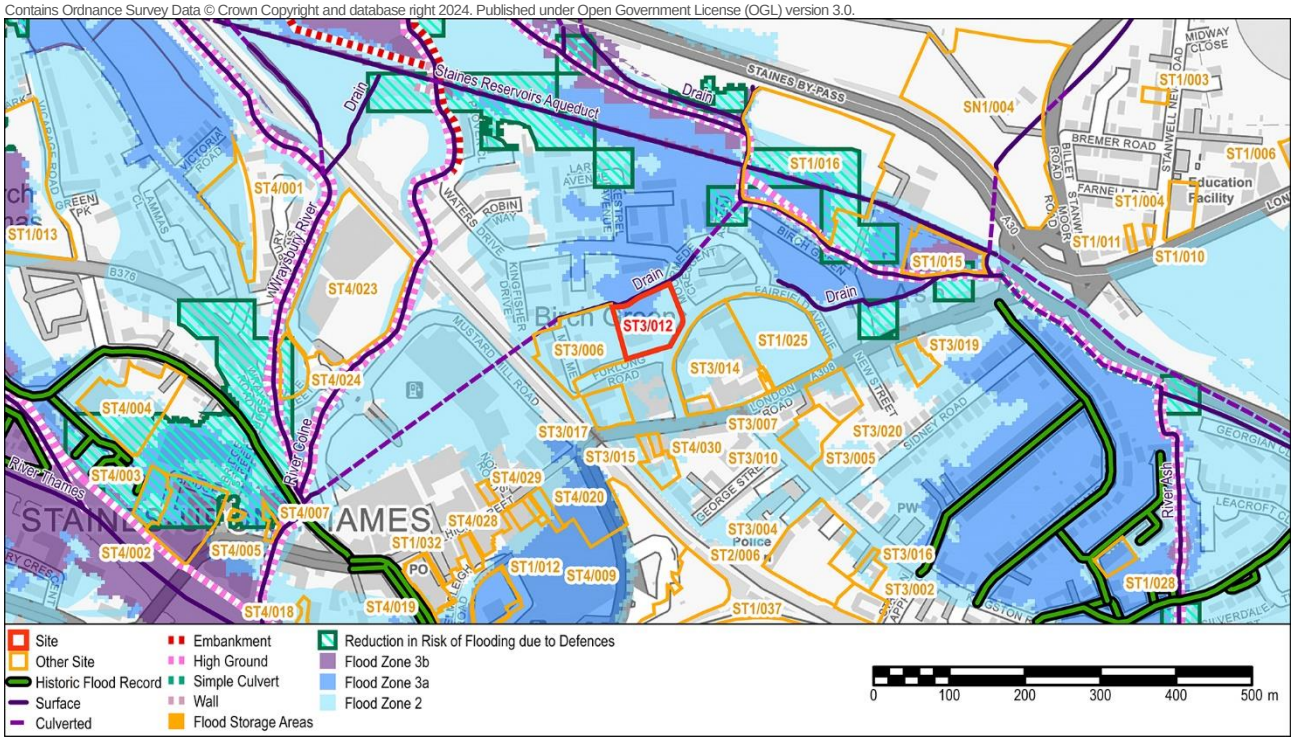
Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable development is compatible in Flood Zones 1 and 2 according to Table 2 of the PPG, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Colne Management Catchment. The climate change allowances for peak river flow are 21% (central) and 35% (higher central). However, the dominant flood source in this location is the River Thames within the neighbouring Management Catchment for Maidenhead and Sunbury, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant. Given that

ST3/004: 34-36 (OAST House) /Car park, Kingston Road, TW18 4LN
parts of the site and access to the site are at risk of flooding during the 1% AEP event including climate change, the following recommendations are made: • Apply a sequential approach and steer residential development away from those areas at risk of flooding from the River Thames during the design event (1% AEP including climate change). • Finished floor levels must be set 300mm above the design flood event (1% AEP including climate change). • There is no completely dry access/egress available for the site during the design event. A route with sections at low hazard during the 1% AEP event including 35% climate change allowance is likely to be achievable north west along Kingston Road and then east along London Road which may be safe depending on the vulnerability of the site users. • An Emergency Plan should be prepared for the site and places of safe refuge identified outside the flood extent of the design event (1% AEP including climate change). • The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing. • Development proposals for the site should seek to implement flood resilience measures. • A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report. • Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST3/012 (Staines Telephone Exchange, Fairfield Avenue)

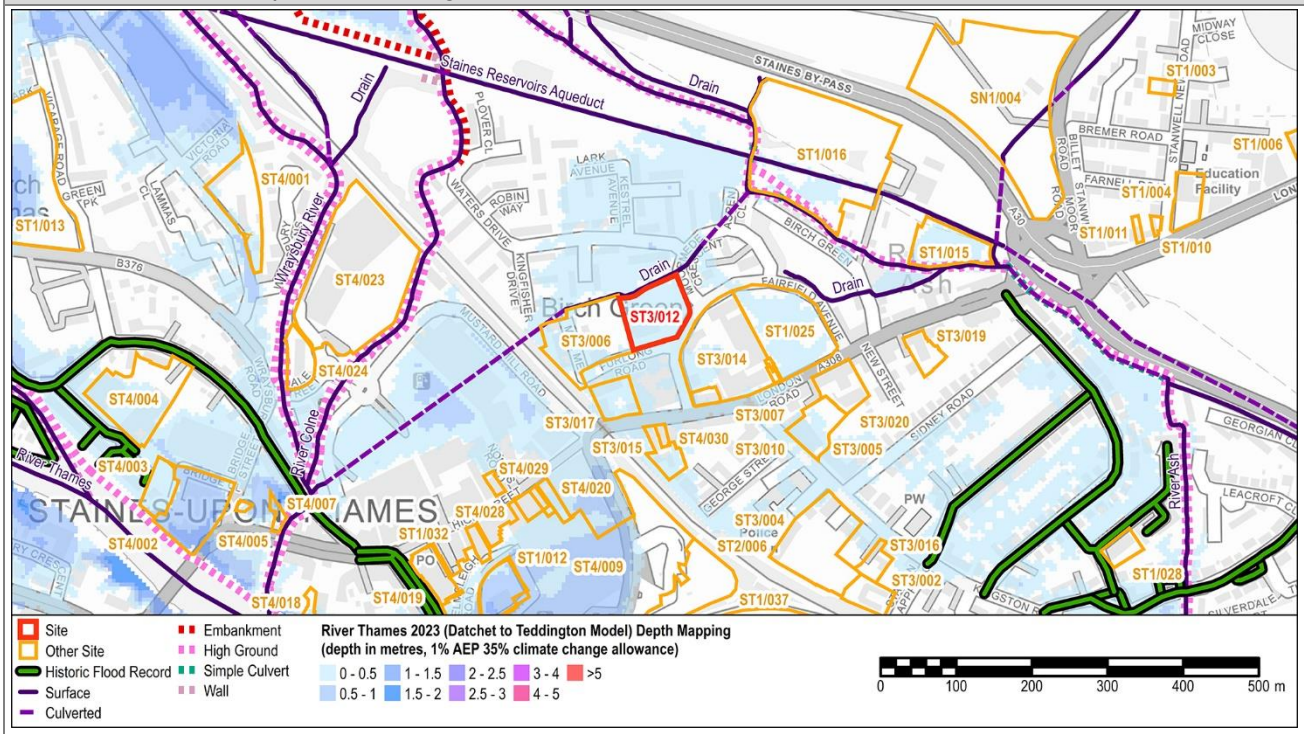
ST3/012: Staines Telephone Exchange, Fairfield Avenue, TW18 4AB			
Site ID:	ST3/012	**Area (ha):**	0.59
Proposed Use: Residential (C3): 180 units (approx.)		**Vulnerability Classification:** More Vulnerable	
Flood Zones and Historic Flooding			
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 80%	**Flood Zone 3 (1% AEP):** 20%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



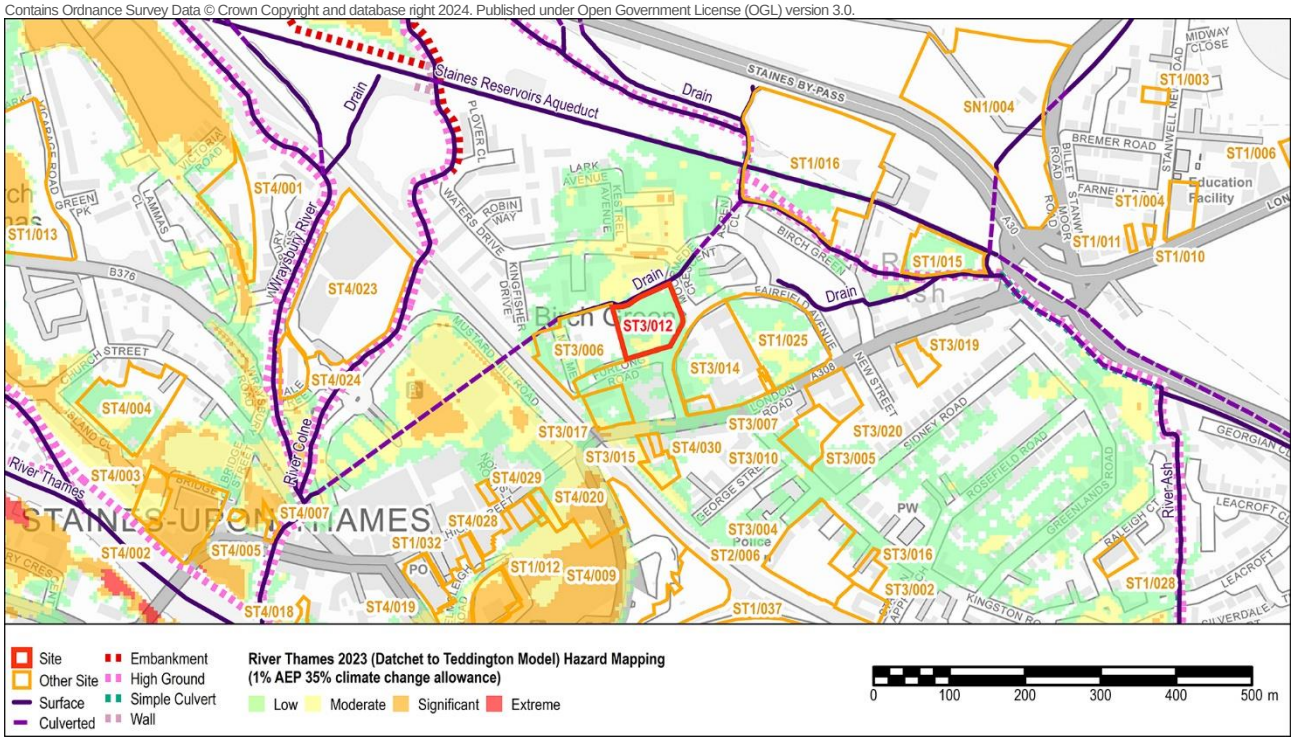
Flood Zones and Flood Records	
Flood Warning Area	River Ash at Ashford and Staines, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 8; External property flooding 0; Section 19 Flood Investigation incident 20; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST3/012: Staines Telephone Exchange, Fairfield Avenue, TW18 4AB

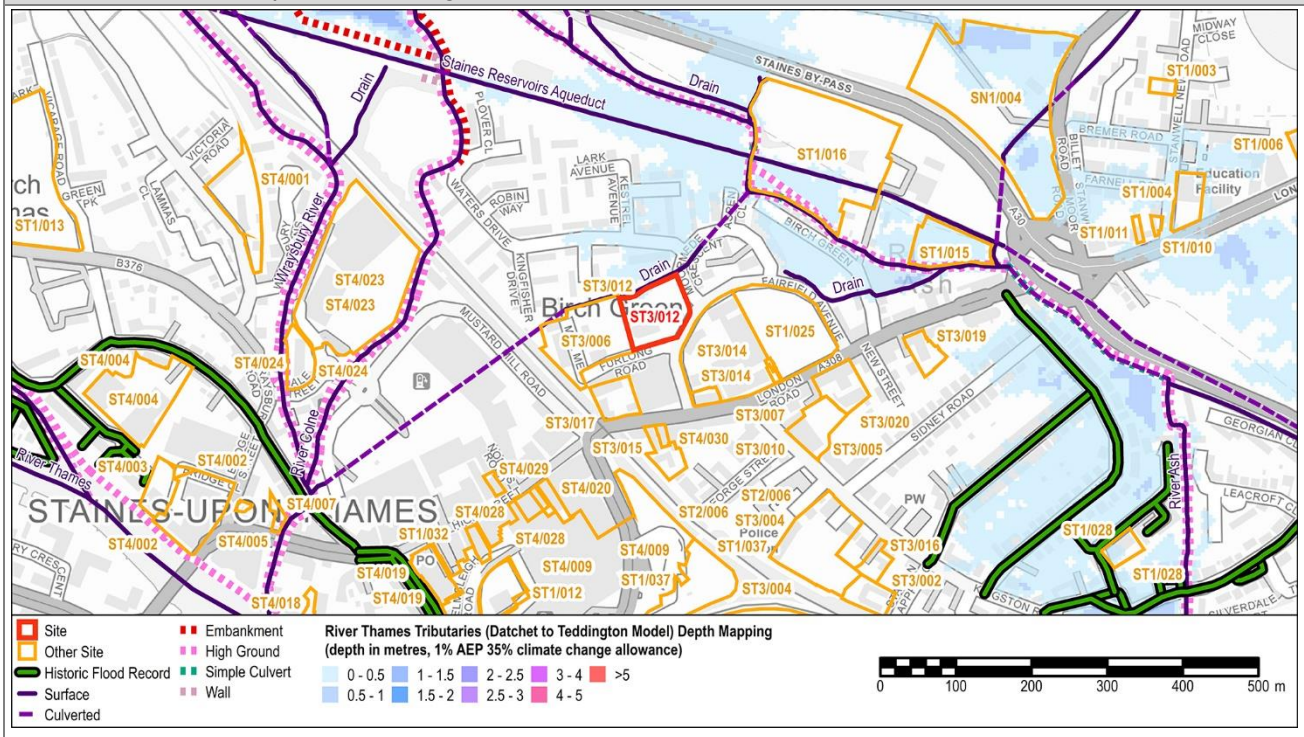


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

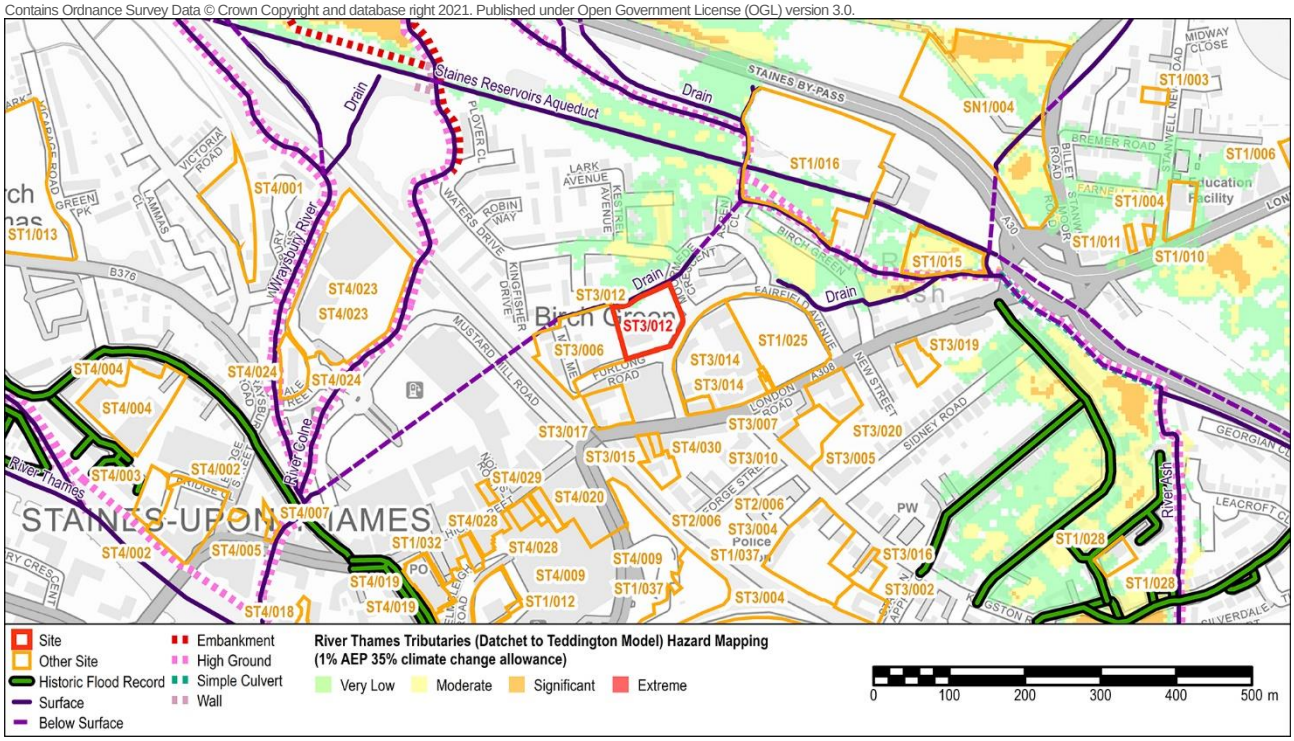


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST3/012: Staines Telephone Exchange, Fairfield Avenue, TW18 4AB

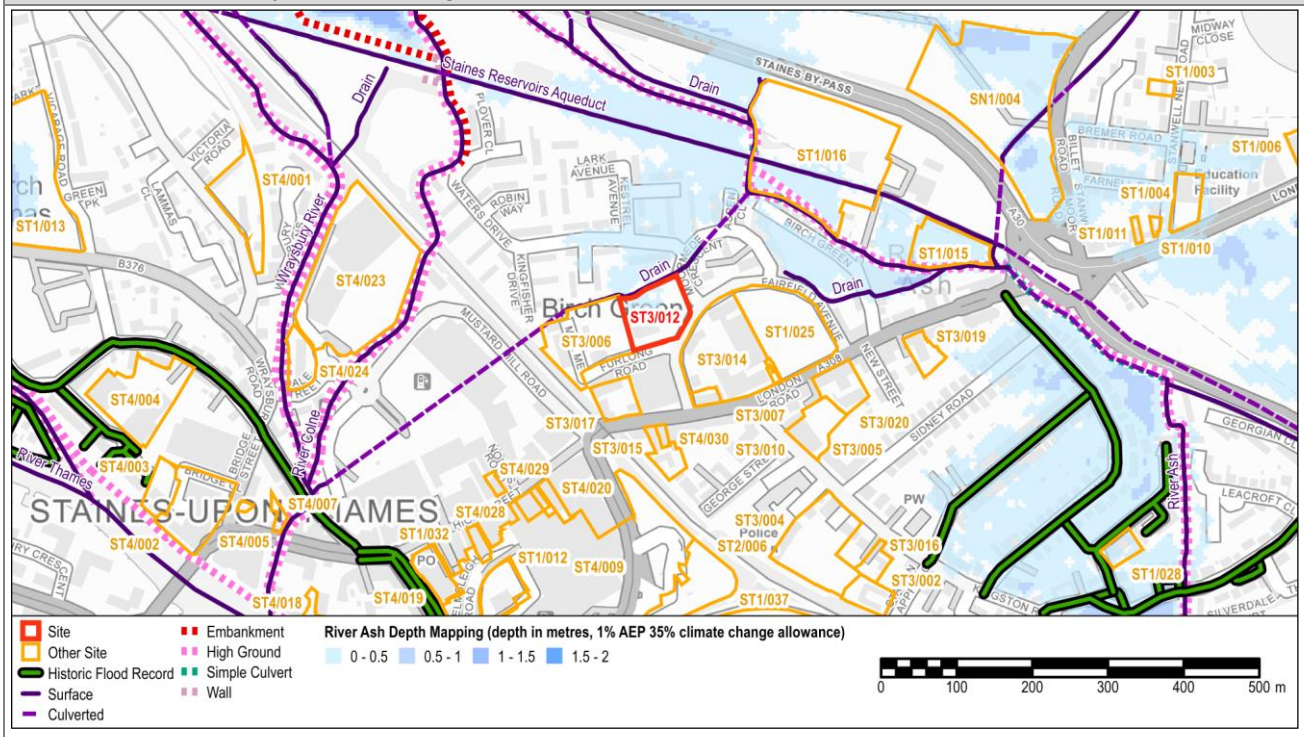


River Thames (Tributary Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

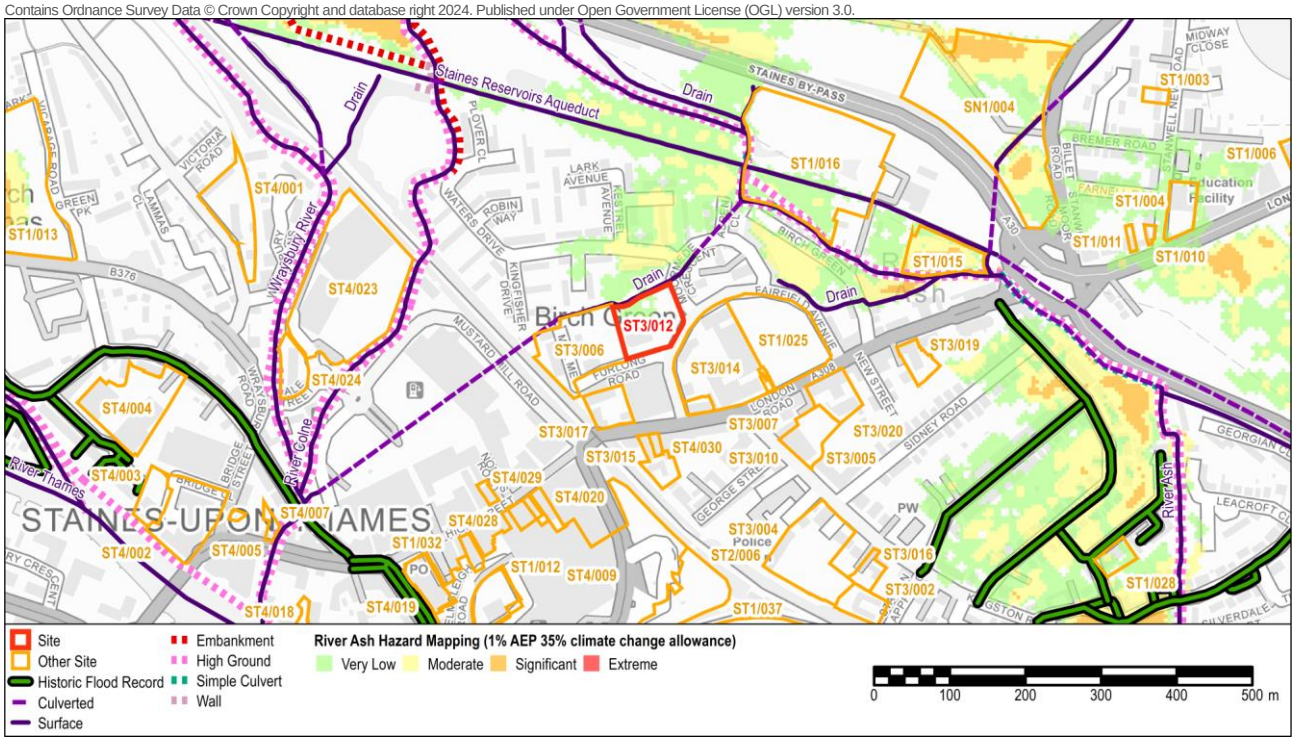


River Thames (Tributary Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST3/012: Staines Telephone Exchange, Fairfield Avenue, TW18 4AB

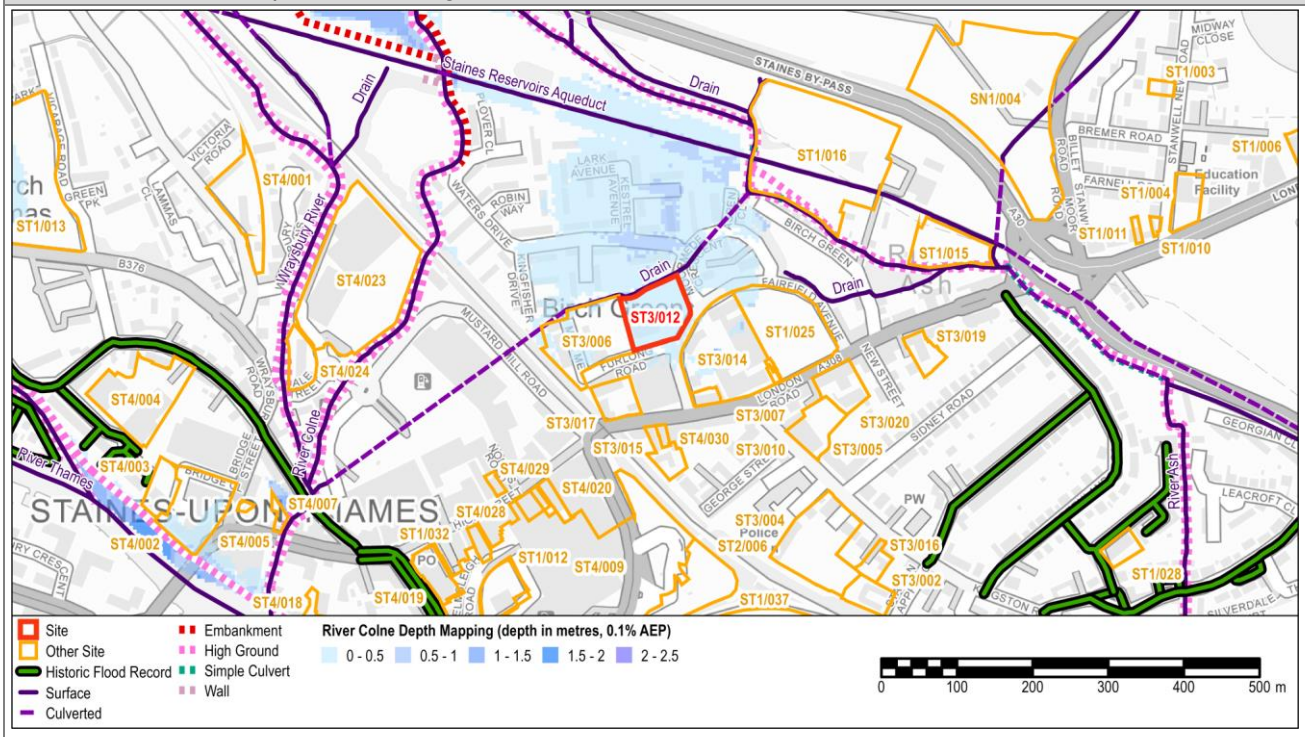


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



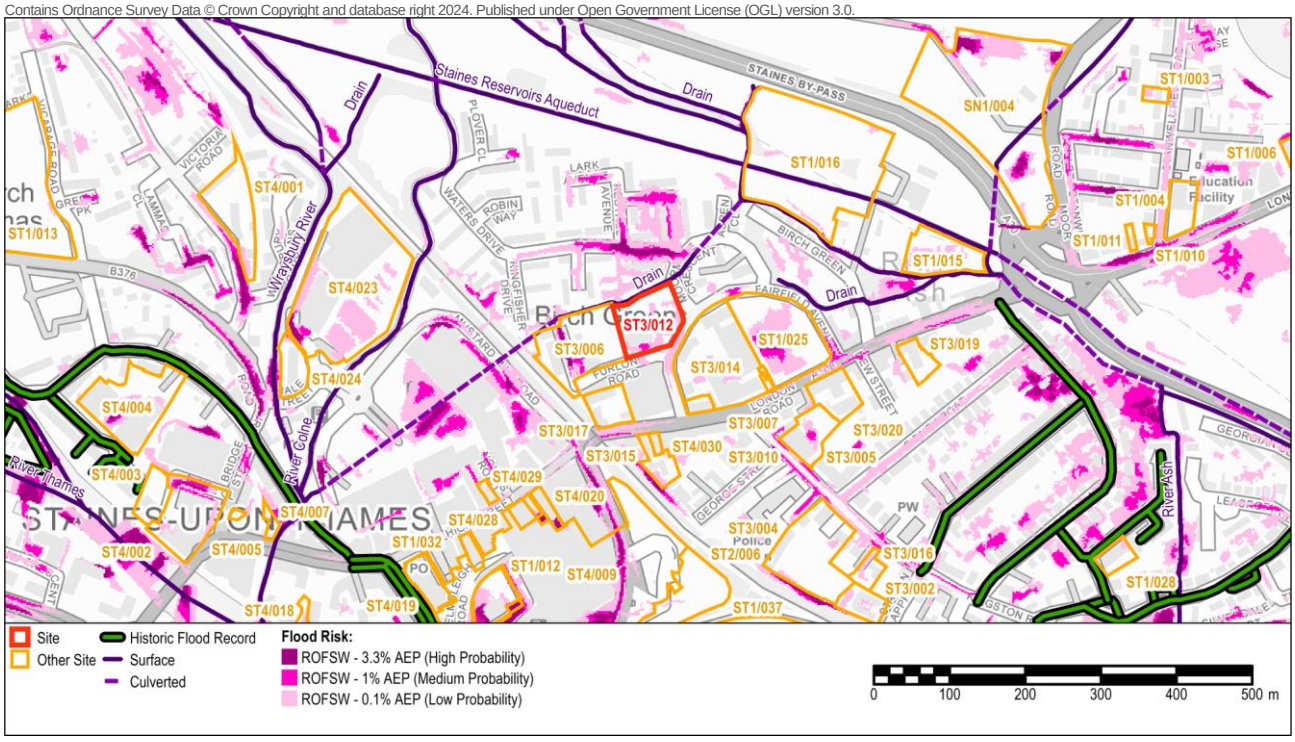
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST3/012: Staines Telephone Exchange, Fairfield Avenue, TW18 4AB



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel

Areas Susceptible to Groundwater Flooding	>75%
BGS Susceptibility to Groundwater Flooding	Not considered to be prone to groundwater flooding.
Aquifer Designation	Secondary A, Secondary A
Other Sources	

ST3/012: Staines Telephone Exchange, Fairfield Avenue, TW18 4AB	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames flows south east approximately 600m west of the site. A culverted drain passes along the northern edge of the site. The majority of the site (80%) is located in Flood Zone 2 Medium probability of flooding from rivers, with 20% in Flood Zone 3a High probability.

Modelling outputs for the River Thames (Thames dominated) show that the whole site is at risk of flooding during the design flood event (1% AEP including 35% climate change allowance). Flood depths of up to 0.5m are modelled, with a corresponding hazard rating of Very Low and Moderate (Danger for Some) along the southern edge of the site.

Modelling outputs for the River Thames (Tributary dominated) show that the northern edge of the site is at risk of flooding during the design flood event (1% AEP including 35% climate change allowance). Flood depths of up to 0.5m are modelled, with a corresponding hazard rating of Very Low.

The site is also shown to be at risk from the River Colne. The northern edge of the site is shown to be at risk of flooding from the River Ash with flood to depths of 0.5m with a Very Low hazard rating.

The Risk of Flooding from Surface Water map shows that the site and the area to the north are susceptible to surface water flooding.

Access Route Summary

100m immediately next to the site is at Low hazard; route **east** along Fairfield Avenue, 50m not at risk of flooding, 20m at Low hazard, remainder of access route along Fairfield Avenue and London Road not at risk of flooding.

Site Specific Recommendations

Residential development is defined as More Vulnerable. Following the satisfaction of the Sequential Test, More Vulnerable development is only permitted in Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

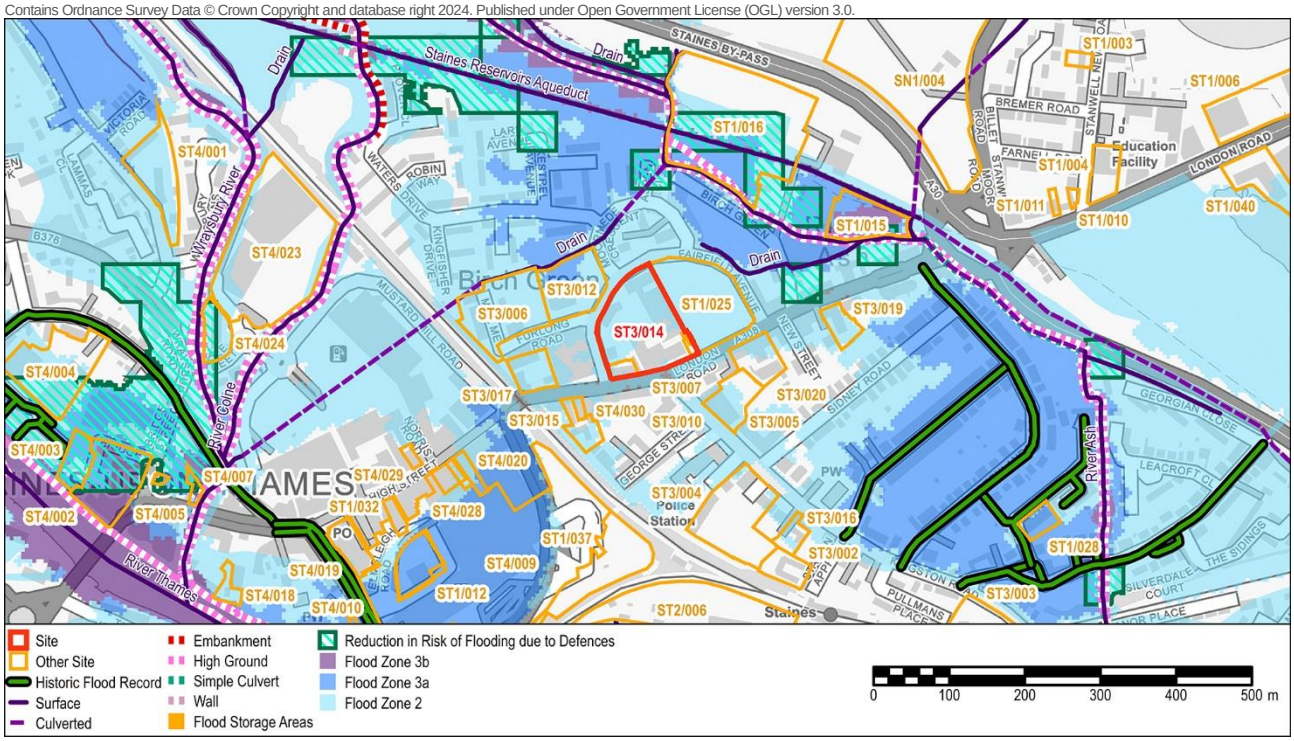
The site is located within the River Colne Management Catchment. However, there is also a risk from the River Thames within the neighbouring Management Catchment for Maidenhead and Sunbury, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are also relevant.

The following recommendations are made for this site:

- Access/egress that is either dry (not at risk of flooding), or at low hazard, during the design event (1% AEP event including 35% climate change allowance) is available for the site along Fairfield Avenue and onto London Road.
- There is built development on the existing site. In order to ensure that future development does not increase the risk of flooding, the built footprint of new development of the site should not exceed that of the existing building and where possible should be reduced.
- Finished floor levels for must be set 300mm above the design flood level (1% AEP including climate change).
- An 8m buffer zone is required between built development and main river (measured from edge of culvert). A Flood Risk Activity Permit will be required for any works within 8m of a main river/culvert/flood defence (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits). Opportunities should be taken to de-culvert this section of the watercourse and re-naturalise the channel.
- The site is located within the Flood Warning Areas for the River Ash (River Ash at Ashford and Staines) and the River Thames (River Thames at Staines and Egham). An Emergency Plan should be prepared for the site and places of safe refuge should be identified outside the flood extent for the design event (1% AEP including climate change).
- Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

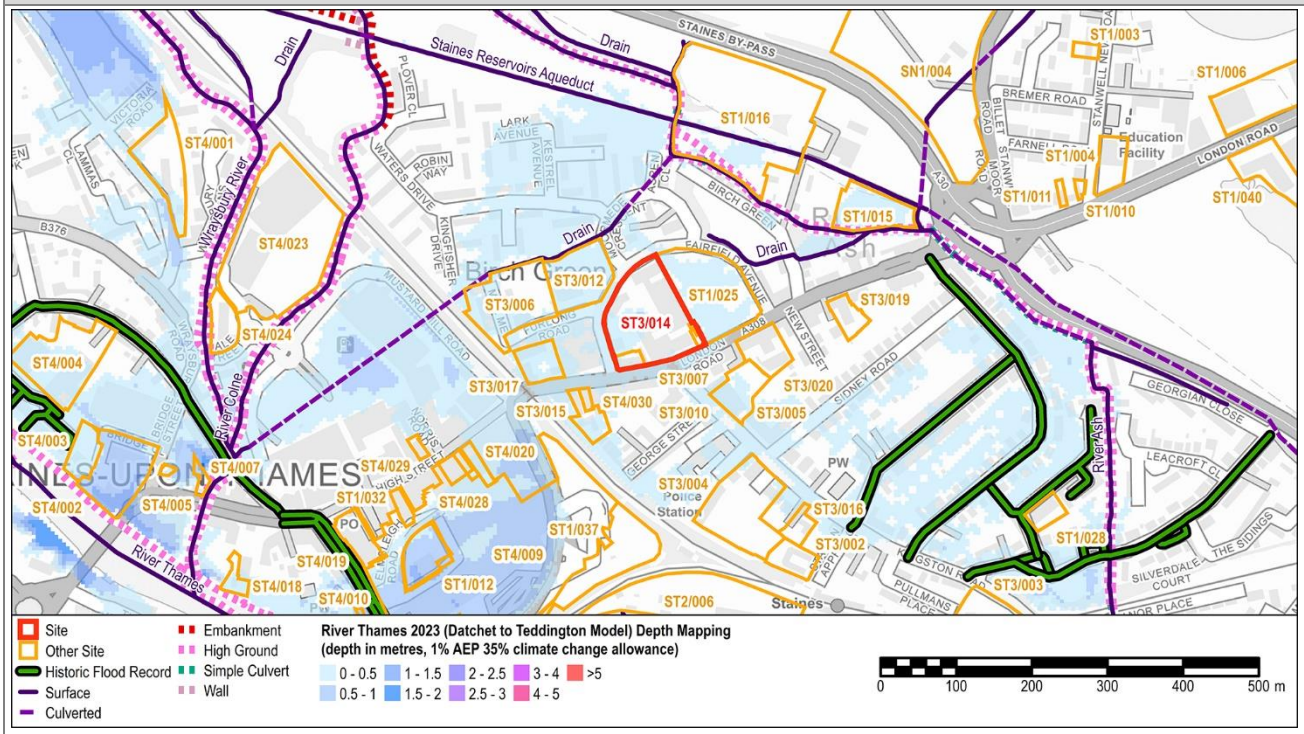
ST3/014 (Birch House/London Road, Fairfield Avenue, Staines)

ST3/014: Birch House/London Road, Fairfield Avenue				
Site ID:	ST3/014	**Area (ha):**		1.25
Proposed Use: Residential (C3): 400 units (approx.) (net) Commercial (Class E): 1200 sqm (approx.)		**Vulnerability Classification:** More Vulnerable, Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 34%	**Flood Zone 2 (0.1% AEP):** 66%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

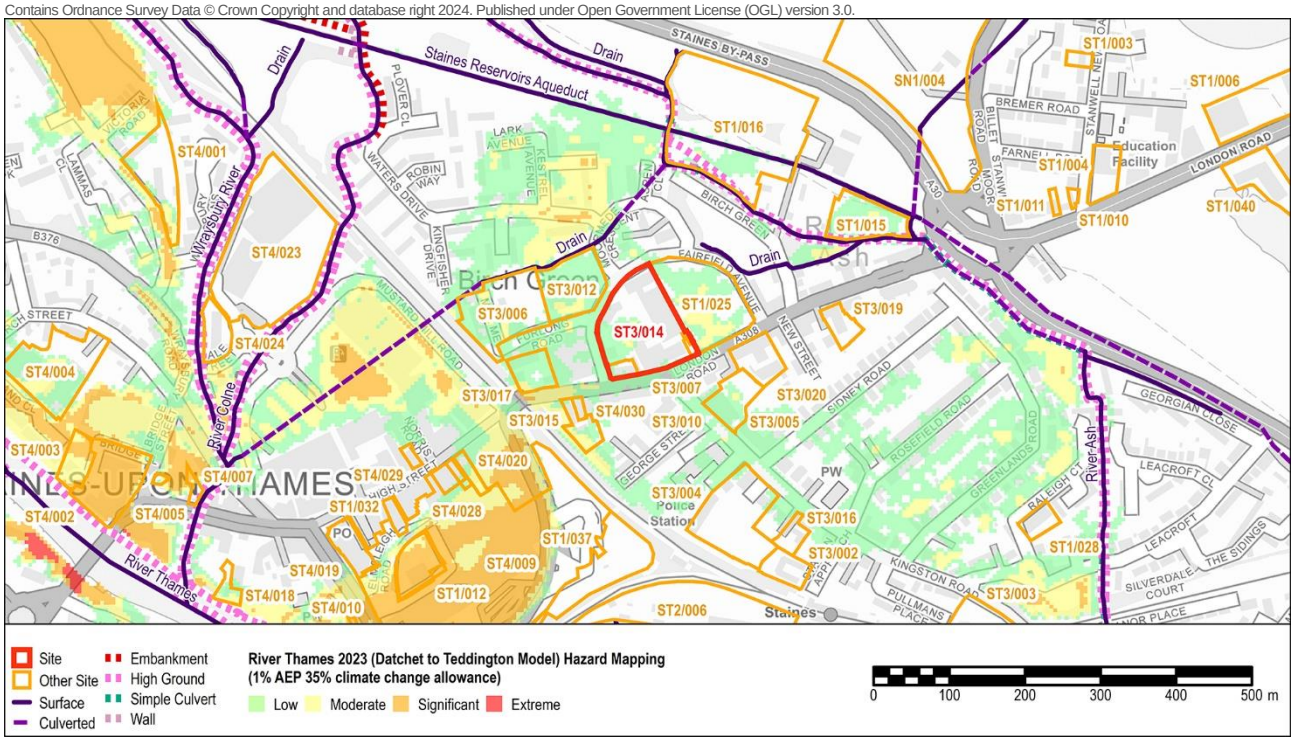


Flood Zones and Flood Records	
Flood Warning Area	River Ash at Ashford and Staines, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 26; External property flooding 0; Section 19 Flood Investigation incident 34; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST3/014: Birch House/London Road, Fairfield Avenue

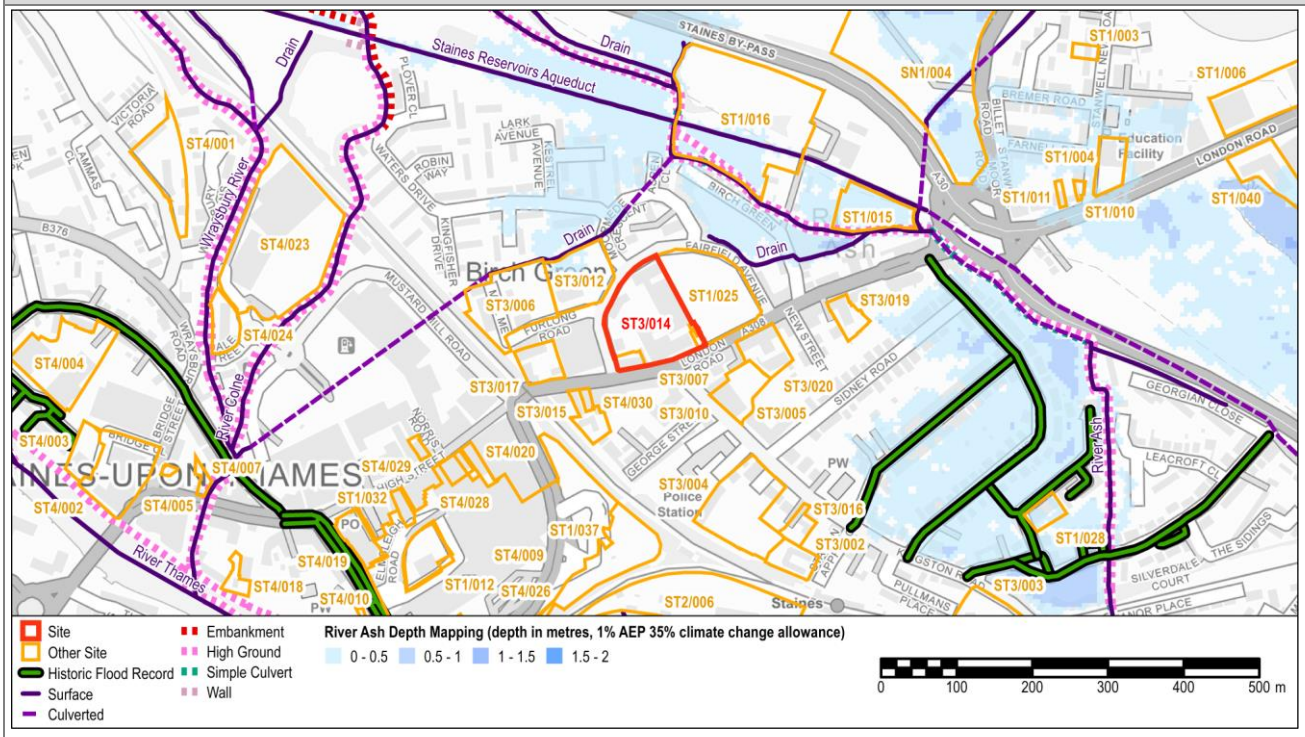


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

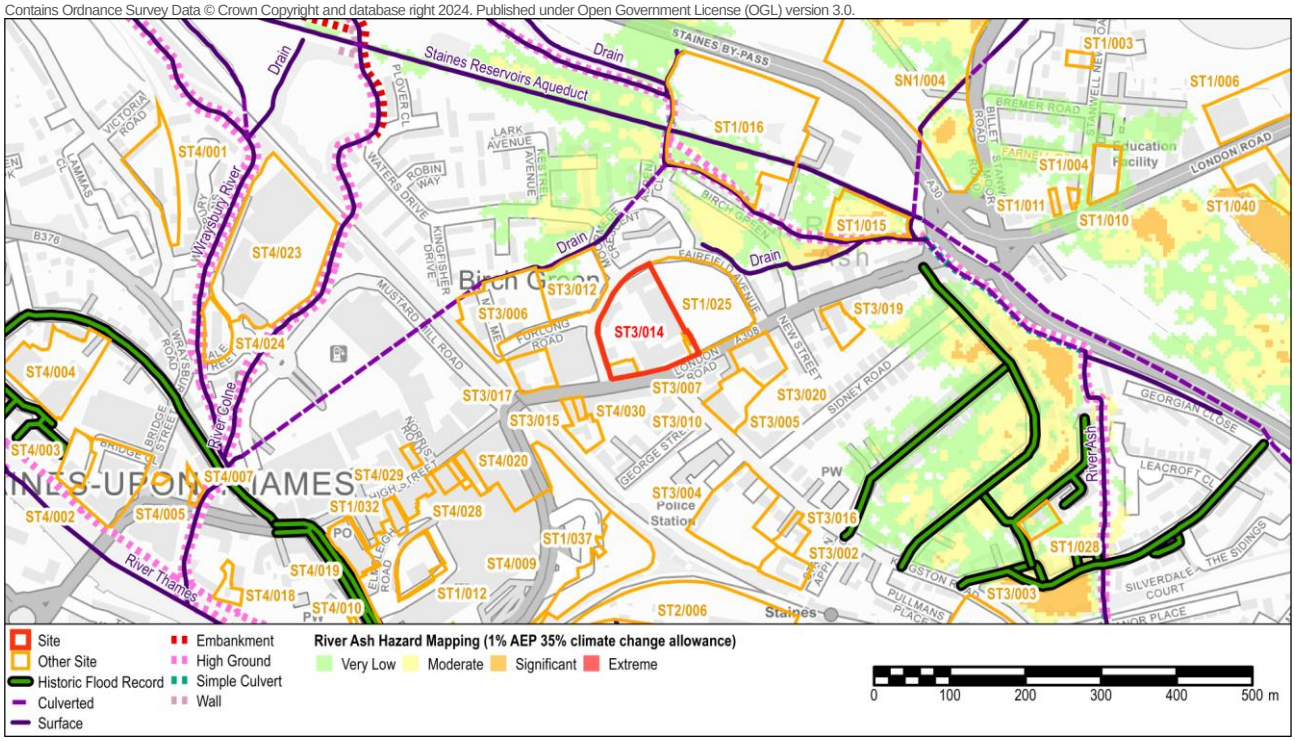


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST3/014: Birch House/London Road, Fairfield Avenue

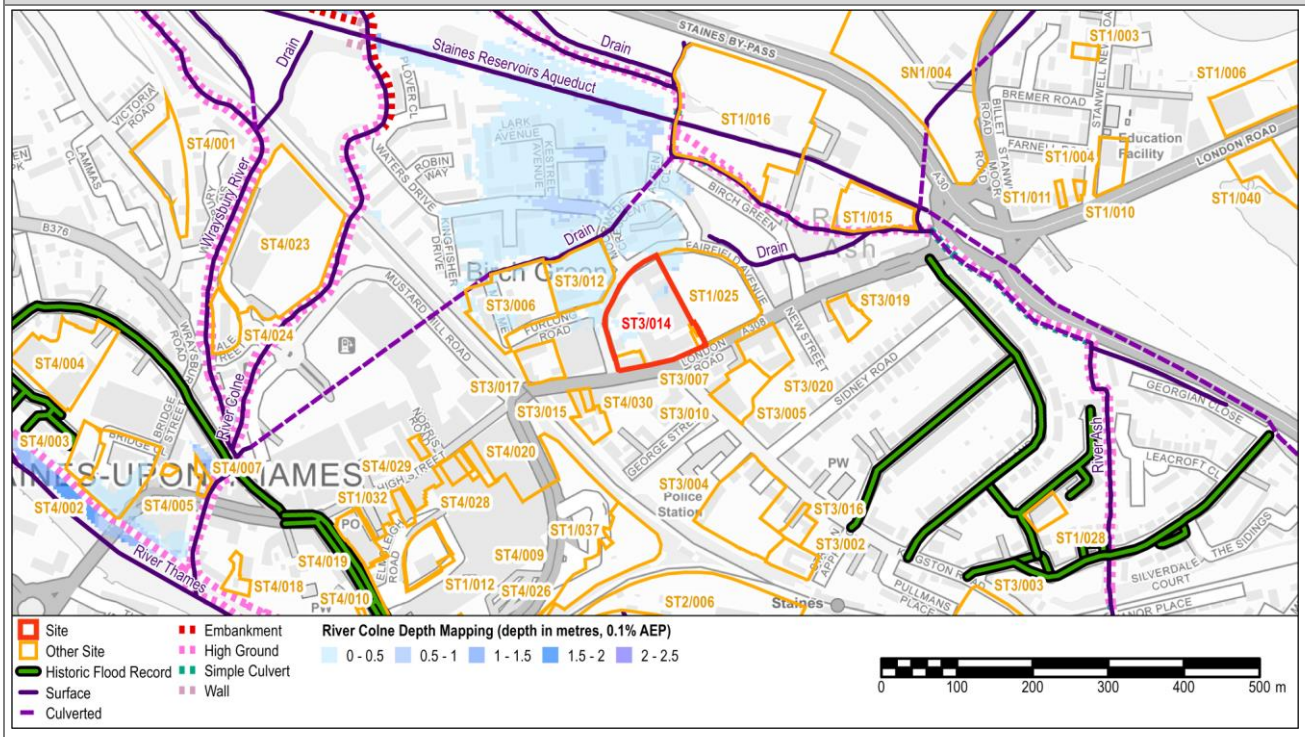


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



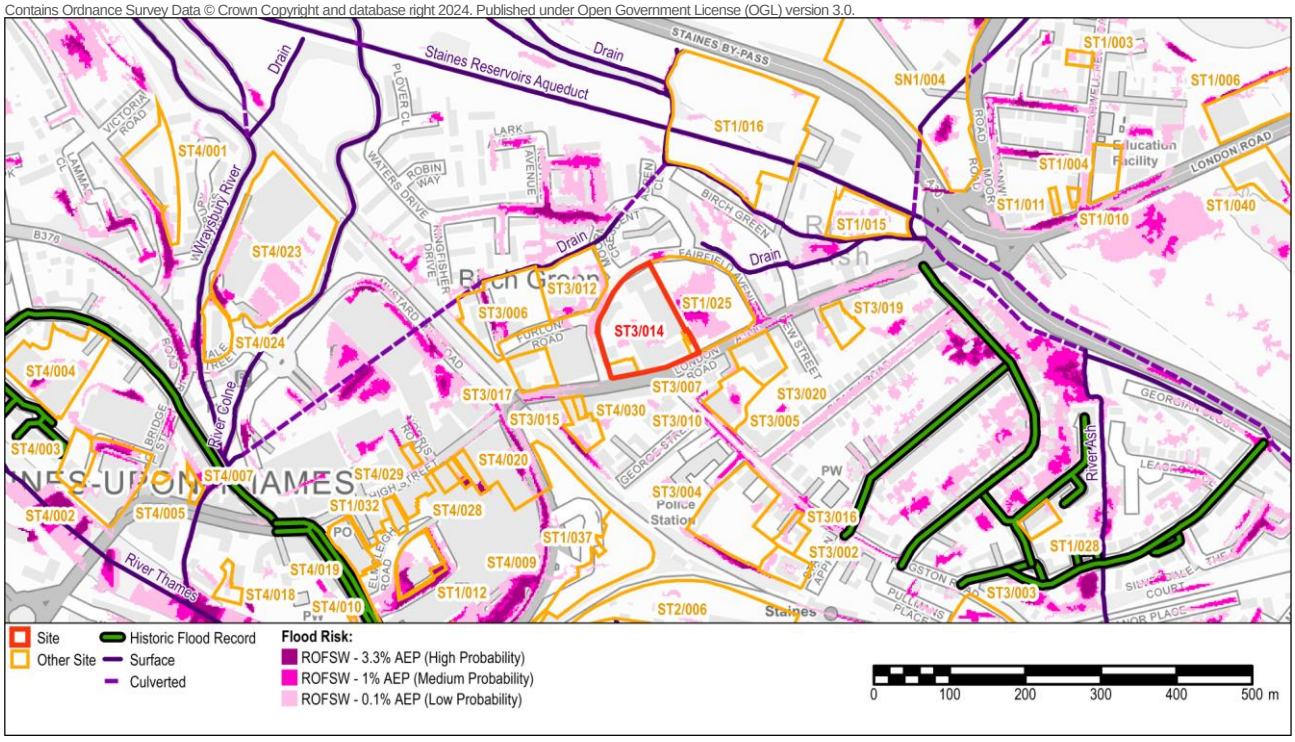
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST3/014: Birch House/London Road, Fairfield Avenue



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Not considered to be prone to groundwater flooding.		
Aquifer Designation	Secondary A, Secondary A		
Other Sources			

ST3/014: Birch House/London Road, Fairfield Avenue	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir, Staines Reservoir or the Wraysbury Reservoir.

Flood Risk Summary

The River Ash is located approximately 250m to the north east of the site, the River Colne is approximately 400m to the west, and flows south to join the River Thames 700m south west of the site. 66% of the site is located in Flood Zone 2 Medium probability of flooding from rivers, and 34% of the site is located in Flood Zone 1, Low probability. However, in the future, as a result of the impact of climate change, the western part of the site is shown to be at risk of flooding during the 1% AEP event including 35% increase in peak river flows.

During the 1% AEP modelled event including 35% climate change, flood depths of 0-0.5m are modelled to occur on the western part of the site, with a corresponding hazard rating of Very Low. A small area in the centre of the site has modelled flood depths up to 1.5m, with a corresponding hazard of Moderate (Danger for Some) and Significant (Danger for Most).

The Risk of Flooding from Surface Water Mapping indicates that the area local to the site is susceptible to surface water ponding. There are multiple records of flooding within 500m of the site.

Access/Egress Route Summary

Fairfield Avenue to the west of the site (126m) and London Road to the south of the site (150m) at Low hazard.

From the northern boundary of the site, route along Fairfield Avenue has 20m at Low hazard, remainder along Fairfield Avenue and London Road not at risk.

From the southern boundary of the site, route along London Road has 100m at Low hazard, remainder not at risk of flooding.

Site Specific Recommendations

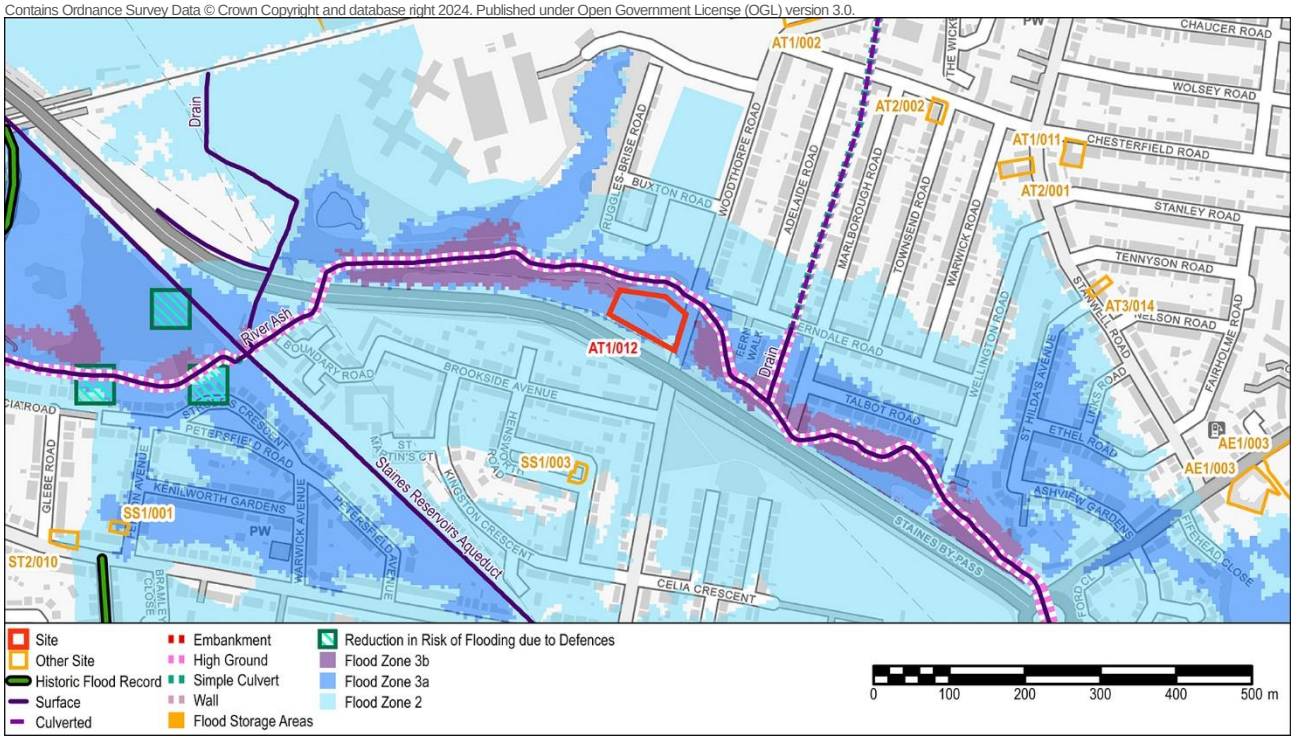
Subject to the satisfaction of the Sequential Test, More Vulnerable development is permitted in Flood Zones 1 and 2, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Colne Management Catchment. The climate change allowances for peak river flow are 21% (central) and 35% (higher central). However, the dominant flood source in this location is the River Thames within the neighbouring Management Catchment for Maidenhead and Sunbury, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant. Given the risk of flooding to the site and surrounding area in the future as a result of climate change the following recommendations are made:

- There is no completely dry access/egress available for the site during the design event. A route that is has sections at low hazard during the 1% AEP event including 35% climate change allowance is available for the site along London Road to the east which may be safe depending on the vulnerability of the site users.
- Development should be steered away from the western part of the site which is shown to be at risk during the 1% AEP event including climate change. Any increase in built footprint in this location would need to be compensated for, on a level for level and volume for volume basis within the rest of the site. Given that part of the site is not currently within the design flood extent this is likely to be achievable.
- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within the Flood Warning Areas for the River Ash (River Ash at Ashford and Staines) and the River Thames (River Thames at Staines and Egham). An Emergency Plan should be prepared for the site and places of safe refuge should also be identified, outside the flood extent for the design event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Group 6 Sites wholly within Flood Zone 3, with access at low hazard

AT1/012 (Ashford Community Centre, Woodthorpe Road)

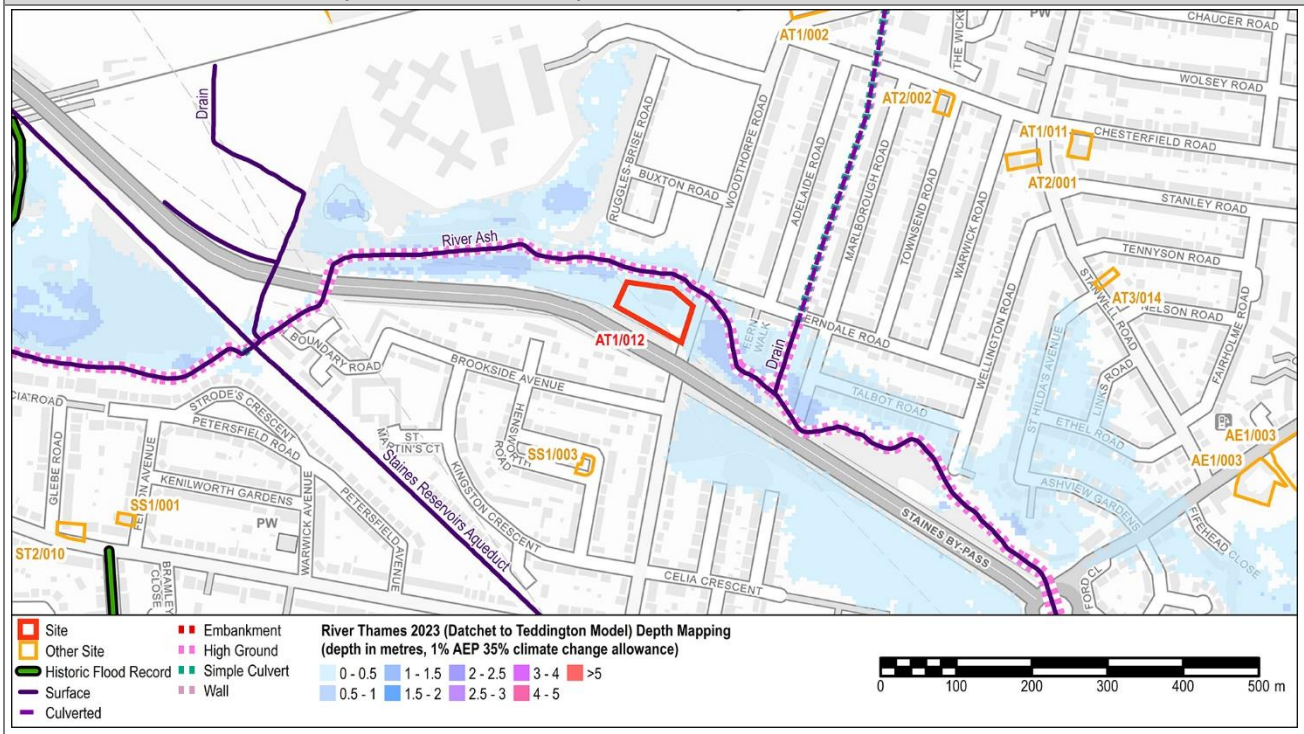
AT1/012: Ashford Community Centre, Woodthorpe Road				
Site ID:	AT1/012	**Area (ha):**		0.47
Proposed Use:	Local Community F2(b): 300sqm Community Centre (approx.) Residential (C3)	**Vulnerability Classification:**		Less Vulnerable, More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 4%	**Flood Zone 3 (1% AEP):** 95%	**Flood Zone 3b:** 1%	**Area with reduced risk of flooding due to defences:** 0%



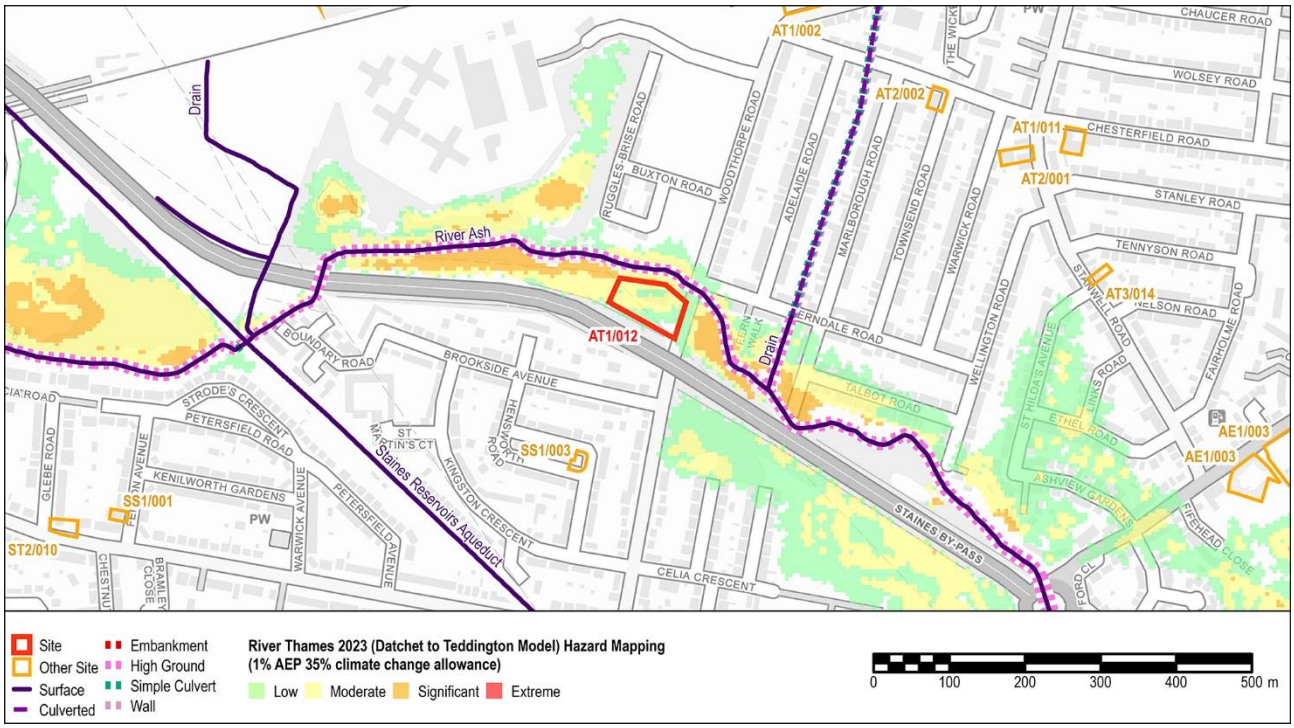
Flood Zones and Flood Records	
Flood Warning Area	River Ash at Ashford and Staines, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947, 06FebruaryWinter2014, 06Winter13-14
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

AT1/012: Ashford Community Centre, Woodthorpe Road

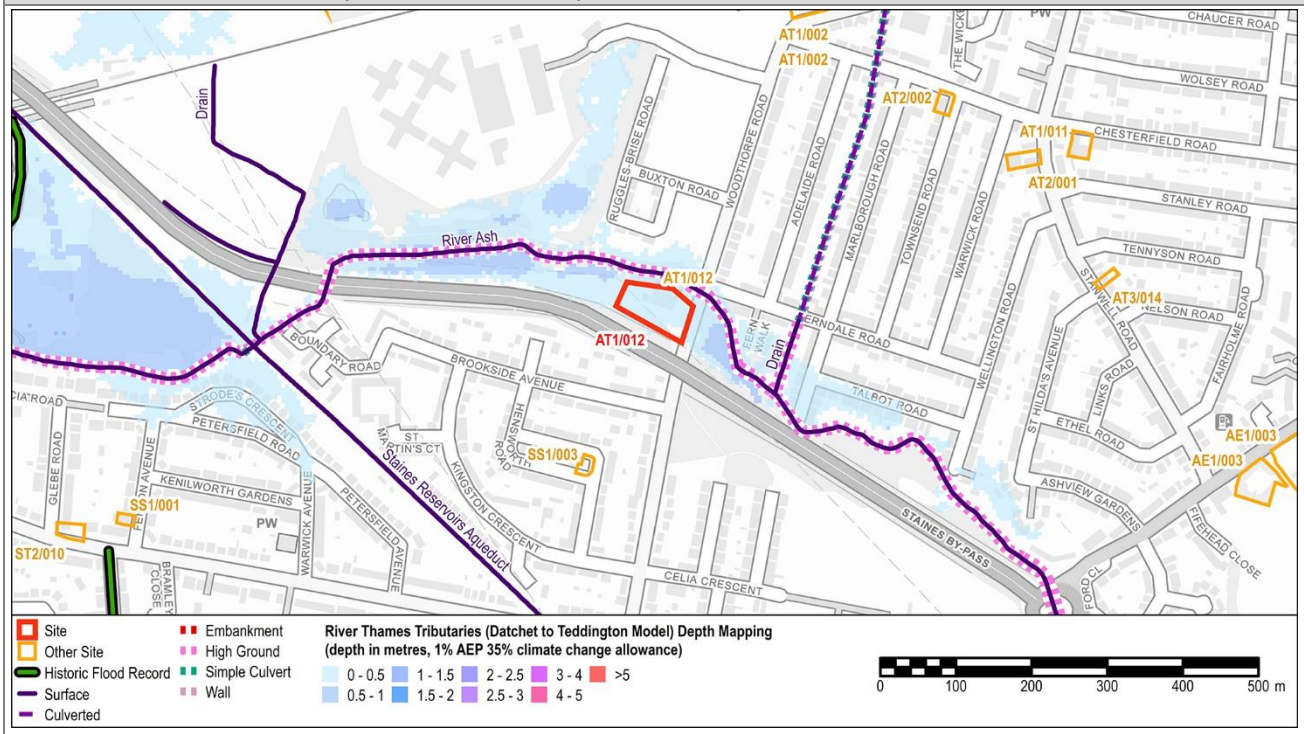


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



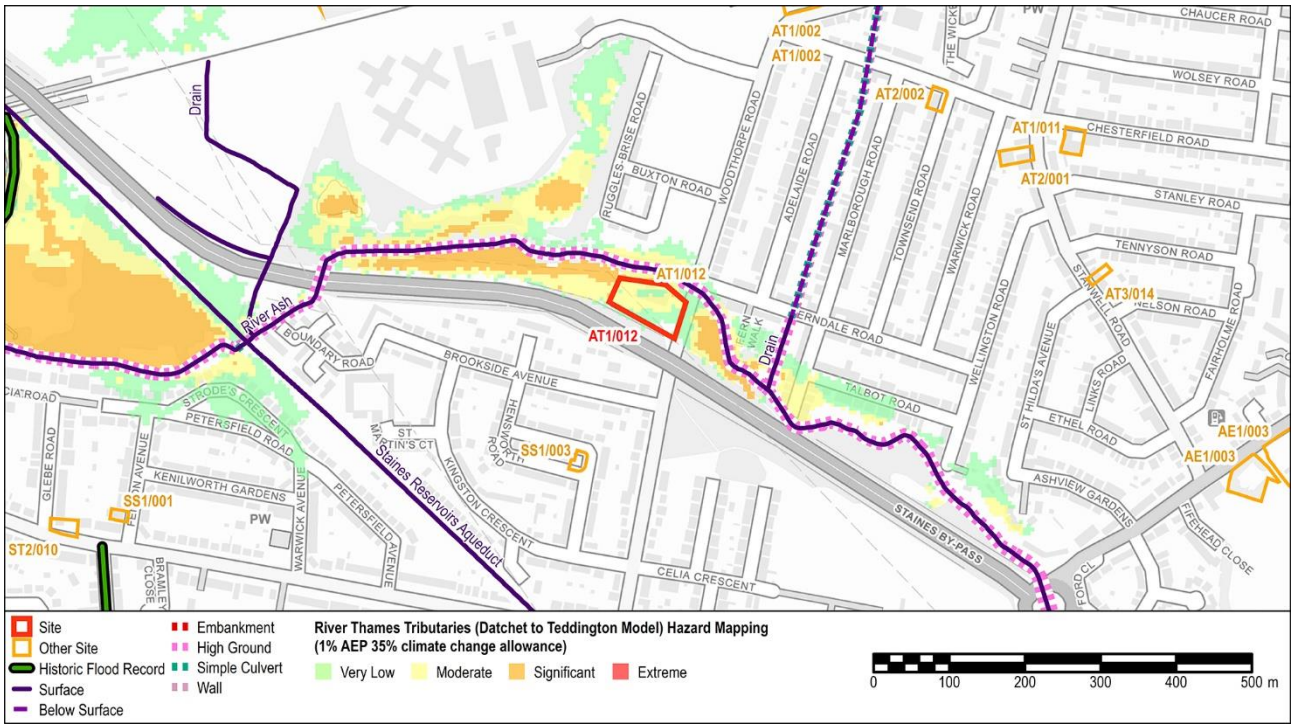
River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

AT1/012: Ashford Community Centre, Woodthorpe Road

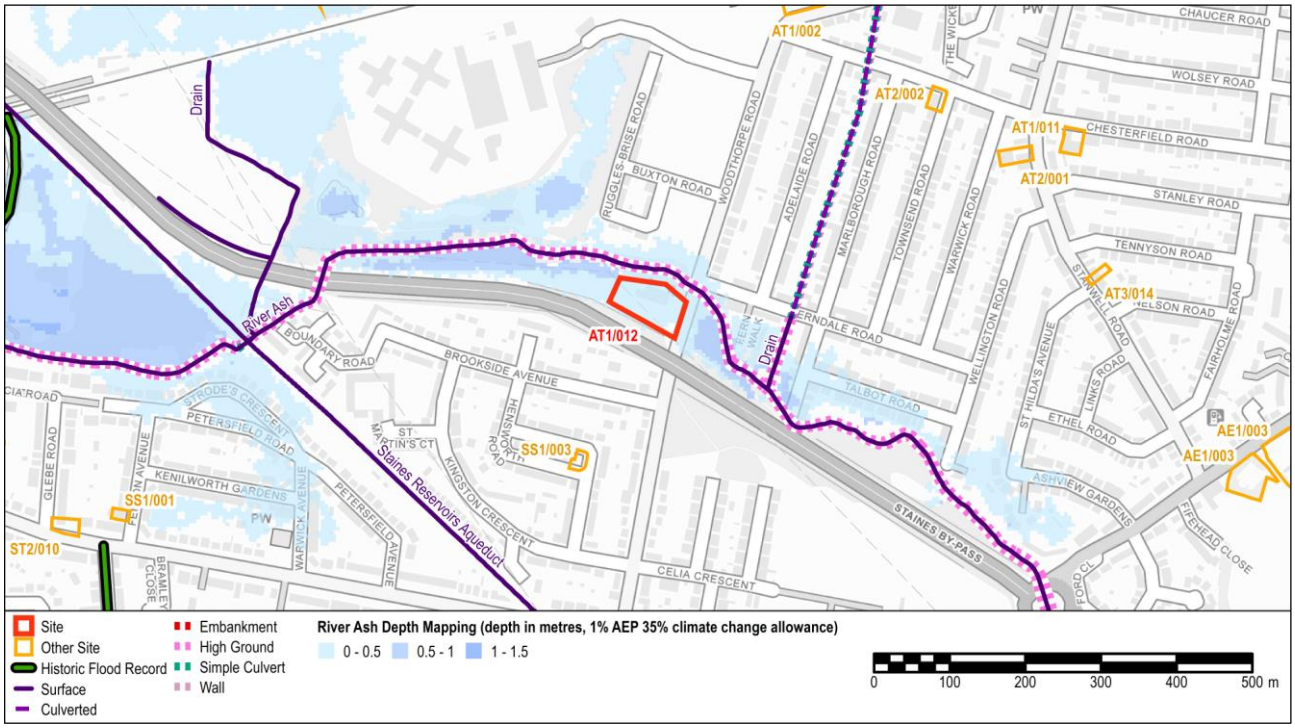


River Thames (Tributary Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

AT1/012: Ashford Community Centre, Woodthorpe Road

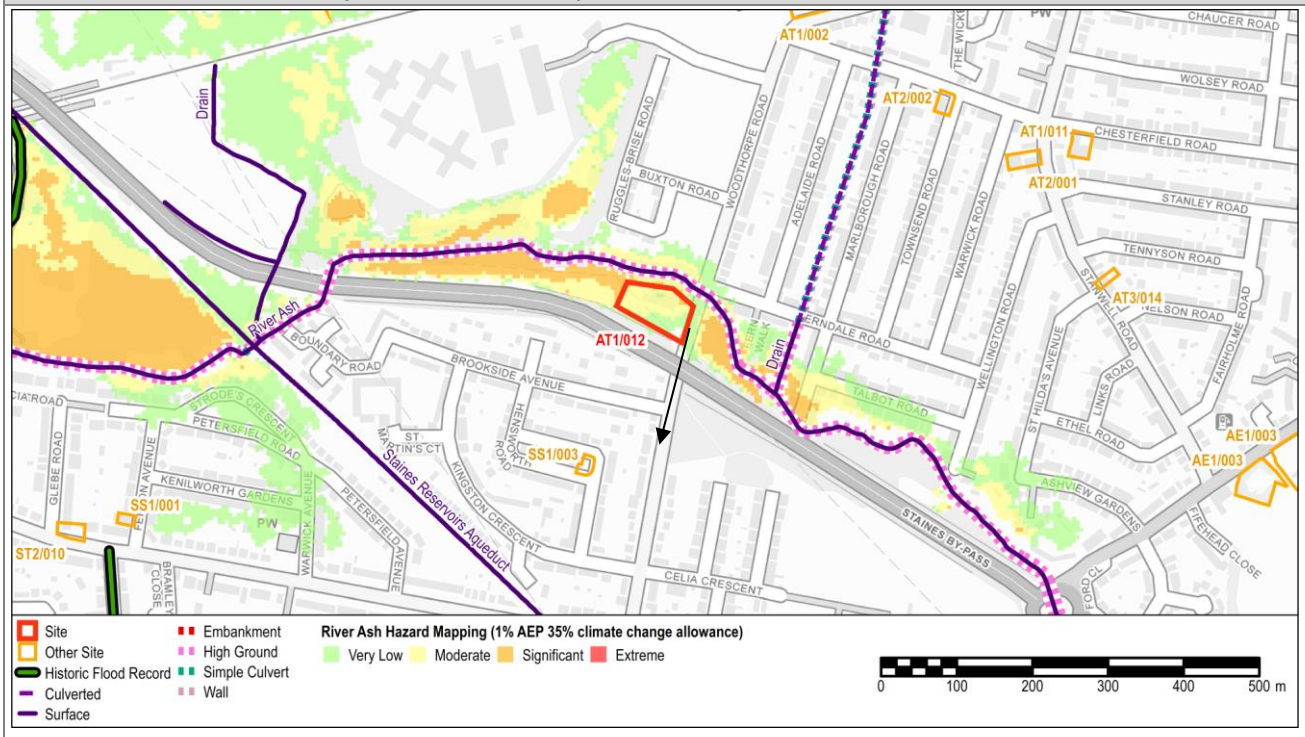


River Thames (Tributary Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change



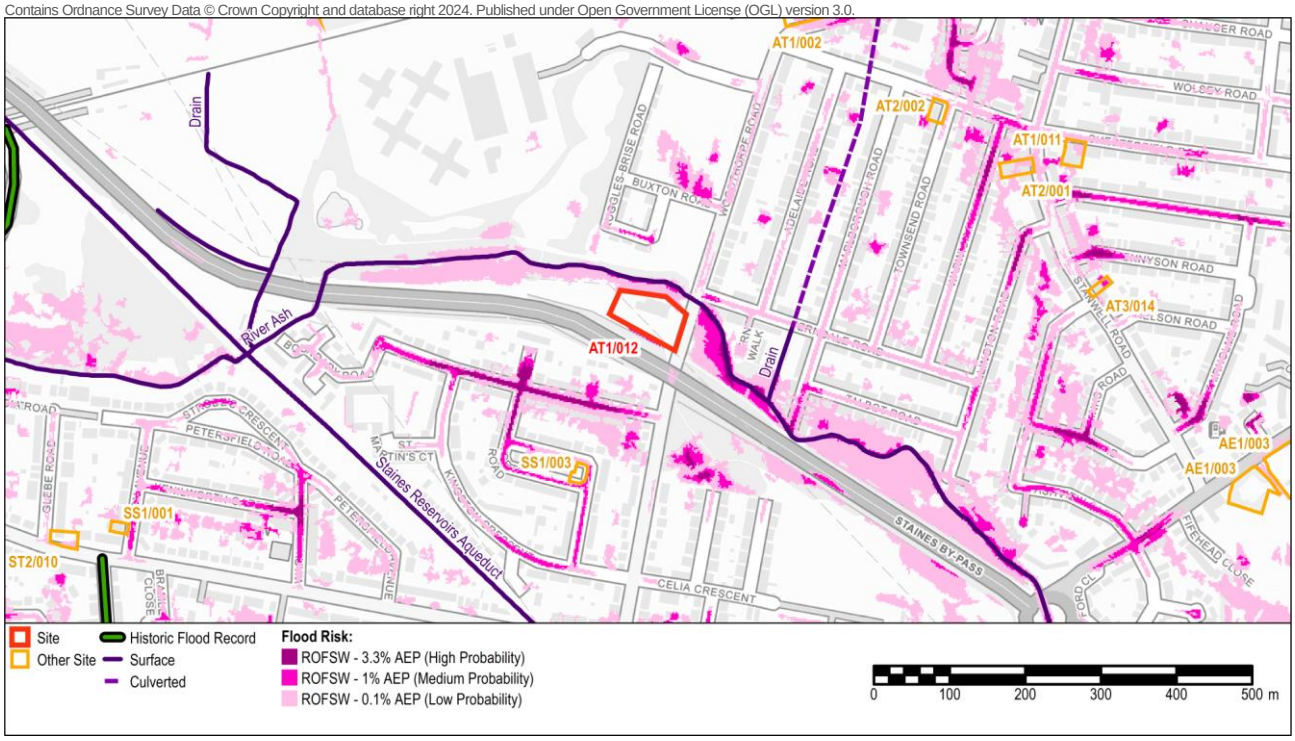
River Ash Maximum Flood Depth 1% AEP plus 35% climate change

AT1/012: Ashford Community Centre, Woodthorpe Road



River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Unproductive, Secondary A		
Other Sources			

AT1/012: Ashford Community Centre, Woodthorpe Road	
Risk of flooding from reservoirs	There are several reservoirs in the local area including Staines Reservoirs, King George VI Reservoir, Queen Mary Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The River Ash flows west to east across the northern edge of the site. The majority of the site (95%) is defined as Flood Zone 3 High probability of flooding from rivers. 1% is defined as Flood Zone 3b Functional Floodplain, and 4% of the site is defined as Flood Zone 2 Medium probability of river flooding.
Modelling outputs for the River Ash for the 1% AEP event including a 35% increase in peak river flows as a result of climate change, indicate flood depths across the majority of the site of 0-0.5m, increasing in the north of the site up to 1m. The hazard rating is 'Very Low; and 'Moderate', meaning 'Danger for Some', e.g., the elderly or young children.
Modelling outputs for the River Thames (Thames dominated) and River Thames (Tributary dominated) for the 1% AEP event including a 35% increase in peak river flows as a result of climate change, indicate flood depths across the majority of the site of 0-0.5m. The hazard rating is 'Very Low; and 'Moderate', meaning 'Danger for Some'.
There are records of flooding within 500m of the site and anecdotal records of flooding on the site itself.
The Risk of Flooding from Surface Water mapping identifies the risk to the site to be Low.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, suggests that there is potential for groundwater flooding at surface in the local area.

Access/Egress Route Summary

Woodthorpe Road to the east of the site has 115m at Low hazard. **To the north** along Woodthorpe Road, the remainder of the route to the north is not at risk of flooding. Alternatively, **to the south** along Woodthorpe Road and onto Kingston Road, there is a 45m section at Low hazard before the junction with the A308.

Site Specific Recommendations

New development is not permitted in areas of Flood Zone 3b Functional Floodplain. This part of the site should be retained as floodplain and steps taken to restore the land to provide a more natural floodplain for the River Ash.

An 8m buffer zone is required between built development and the Main River (measured from top of bank or edge of flood defence structure). A Flood Risk Activity Permit will be required for any works within 8m of a main river/culvert/flood defence (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).

Residential development is defined as More Vulnerable. Following the satisfaction of the Sequential Test, More Vulnerable development is only permitted in Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

This site is located in the Colne Management Catchment. The climate change allowances for peak river flow are 21% (central) and 35% (higher central).

The following recommendations are made for this site:

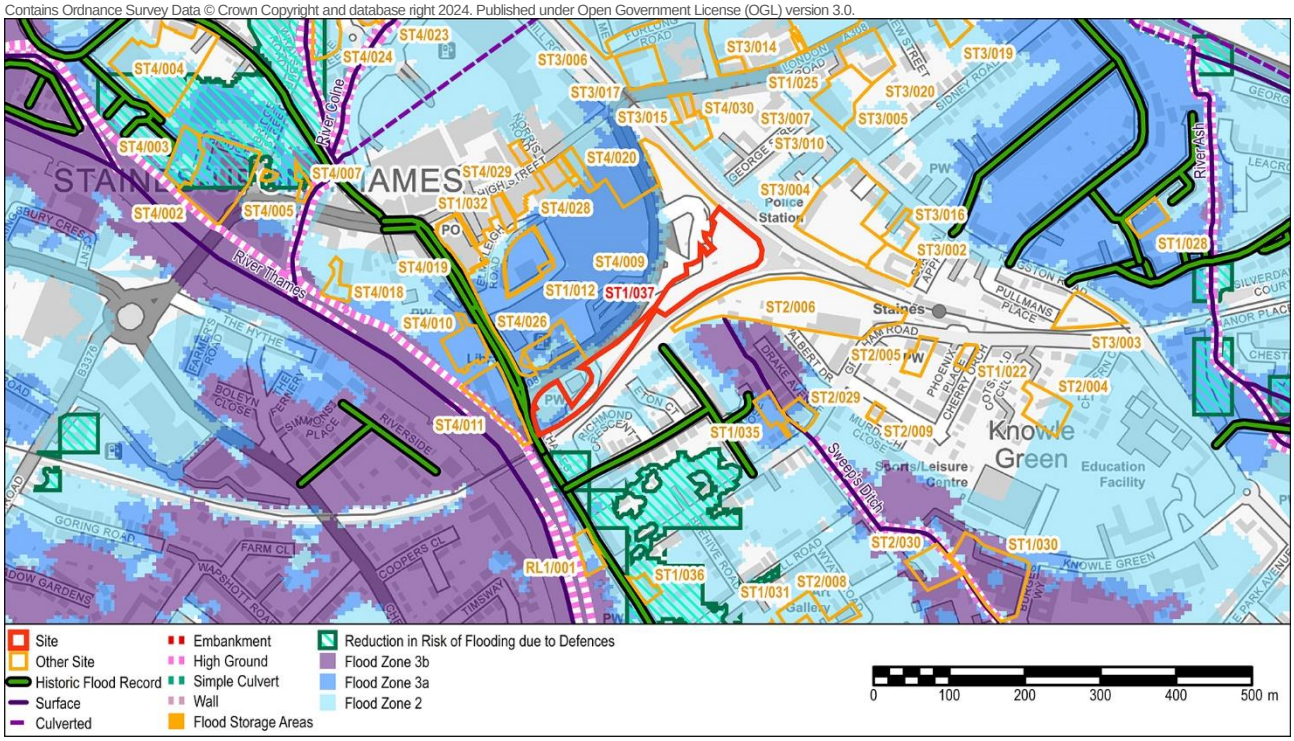
- Safe access/egress that is at low hazard to an area at low risk of river flooding is likely to be achievable south along Woodthorpe Road.
- There is built development on the existing site. In order to ensure that future development does not increase the risk of flooding, the built footprint of new development of the site should not exceed that of the existing building and where possible should be reduced.
- Finished floor levels for must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within the Flood Warning Areas for the River Ash (River Ash at Ashford and Staines) and the River Thames (River Thames at Staines and Egham). An Emergency Plan should be prepared for the site and places of safe refuge should be identified outside the design event flood extent (1% AEP including climate change).
- Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from the Staines Reservoirs.

Group 7 Sites in Flood Zone 3 with pedestrian access at low hazard

ST1/037 (Thameside House, South Street)

ST1/037: Thameside House, South Street, TW18 4PR			
Site ID:	ST1/037	**Area (ha):**	0.24
Proposed Use: Residential (C3): 140 units (approx.) Flexible Commercial (Class E): 3,200 sqm (approx.)		**Vulnerability Classification:** More Vulnerable, Less Vulnerable	

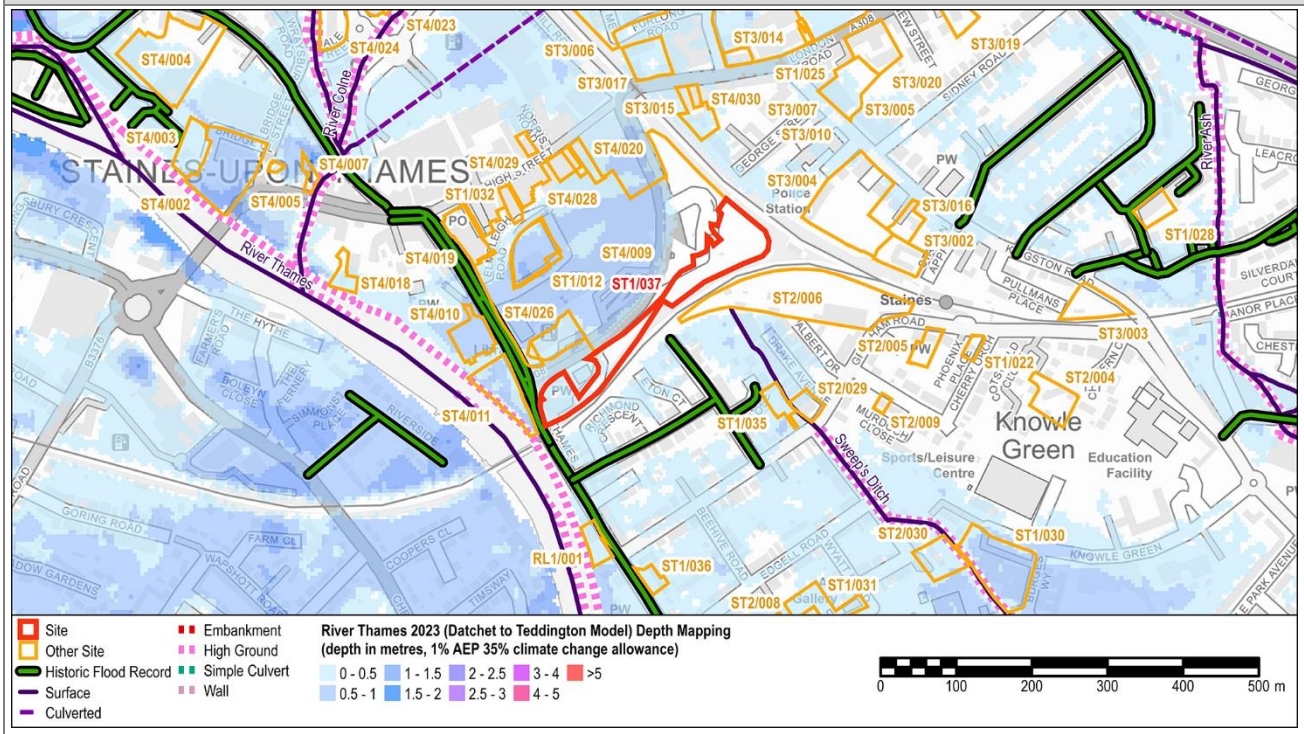
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 74%	**Flood Zone 2 (0.1% AEP):** 20%	**Flood Zone 3 (1% AEP):** 6%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



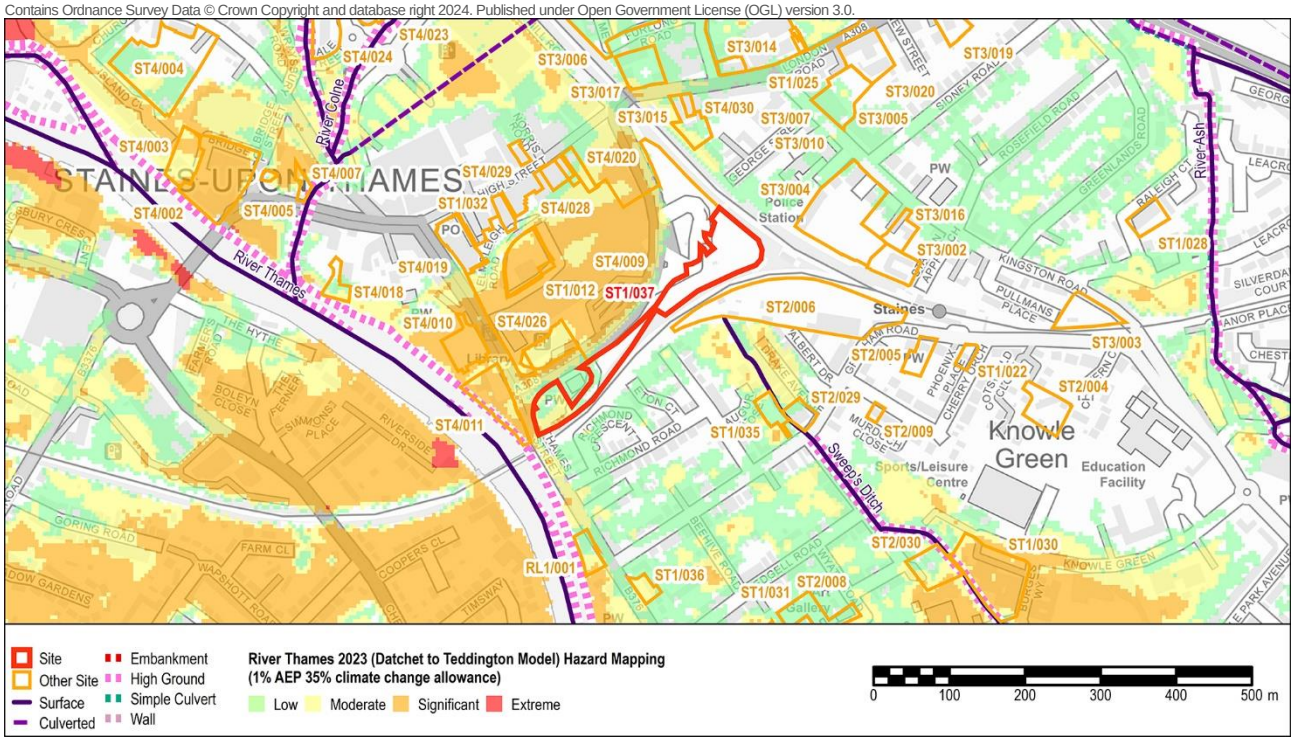
Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 30; External property flooding 2; Section 19 Flood Investigation incident 28; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST1/037: Thameside House, South Street, TW18 4PR



River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

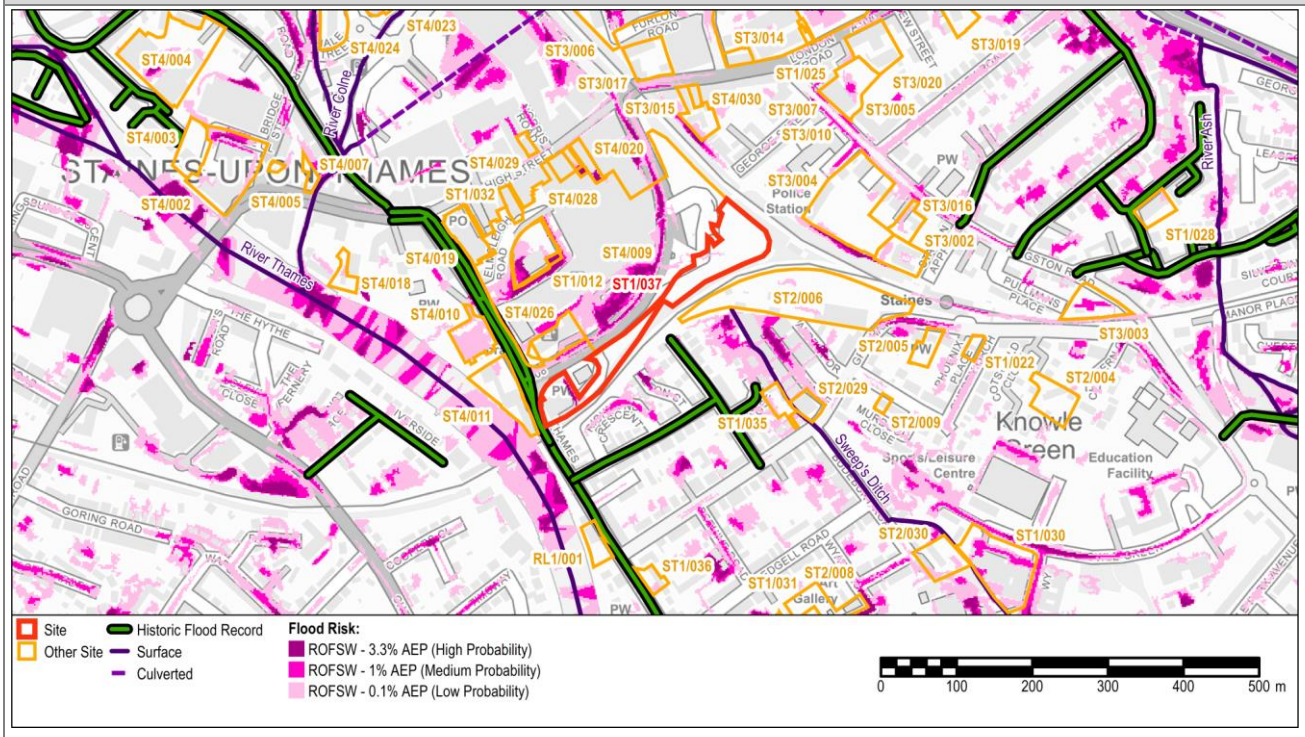


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Low

ST1/037: Thameside House, South Street, TW18 4PR



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames flows south east approximately 40m to the west of the site. The majority of the site (75%) is defined as Flood Zone 1 Low probability of flood from rivers, 20% is defined as Flood Zone 2 Medium probability, and 5% Flood Zone 3 High probability. The site does not benefit from flood defences.

Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates flood depths on western end of the site of 0-0.5m. The hazard rating is Very Low to Moderate meaning 'Danger for Some'.

The Risk of Flooding from Surface Water Map does not indicate the site to be at particular risk, however the site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

There is a **pedestrian access** route to the north of the site through the underpass beneath the railway line, not at risk of flooding. On the northern side of the railway line, the route along George Street has two sections of Low hazard (25m and 60m). Continuing east along London Road there is 70m at Low hazard, the remainder is not at risk of flooding.

Vehicular access has to pass along South Street (140m Significant hazard, 25m Moderate hazard, 25m at Low hazard), beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 and 2 in accordance with Table 2 of the PPG. In areas of Flood Zone 3, More Vulnerable development is only permitted where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible

ST1/037: Thameside House, South Street, TW18 4PR

reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is either dry, or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, vehicular access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the vehicular route along the A308 are defined as Significant hazard ('Danger for Most'). There may be an access route for pedestrians available to the north of the site through the underpass beneath the railway line. This takes pedestrians through to George Street and then either east onto Kingston Road or north east onto London Road, which is shown to be at low hazard during the 1% AEP including 35% climate change allowance. The route east along Kingston Road leads out of the floodplain.

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime).

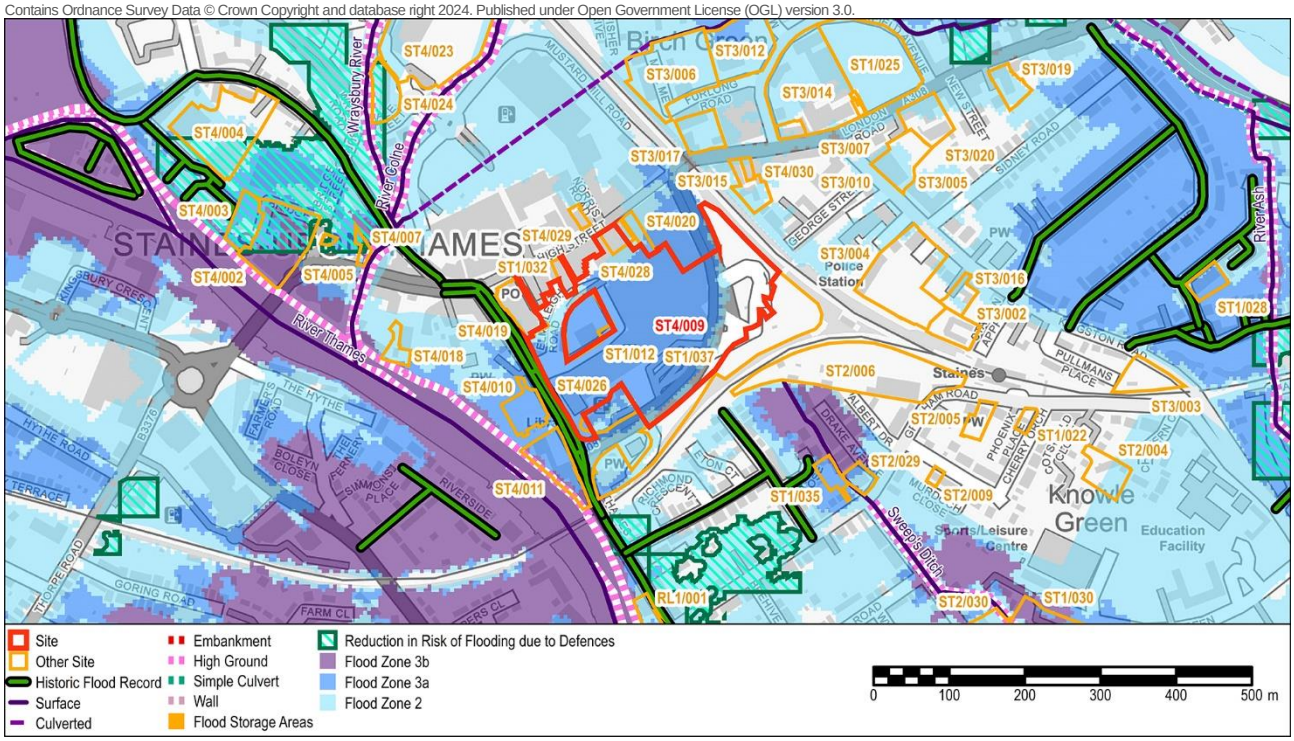
Residential development should be steered towards those parts of the site located in Flood Zone 1 Low probability of river flooding, using a sequential approach. In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced.

Other requirements for the site are:

- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within Flood Warning Areas for the Thames at Staines and Egham. An Emergency Plan should be prepared for the site and places of safe refuge designated, outside the flood extent for the design event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST4/009 (Elmsleigh Centre and Adjoining Land, South Street)

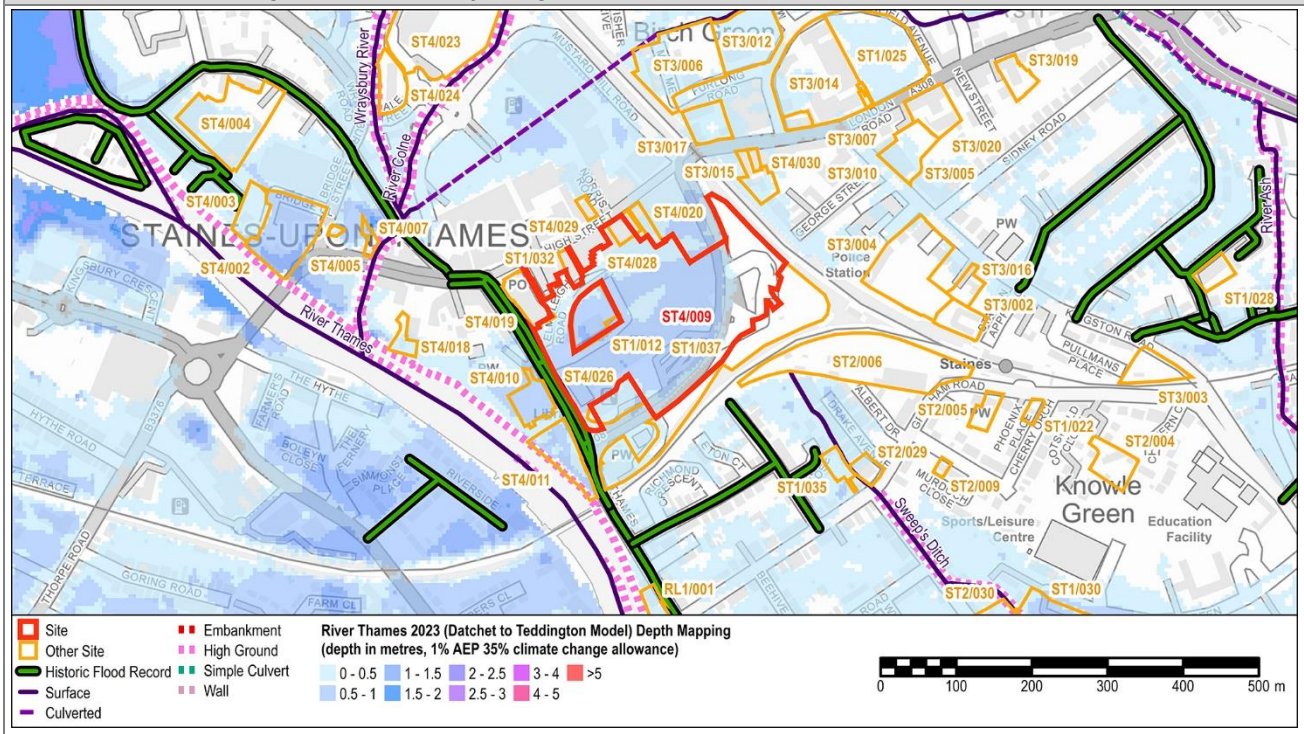
ST4/009: The Elmsleigh Centre and adjoining land, South Street, TW18 4QF				
Site ID:	ST4/009	**Area (ha):**		6.34
Proposed Use: Residential (C3): 850 units (approx.) Retail/Commercial town centre uses (Class E)			**Vulnerability Classification:** More Vulnerable Less Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 25%	**Flood Zone 2 (0.1% AEP):** 9%	**Flood Zone 3 (1% AEP):** 66%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



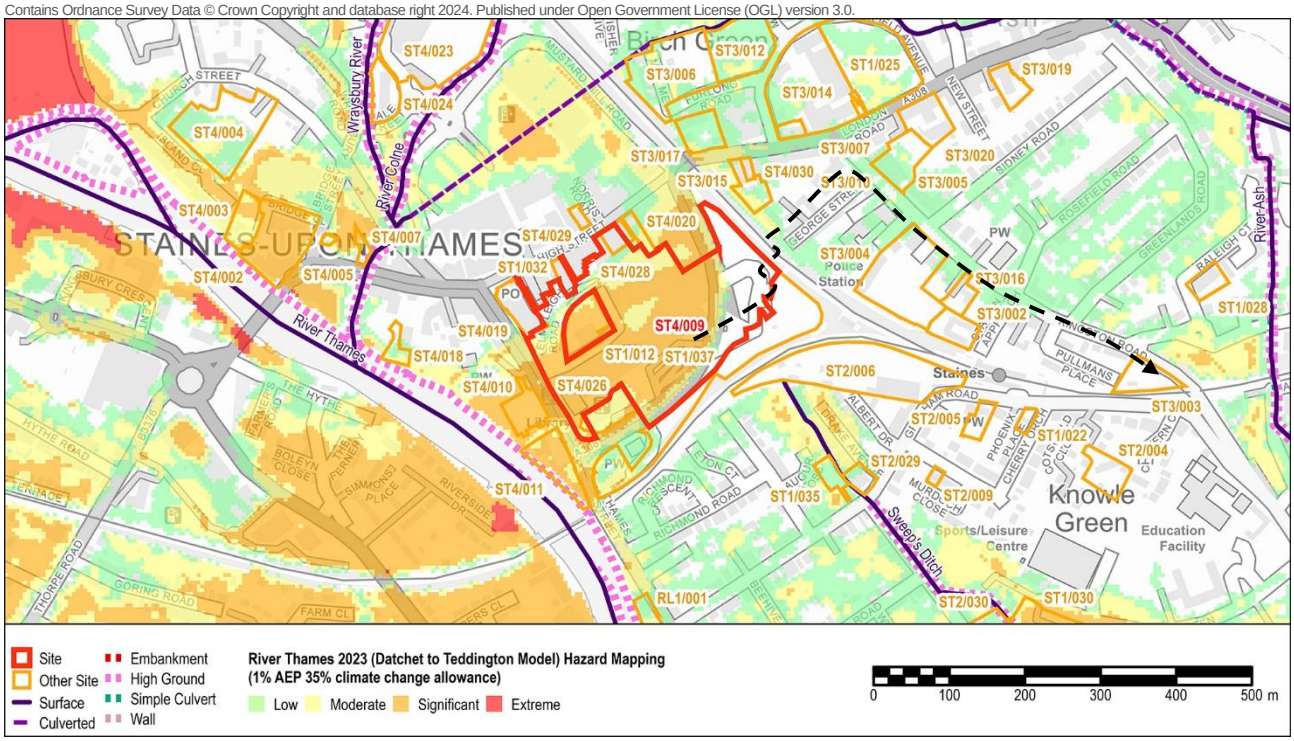
Flood Zones and Flood Records	
Flood Warning Area	River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 38; External property flooding 0; Section 19 Flood Investigation incident 50; Surrey County Council Wetspots 3
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST4/009: The Elmsleigh Centre and adjoining land, South Street, TW18 4QF



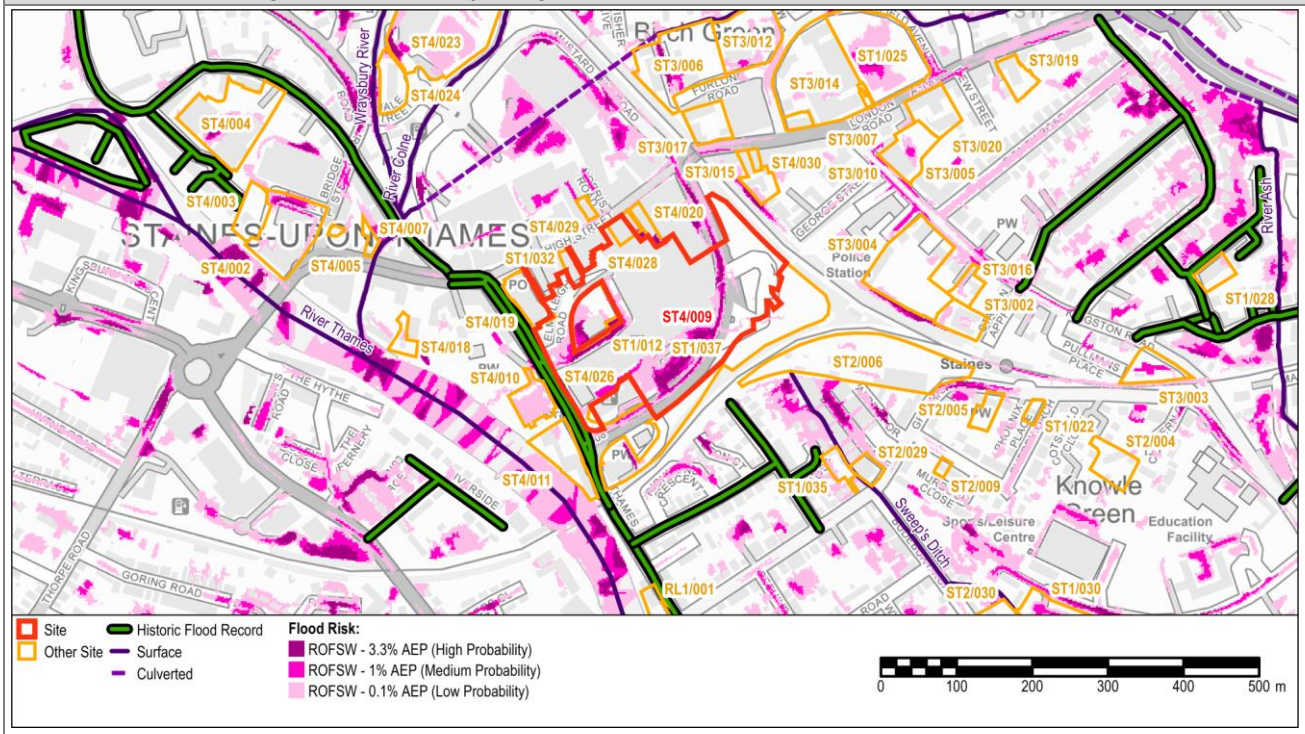
River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



River ThameS (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium / High

ST4/009: The Elmsleigh Centre and adjoining land, South Street, TW18 4QF



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand, Sand And Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames flows south east approximately 100m to the south west of the site. The majority of the site (66%) is defined as Flood Zone 3 High probability of river flooding, 25% is defined as Flood Zone 1 Low probability, and 9% is defined as Flood Zone 2 Medium probability.

Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates flood depths of 0-1m. The hazard rating in the centre of the site reaches Significant (Danger for Most).

The Risk of Flooding from Surface Water dataset shows a flow path through the centre of the site where the risk is Medium – High. There are numerous records of flooding in proximity to the site.

The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

There is a **pedestrian access** route to the north of the site through the underpass beneath the railway line, not at risk of flooding. On the northern side of the railway line, the route along George Street has two sections of Low hazard (25m and 60m). Continuing east along London Road there is 70m at Low hazard, the remainder is not at risk of flooding.

Vehicular access has to pass along South Street (140m Significant hazard, 25m Moderate hazard, 25m at Low hazard), beneath the railway line and then on to London Road, with 10m at Significant hazard, 60m at Moderate hazard and 200m at Low hazard.

Site Specific Recommendations

The proposed use for this site includes retail, defined Less Vulnerable, and residential, defined as More Vulnerable.

Subject to the satisfaction of the Sequential Test, Less Vulnerable development is compatible with Flood Zone 3 in accordance with Table 2 of the PPG and the Exception Test is not required. More Vulnerable development is only permitted in Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible

ST4/009: The Elmsleigh Centre and adjoining land, South Street, TW18 4QF

reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is either dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the vehicular route along the A308 are defined as Significant hazard ('Danger for Most'). There may be an access route for pedestrians available to the north of the site through the underpass beneath the railway line. This takes pedestrians through to George Street and Kingston Road, which is shown to be at low hazard during the 1% AEP including 35% climate change allowance. The route east along Kingston Road leads out of the floodplain.

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime).

Residential development should be steered towards those parts of the site located in Flood Zone 1 Low probability of river flooding, using a sequential approach. In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced.

Spelthorne BC propose to move this site to Years 11-15 of the plan period.

Other requirements for the site are:

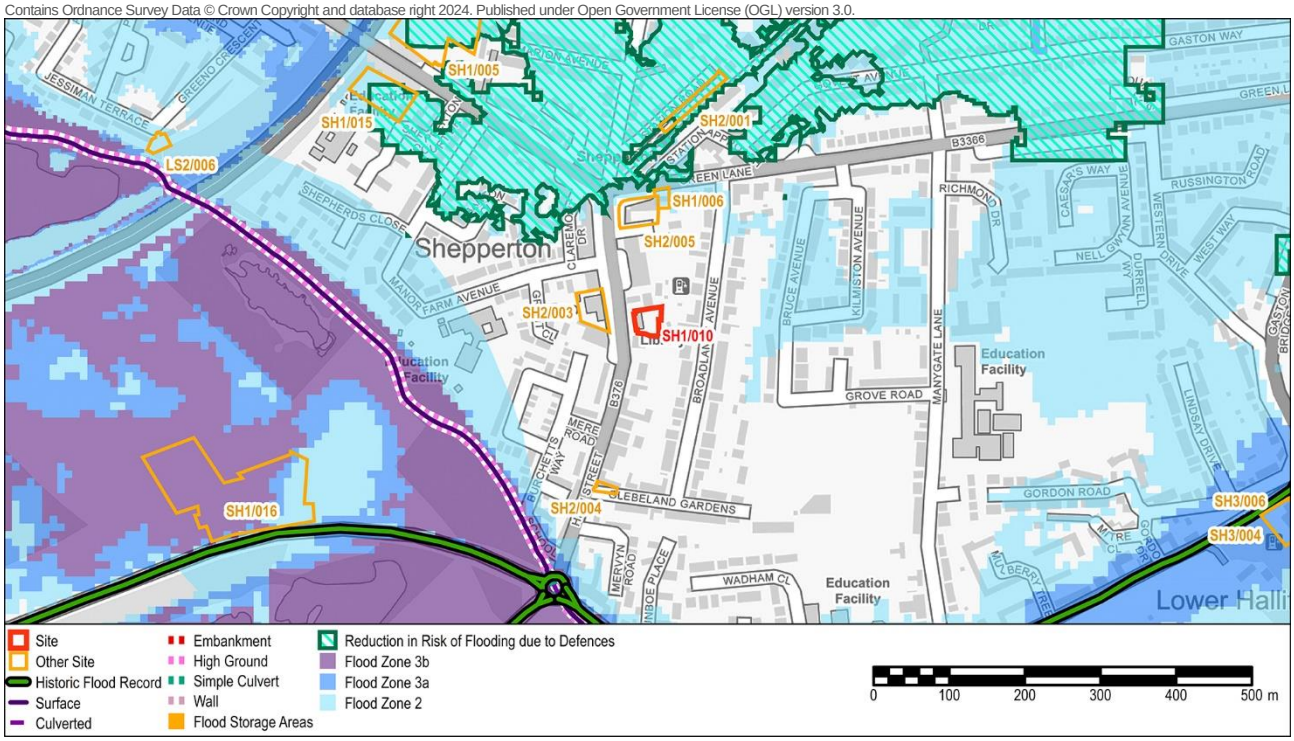
- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within Flood Warning Areas for the Thames at Staines and Egham. An Emergency Plan should be prepared for the site and places of safe refuge designated, outside the flood extent for the design event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Group 8 Sites primarily in Flood Zone 1 with no access that is dry, or at low hazard

SH1/010 (Shepperton Library, High Street)

SH1/010: Shepperton Library, High Street, TW17 9AU			
Site ID:	SH1/010	**Area (ha):**	0.15
Proposed Use: Residential (C3): 10 units (approx.) Ground floor community use (Class F): 250sqm (approx.) or re-provision off site		**Vulnerability Classification:** More Vulnerable Less Vulnerable	

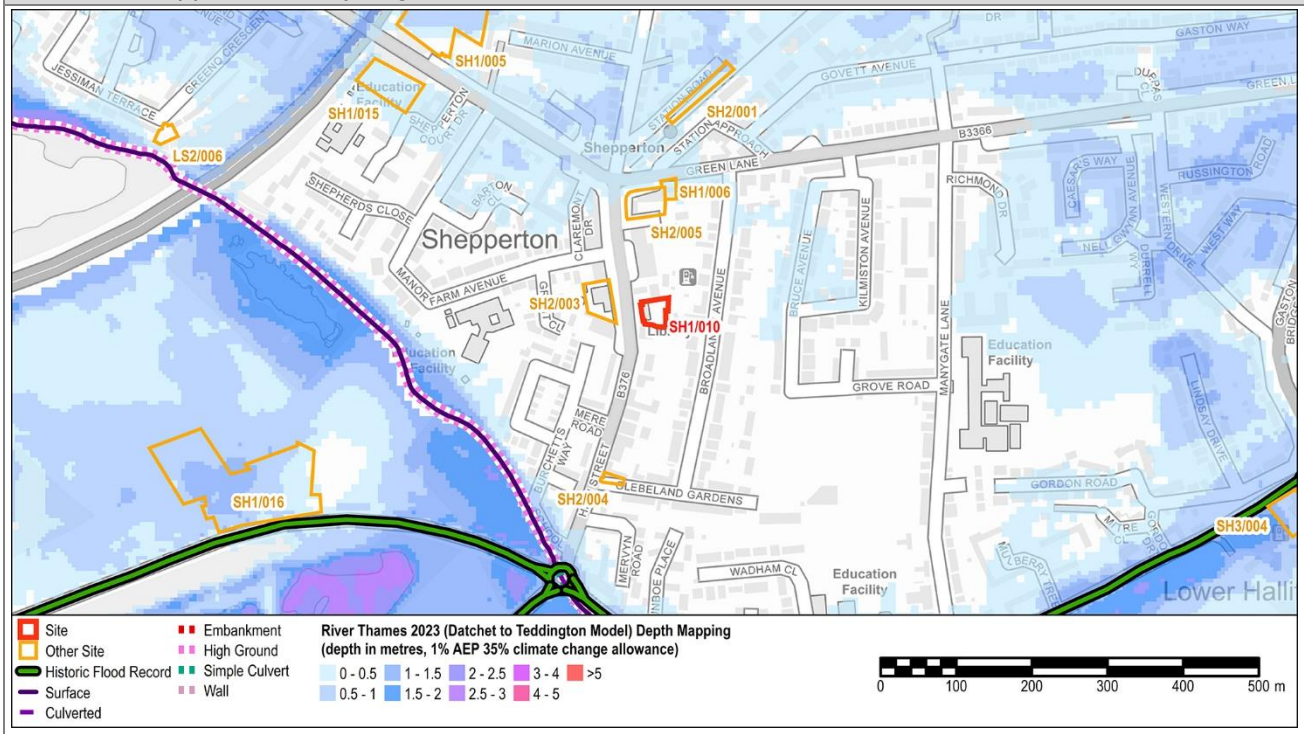
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



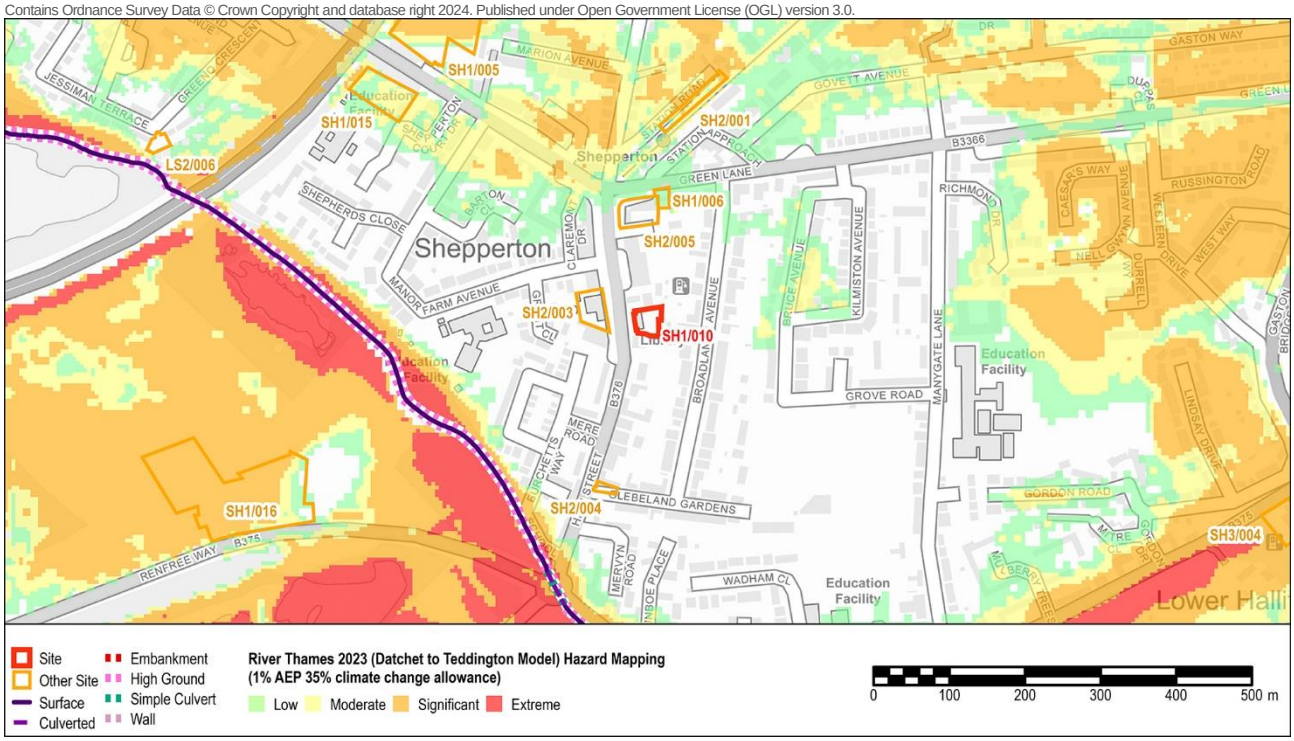
Flood Zones and Flood Records	
Flood Warning Area	None for the site, however surrounding area is subject to Flood Warning Area for River Thames at Shepperton and Lower Halliford.
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 2; External property flooding 0; Section 19 Flood Investigation incident 12; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 4

River Flooding

SH1/010: Shepperton Library, High Street, TW17 9AU



River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

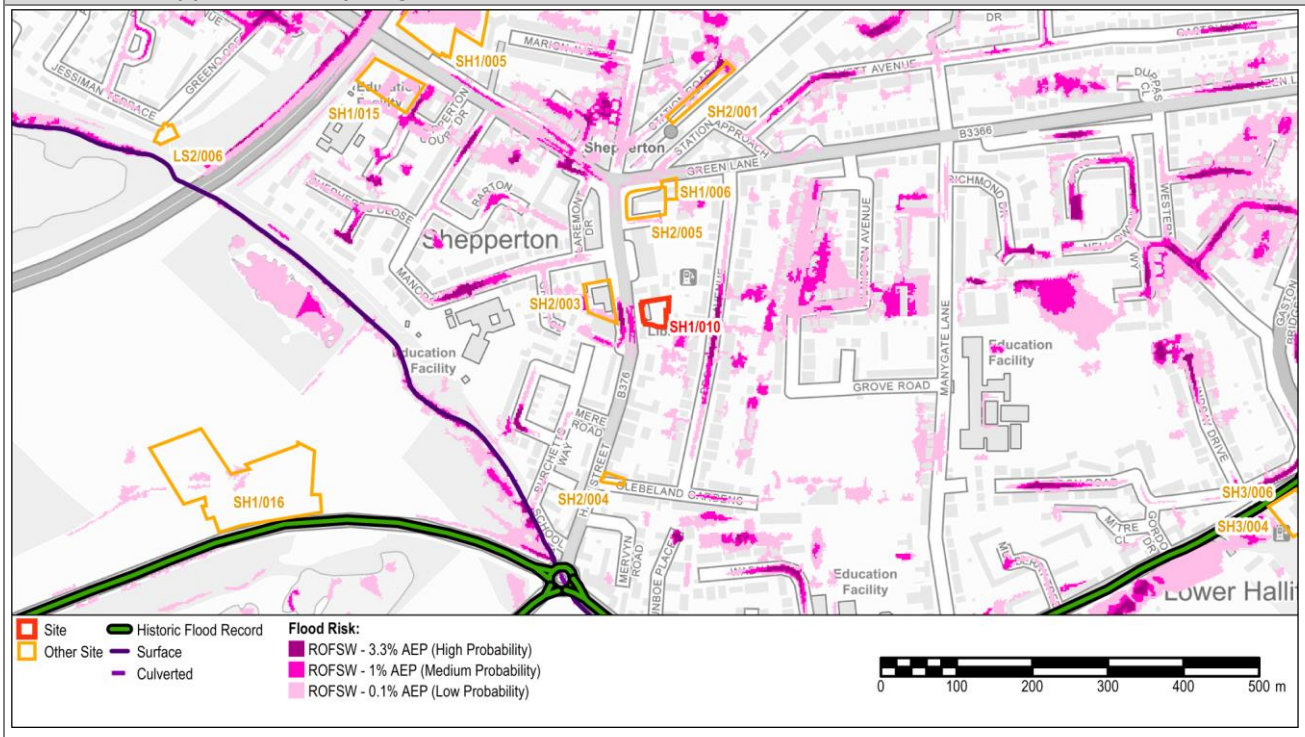


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Low

SH1/010: Shepperton Library, High Street, TW17 9AU



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	25% to 50%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding of property situated below ground level.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that the local area could be at risk of flooding in the event of a breach of one of these reservoirs. The site itself is shown to be at risk when there is also flooding from rivers.

Flood Risk Summary

The site itself is shown to be in Flood Zone 1, low probability of flooding from rivers. However the site is on a dry island within the wider Thames floodplain. During the 1% AEP flood event including 35% climate change, the site and immediate surroundings are not at risk of flooding, however the routes away from the site to areas outside the floodplain are shown to flood, including the B376 Green Lane (north of the site) and Renfree Way / B375 Russell Road (south of the site).
The site is not shown to be at particular risk of surface water flooding. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding of property situated below ground level.

Access/Egress Route Summary

North along the High Street 150m not at risk of flooding; east along Green Lane 150m Low hazard, 440m not at risk of flooding, 300m Low hazard, 40m Moderate hazard, 100m not at risk of flooding; north onto A244 80m not at risk of flooding, 90m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG. The Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. Sections of the route are shown to be at Moderate hazard. (The site is located in the Colne Management Catchment, however the dominant flood source in this location is the River Thames, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant, 35% (central) and 47% (higher central)).

SH1/010: Shepperton Library, High Street, TW17 9AU

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

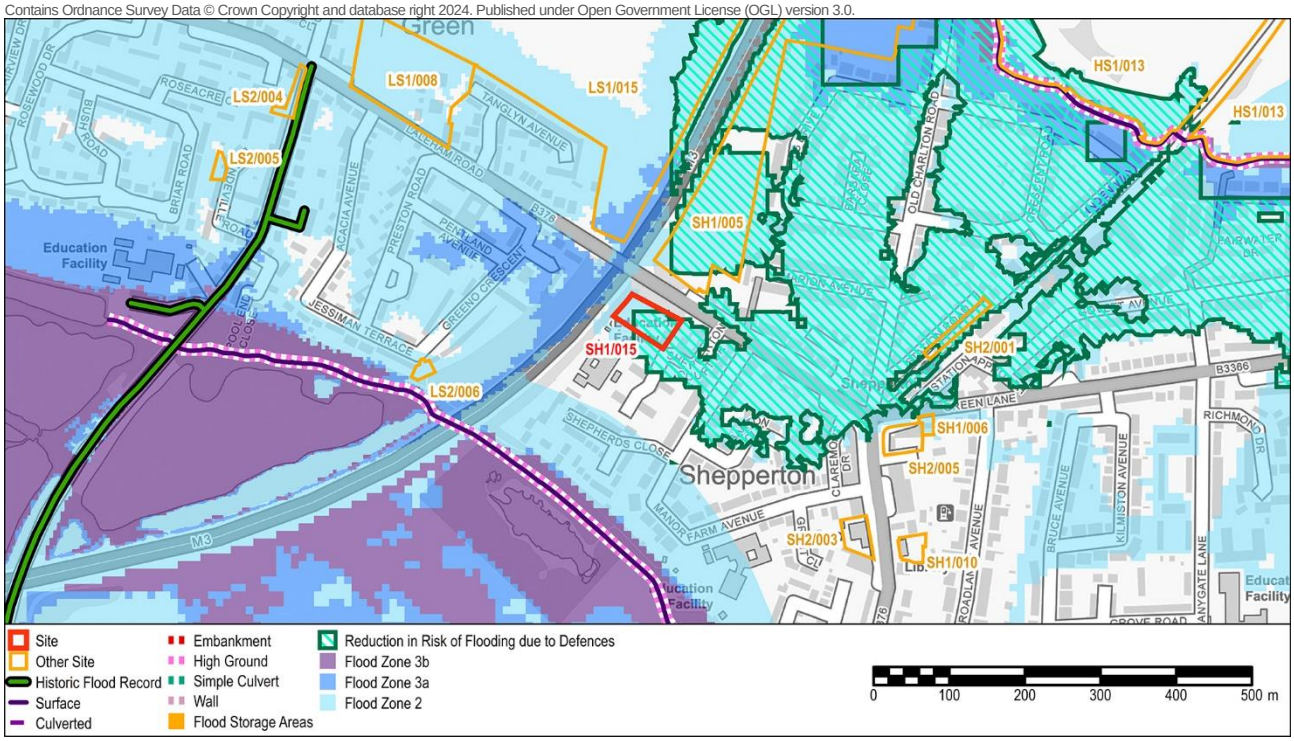
Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

SH1/015 (Shepperton Youth Centre, Shepperton Court Drive)

SH1/015: Shepperton Youth Centre, Laleham Road, TW17 8EJ			
Site ID:	SH1/015	**Area (ha):**	0.31
Proposed Use: Local Community F2(b): 700sqm Youth Centre (approx.) and associated outdoor space. Residential (C3): 24 units (approx.)		**Vulnerability Classification:** Less Vulnerable, More Vulnerable	

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 4%	**Flood Zone 2 (0.1% AEP):** 96%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 65%

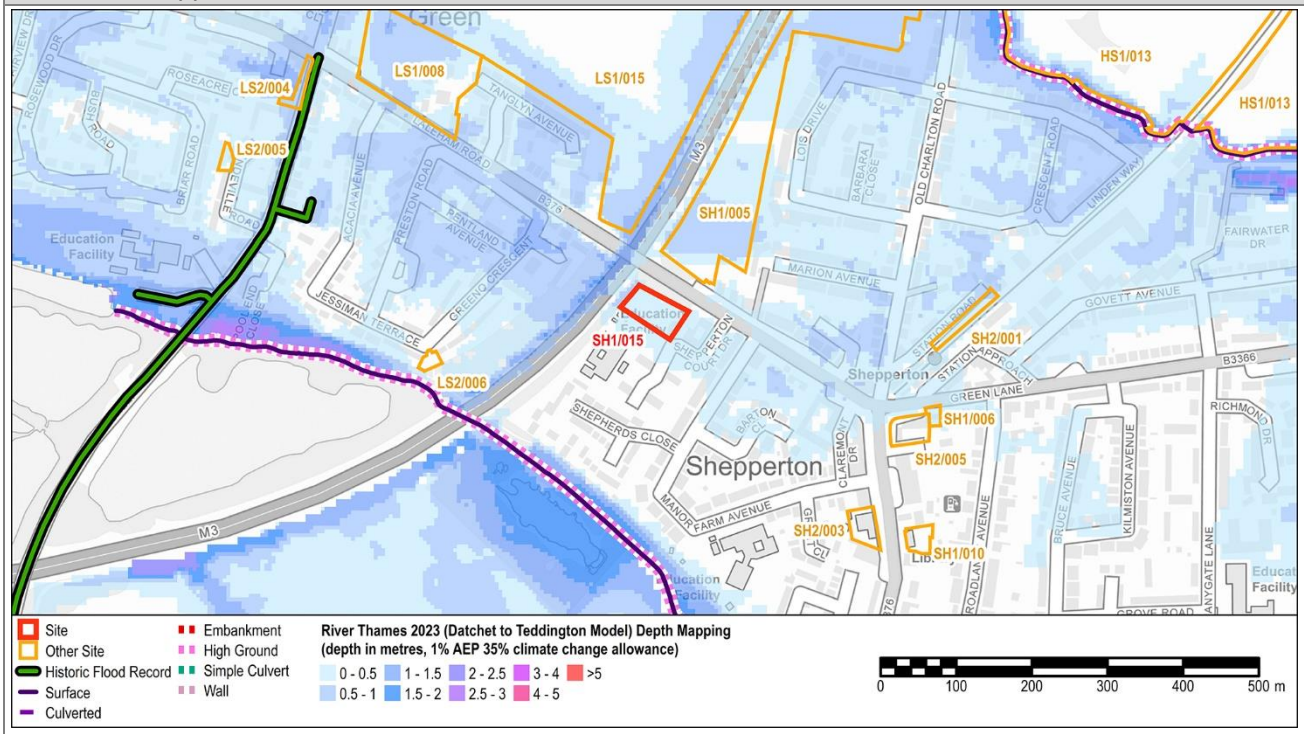


Flood Zones and Flood Records

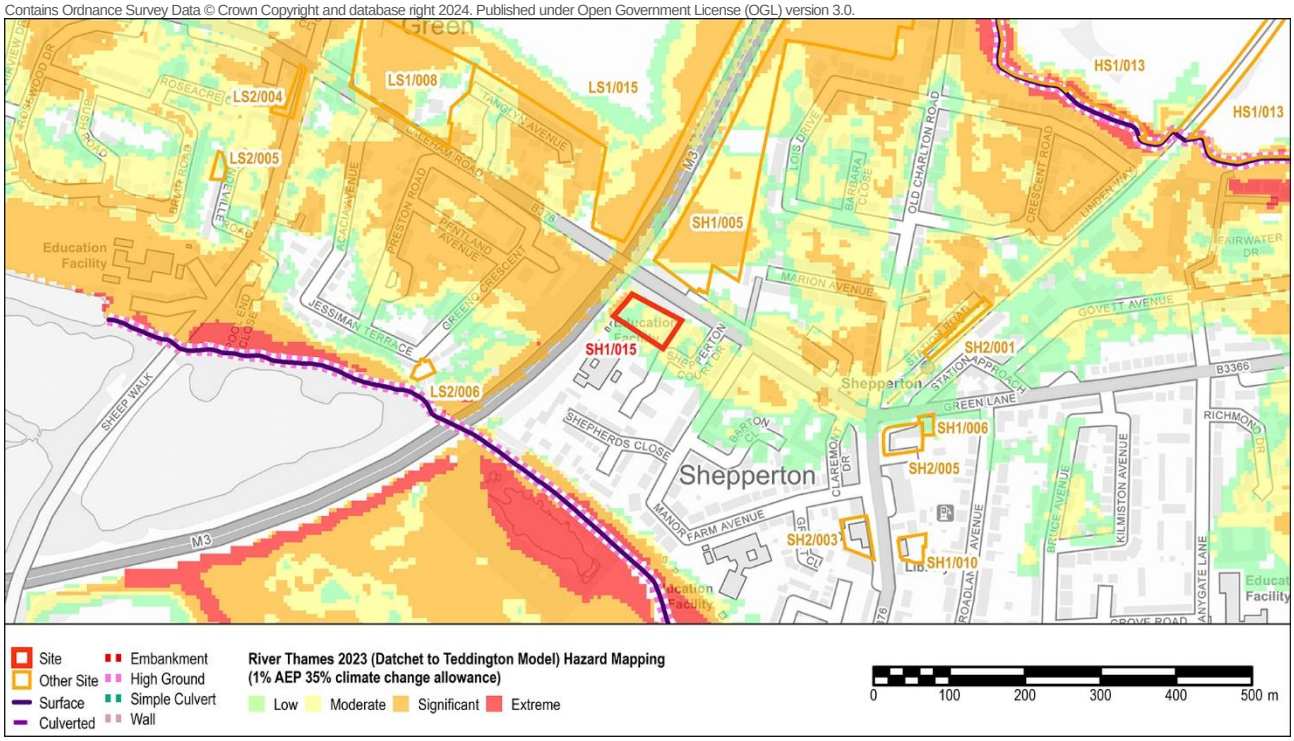
Flood Warning Area	River Thames at Shepperton and Lower Halliford, River Thames at Shepperton Green
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 4; Surrey County Council Wetspots 3
Sewer flooding records within the post code area in which the site is located:	Internal 0; External 3

River Flooding

SH1/015: Shepperton Youth Centre, Laleham Road, TW17 8EJ



River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

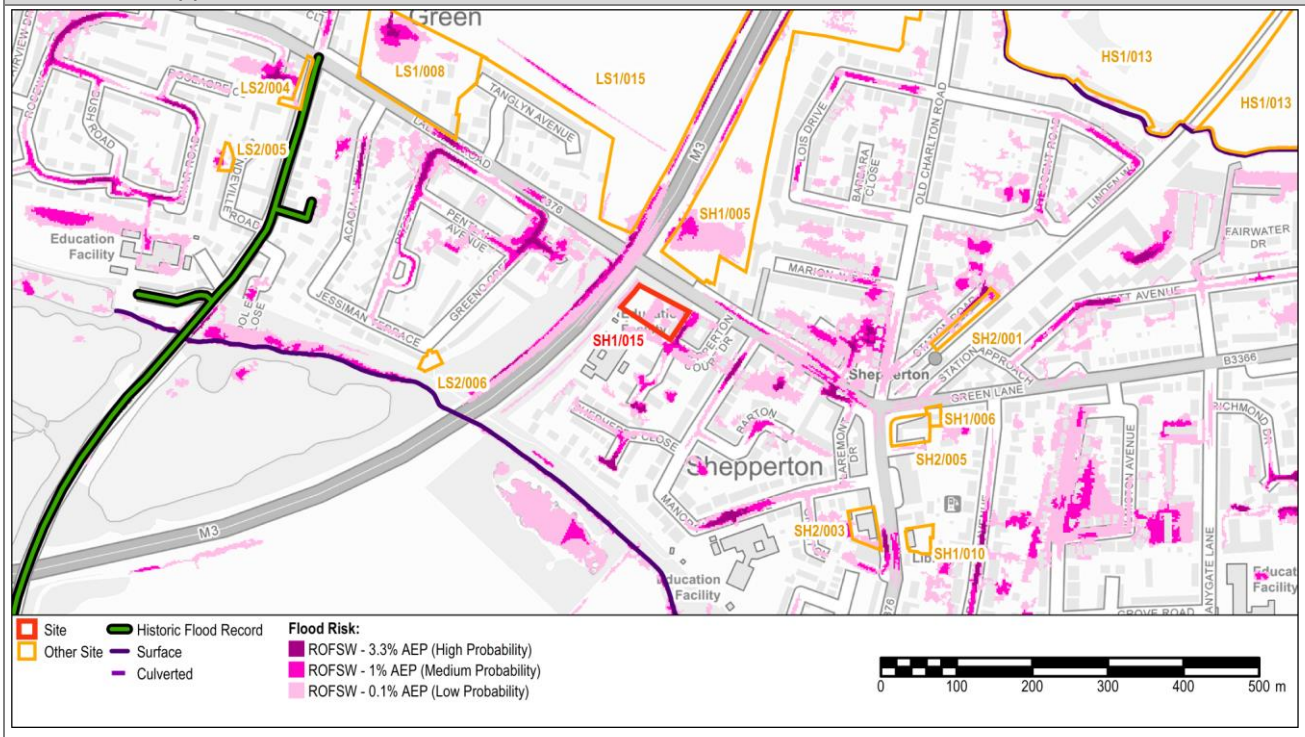


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Medium

SH1/015: Shepperton Youth Centre, Laleham Road, TW17 8EJ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Bracklesham Group And Barton Group (Undifferentiated) – Sand, Silt And Clay, Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel

Areas Susceptible to Groundwater Flooding	<25%
BGS Susceptibility to Groundwater Flooding	Limited potential for groundwater flooding to occur.
Aquifer Designation	Unproductive, Secondary A

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the Queen Mary Reservoir.

Flood Risk Summary

The River Thames is located approximately 1.2km south of the site and the River Ash is located 700m north of the site. The site is located in Flood Zone Medium probability of river flooding.
Modelling outputs for the River Thames show that during the 1% AEP flood event including a 35% increase in peak river flow as a result of climate change, flood depths reach 0-0.5m, with a corresponding hazard rating of Moderate (Danger for Some).
The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond on the site and in the local area.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be limited potential for groundwater flooding to occur in this area.

Access/Egress Route Summary

Laleham Road on northern boundary of site and heading east 110m not at risk of flooding, 200m Moderate hazard, 125m Low hazard, 440m not at risk of flooding, 300m Low hazard, 40m Moderate hazard, 100m not at risk of flooding; north onto A244 80m not at risk of flooding, 90m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 2 in accordance with Table 2 of the PPG and the Exception Test is not required. Given the level of flood risk surrounding the site, at the planning application stage, a site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

The site is located in the Colne Management Catchment, however the dominant flood source in this location is the River Thames, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant, 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is either dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the

SH1/015: Shepperton Youth Centre, Laleham Road, TW17 8EJ

River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

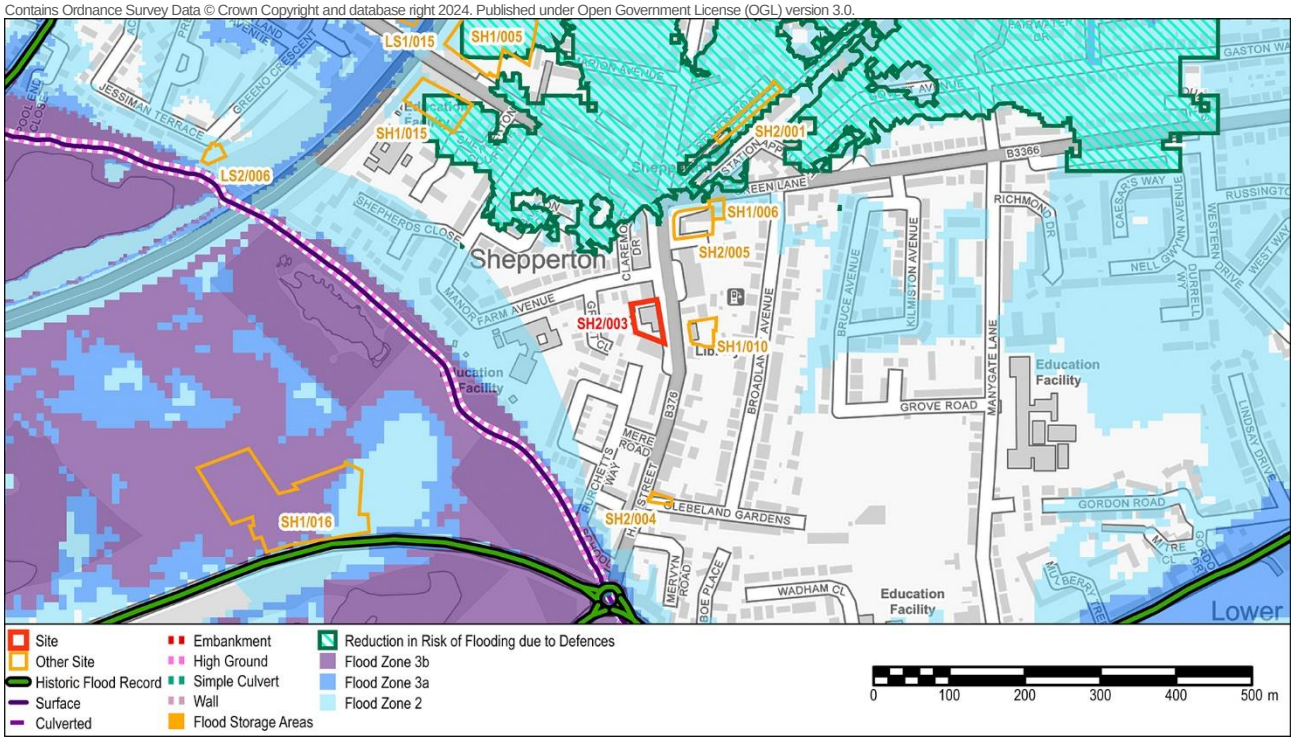
There is built development on the existing site. In order to ensure that future development does not increase the risk of flooding, the built footprint of new development of the site should not exceed that of the existing building and where possible should be reduced.

Other requirements include:

- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within the Flood Warning Area for the Thames and Ash and Emergency Plans would need to be developed for occupants of the site to set out the response in the event of flooding.
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

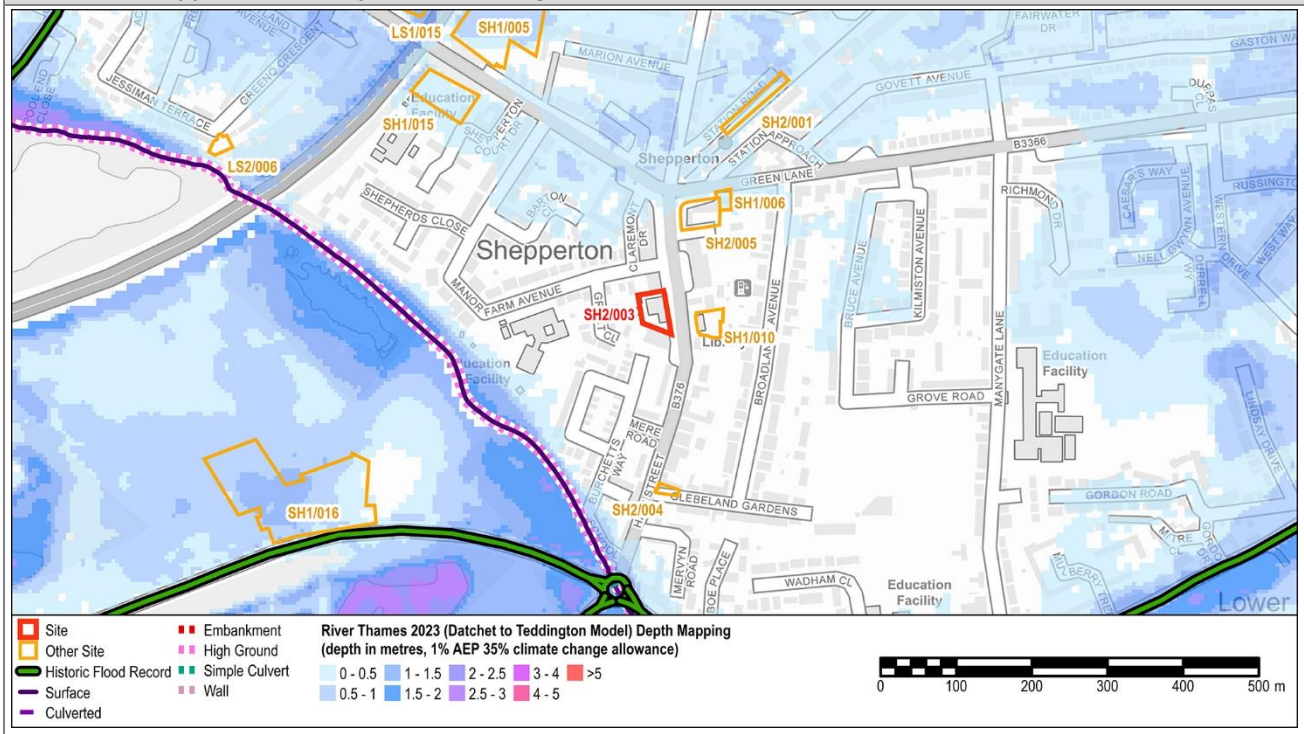
SH2/003 (Shepperton Delivery Office, High Street)

SH2/003: Shepperton Delivery Office, 47, High Street, TW17 9AA				
Site ID:	SH2/003	**Area (ha):**		0.17
Proposed Use: Residential (C3): 10 units (approx.) Ground floor Retail (Class E): 400sqm (approx.)		**Vulnerability Classification:** More Vulnerable Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 100%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

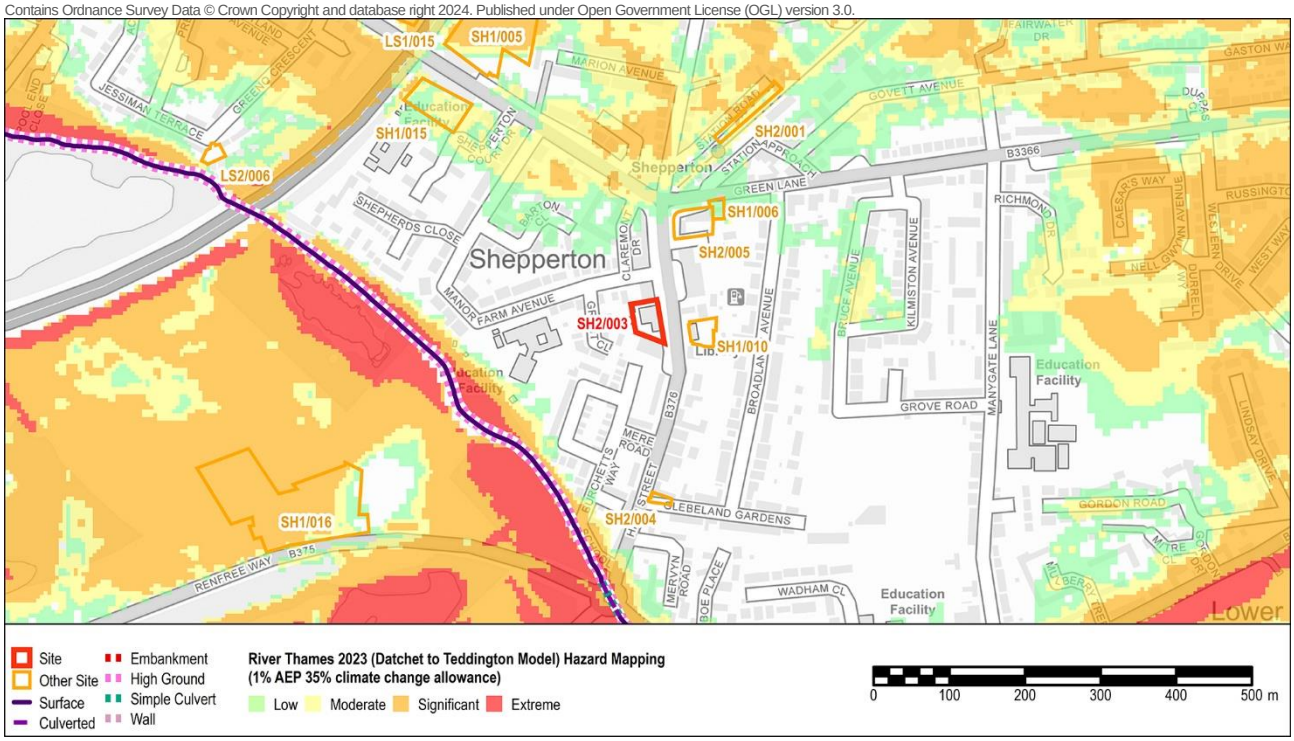


Flood Zones and Flood Records	
Flood Warning Area	None for the site, however surrounding area is subject to Flood Warning Area for River Thames at Shepperton and Lower Halliford.
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 2; External property flooding 0; Section 19 Flood Investigation incident 12; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 4
River Flooding	

SH2/003: Shepperton Delivery Office, 47, High Street, TW17 9AA



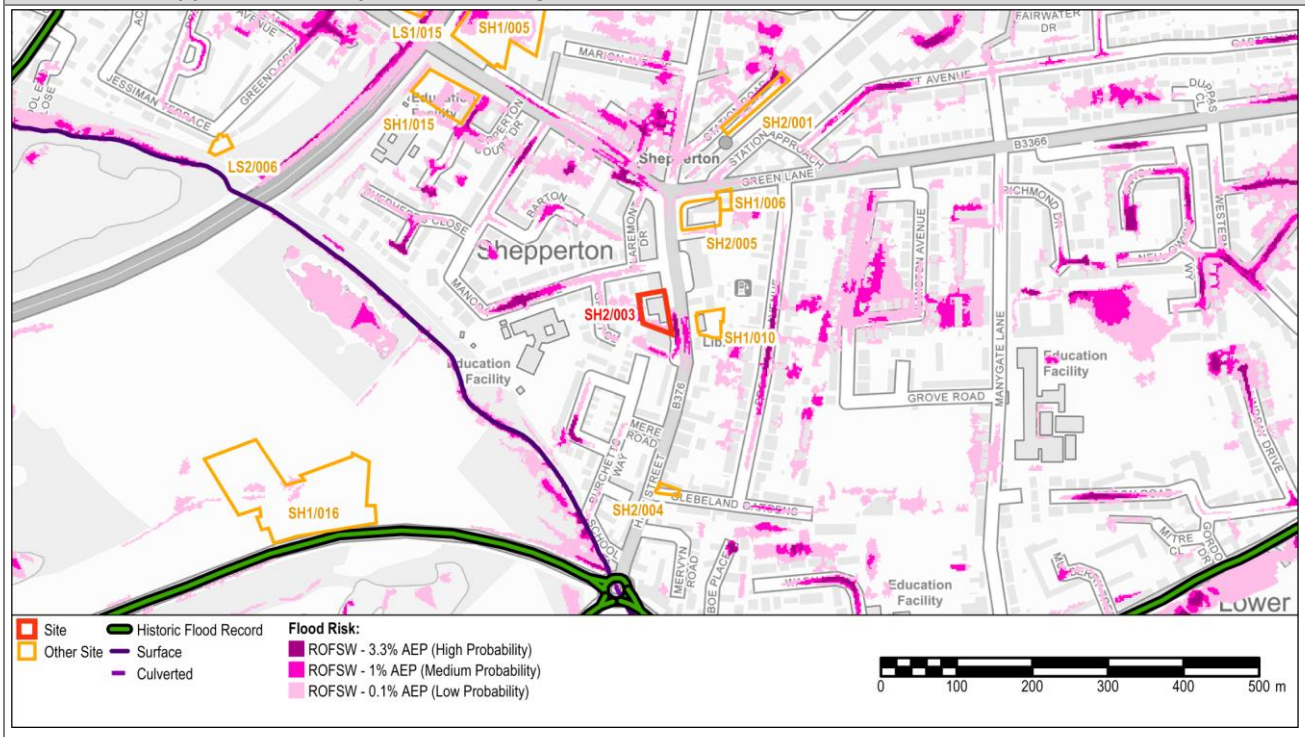
River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

SH2/003: Shepperton Delivery Office, 47, High Street, TW17 9AA



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	25% to 50%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that the local area could be at risk of flooding in the event of a breach of one of these reservoirs. The site itself is shown to be at risk when there is also flooding from rivers.

Flood Risk Summary

The site itself is shown to be in Flood Zone 1, low probability of flooding from rivers. However, the site is on a dry island within the wider Thames floodplain. During the 1% AEP flood event including 35% climate change, the site and immediate surroundings are not at risk of flooding, however the routes away from the site to areas outside the floodplain are shown to flood, including the B376 Green Lane (north of the site) and Renfree Way / B375 Russell Road (south of the site).
The Risk of Flooding from Surface Water mapping shows that the edge of the site and the wider area is susceptible to surface water flooding. The site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates there may be potential for groundwater flooding of property situated below ground level.

Access/Egress Route Summary

North along the High Street 150m not at risk of flooding; east along Green Lane 150m Low hazard, 440m not at risk of flooding, 300m Low hazard, 40m Moderate hazard, 100m not at risk of flooding; north onto A244 80m not at risk of flooding, 90m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 1 in accordance with Table 2 of the PPG and the Exception Test is not required. Given the level of flood risk surrounding the site, at the planning application stage, a site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

SH2/003: Shepperton Delivery Office, 47, High Street, TW17 9AA

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.

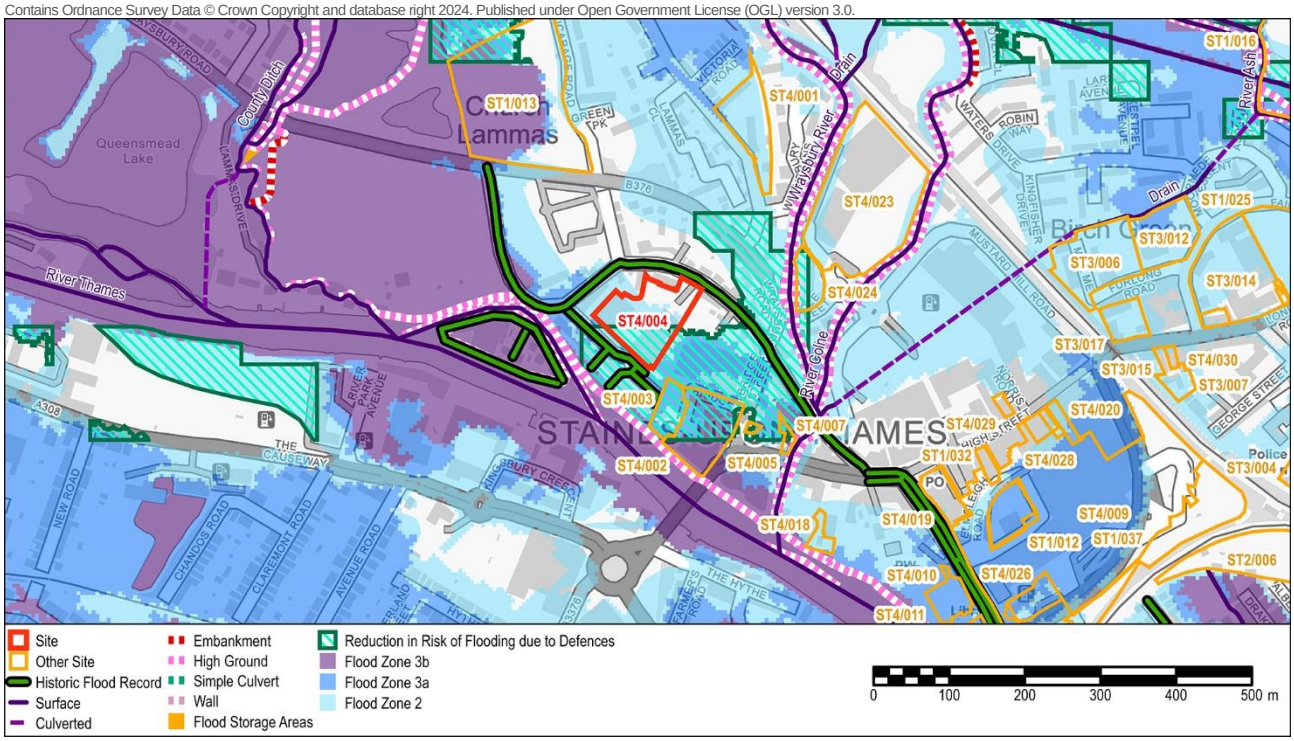
Development proposals for the site should seek to implement flood resilience measures.

A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.

Site proposals need to consider emergency planning requirements relating to residual risk from reservoirs.

ST4/004 (96-104 Church Street, Staines)

ST4/004: 96-104, Church Street, TW18 4DQ				
Site ID:	ST4/004	**Area (ha):**		0.88
Proposed Use: Residential (C3): 100 units (approx.)		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 29%	**Flood Zone 2 (0.1% AEP):** 71%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 32%

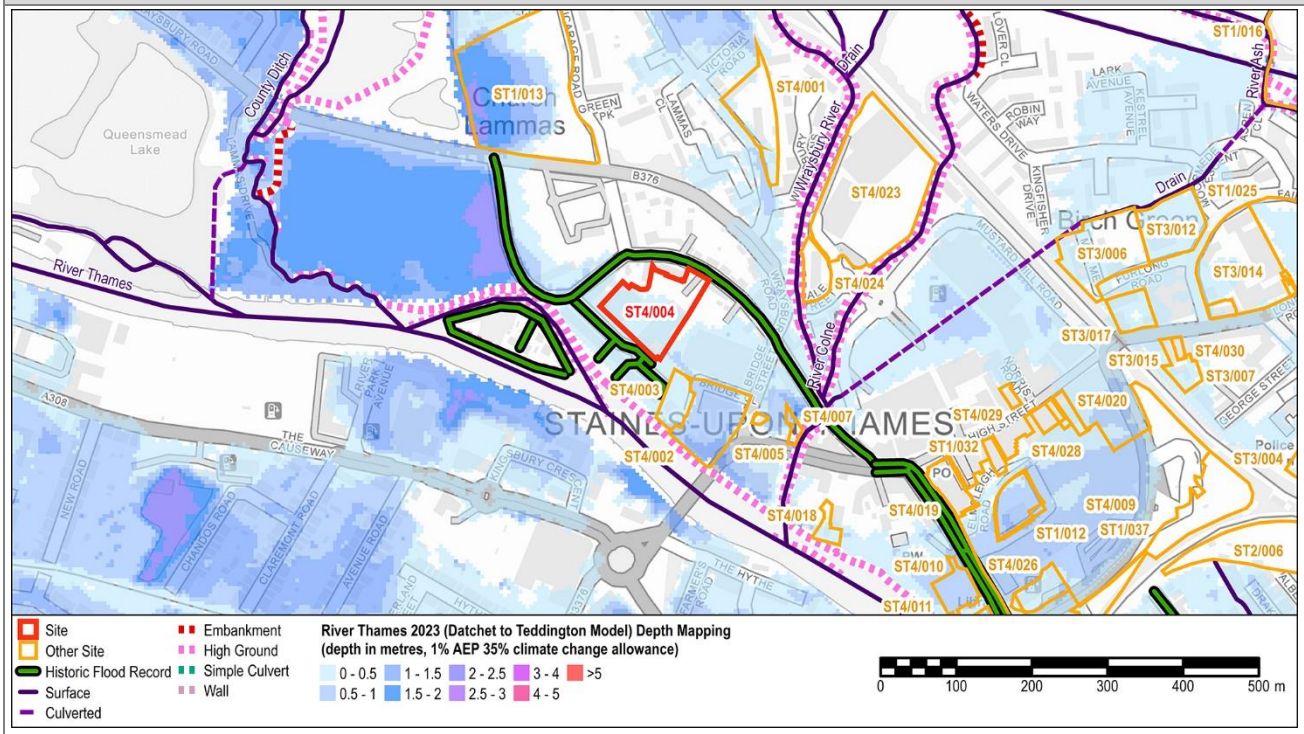


Flood Zones and Flood Records

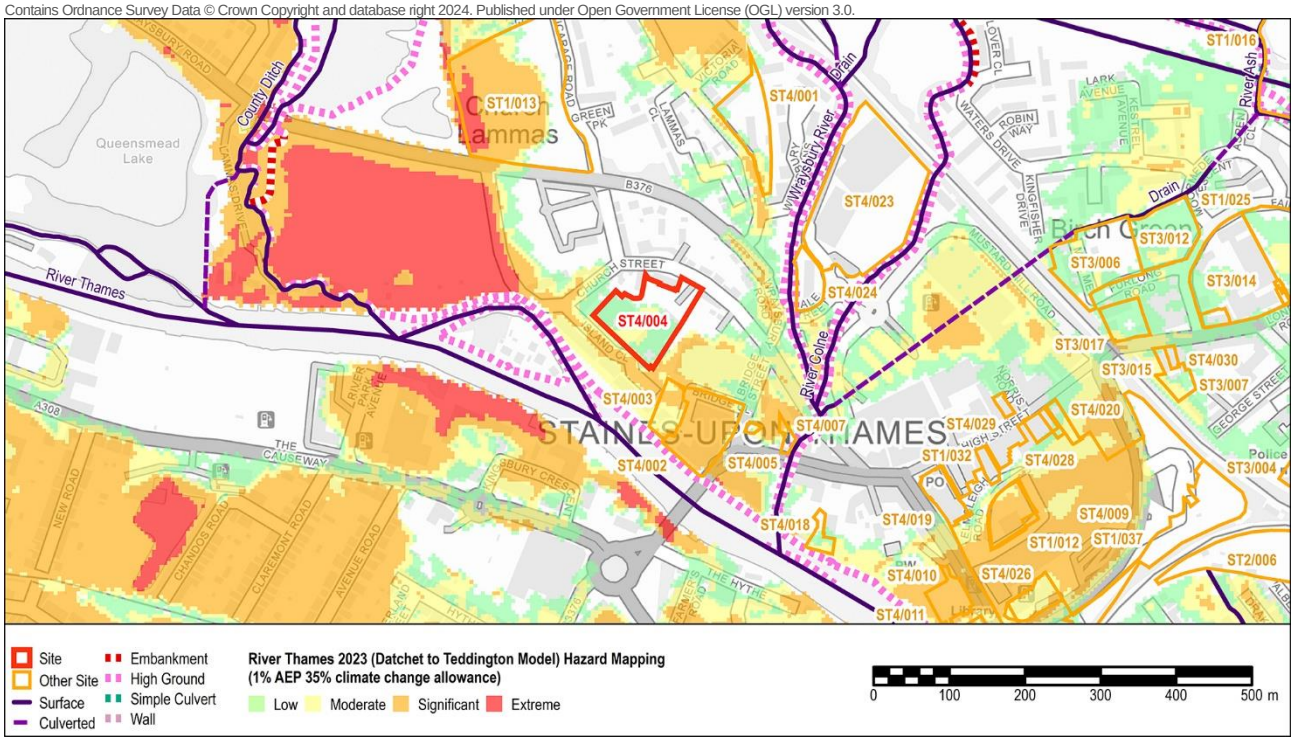
Flood Warning Area	River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 14; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST4/004: 96-104, Church Street, TW18 4DQ

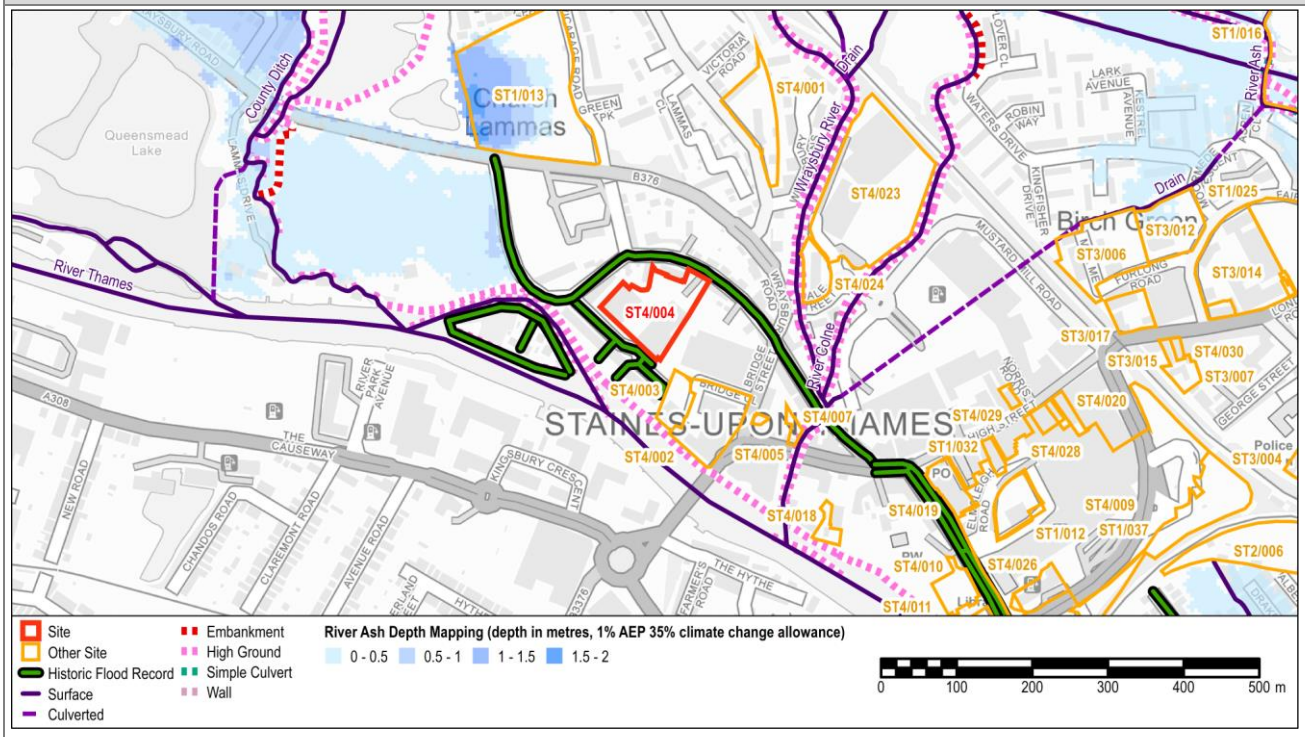


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

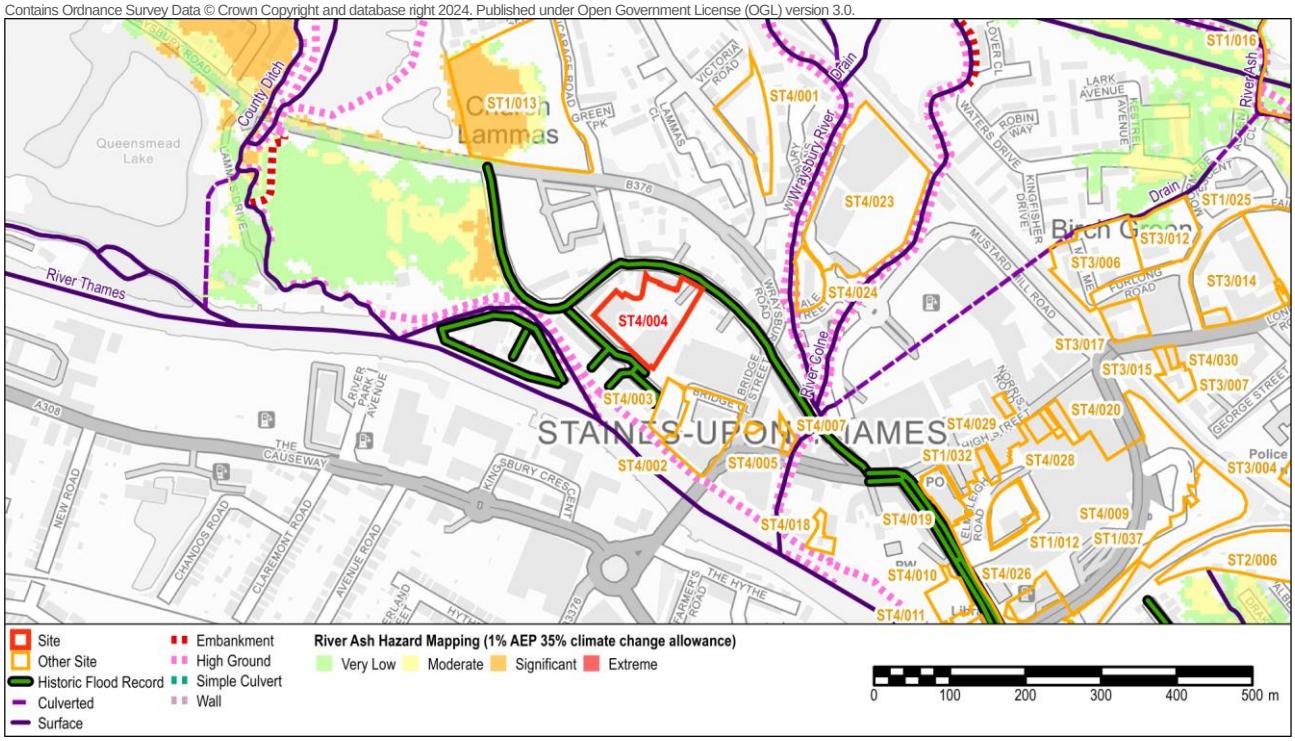


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/004: 96-104, Church Street, TW18 4DQ



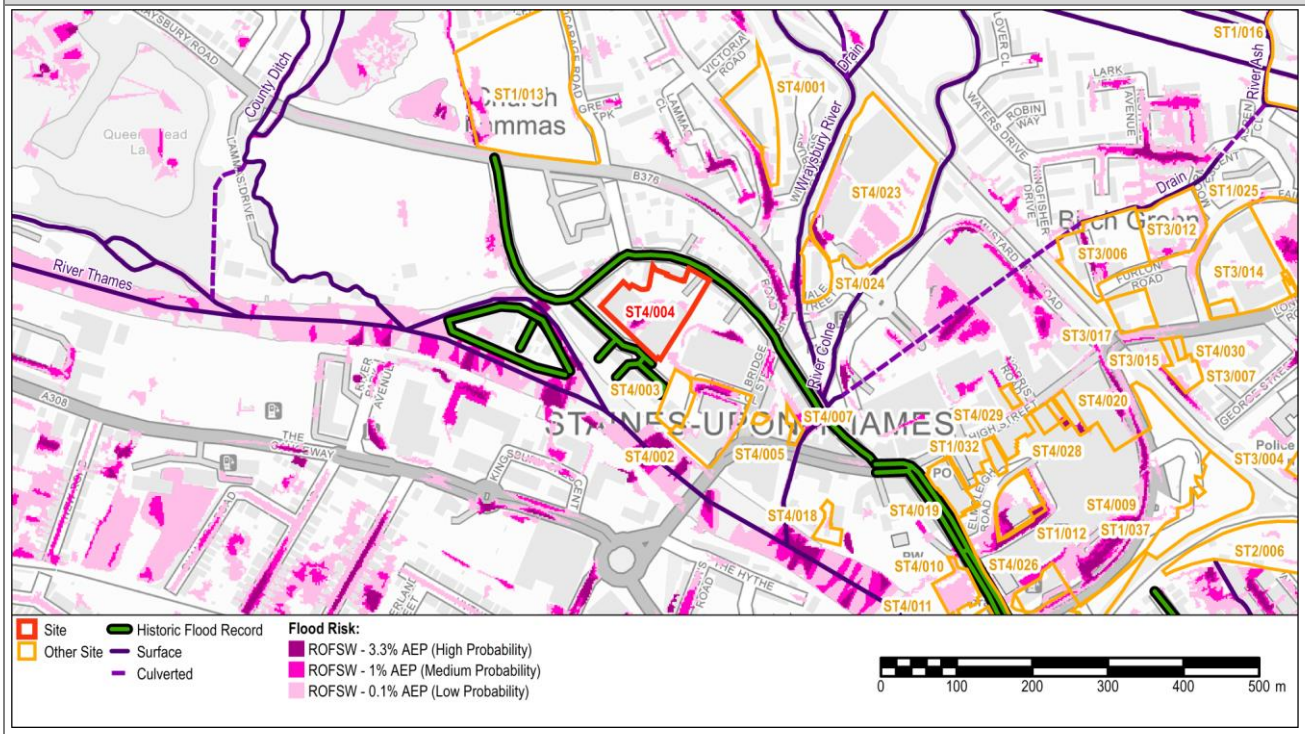
River Ash Maximum Flood Depth 1% AEP plus 35% climate change



River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	High

ST4/004: 96-104, Church Street, TW18 4DQ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the Wraysbury Reservoir or King George VI Reservoir.

Flood Risk Summary

The River Thames flows south east to the south west of the site and the Wraysbury River and River Colne channels are located ~200-300m to the east of the site. The majority of the site (71%) is defined as Flood Zone 2 Medium probability of flooding from rivers, and 29% is defined as Flood Zone 1.
Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicate flood depths on the southern half of the site of 0-0.5m The hazard rating is Very Low to Moderate (Danger for Some).
The site is not shown to be at risk of flooding from the River Colne or the River Ash during a 1% AEP event plus 35% climate change.
The Risk of Flooding from Surface Water Map shows potential for surface water to pond on the site. The surrounding area is defined as a wetspot by Surrey County Council.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

East along Church Street 110m not at risk of flooding, 50m Low hazard, 85m Moderate hazard, 60m Low hazard, 50m not at risk. East onto A308 and then High Street 280m not at risk of flooding, 45m Low hazard, 40m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable development is permitted in Flood Zones 1 and 2, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change

ST4/004: 96-104, Church Street, TW18 4DQ

allowance. Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 6-10 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

There is built development on the existing site. In order to ensure that future development does not increase the risk of flooding, the built footprint of new development of the site should not exceed that of the existing building and where possible should be reduced.

Other requirements include:

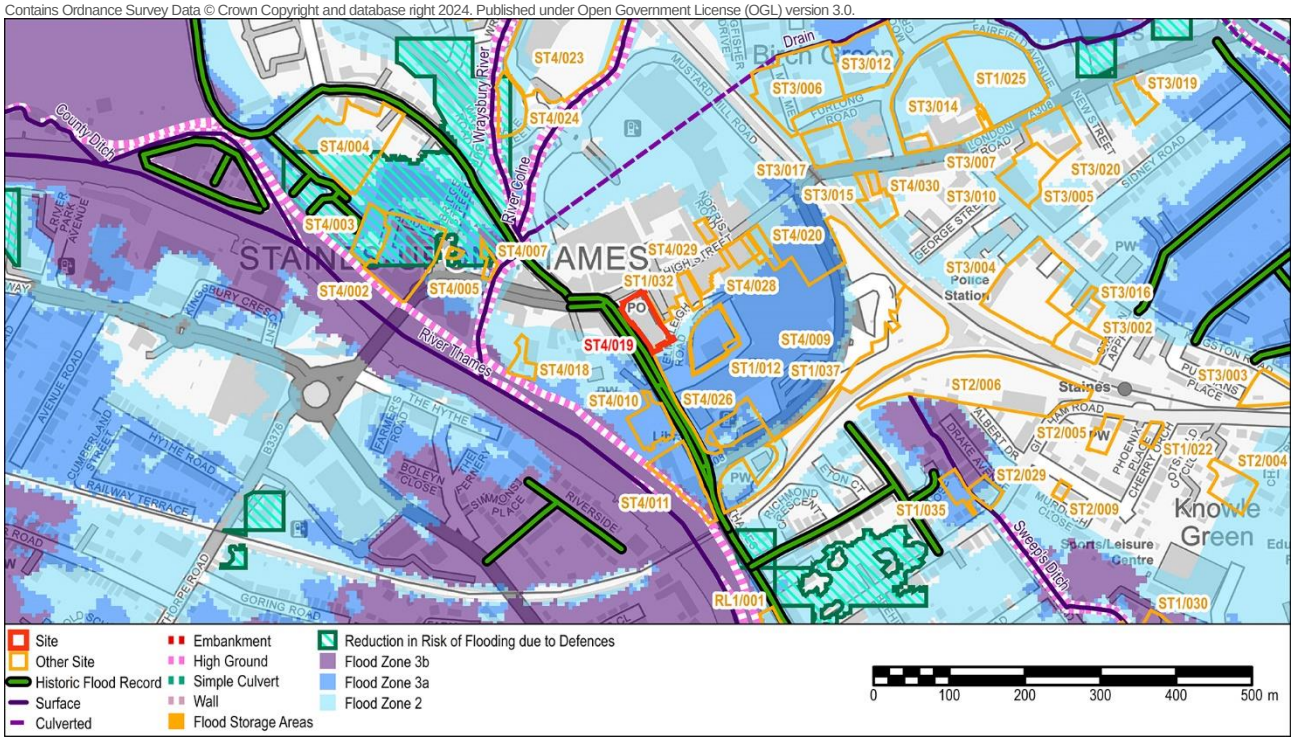
- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within the Flood Warning Area for the Thames and Ash and Emergency Plans would need to be developed for occupants of the site to set out the response in the event of flooding.
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST4/019 (Former Debenhams Site, High Street)

ST4/019: Debenhams site, 35-45, High Street, TW18 4QU			
Site ID:	ST4/019	**Area (ha):**	0.26
Proposed Use:	Residential (C3): 150 units (approx.) Commercial (Class E): 500 sqm (approx.)	**Vulnerability Classification:**	More Vulnerable Less Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 95%	Flood Zone 2 (0.1% AEP): 5%	Flood Zone 3 (1% AEP): 0%	Flood Zone 3b: 0%	Area with reduced risk of flooding due to defences: 0%

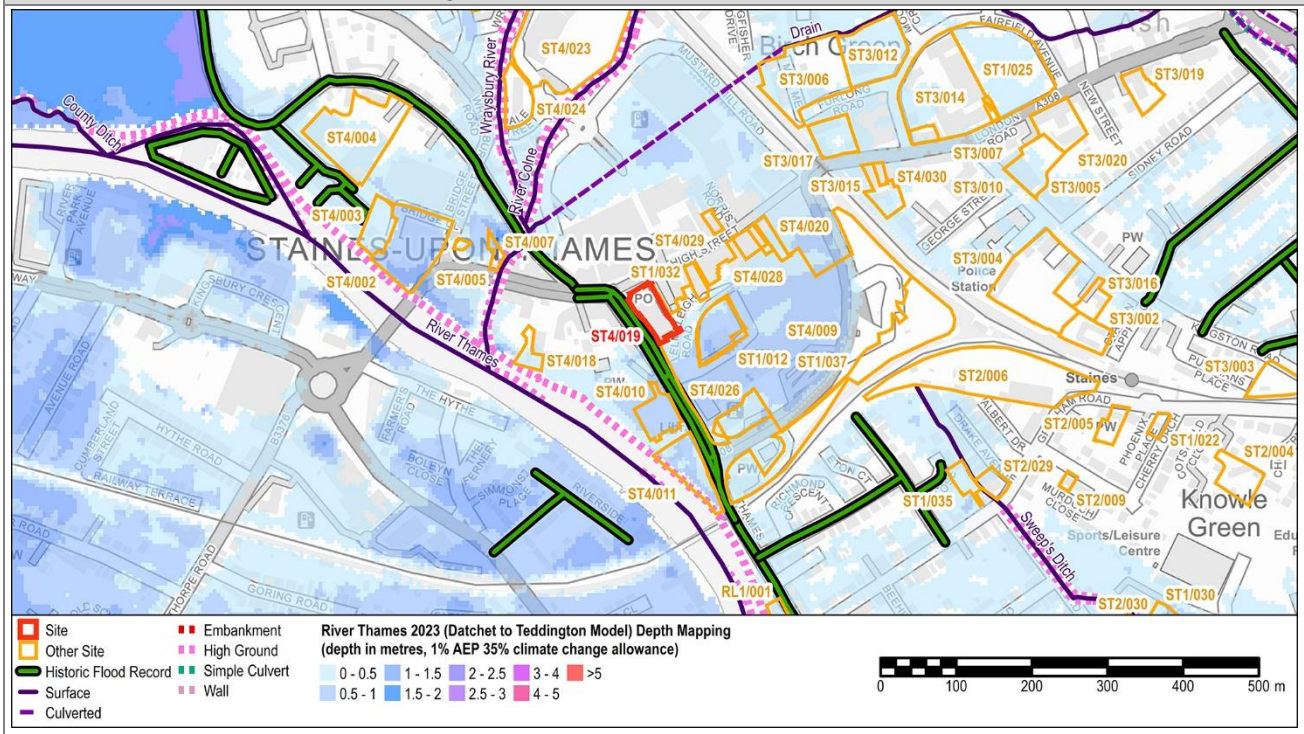


Flood Zones and Flood Records

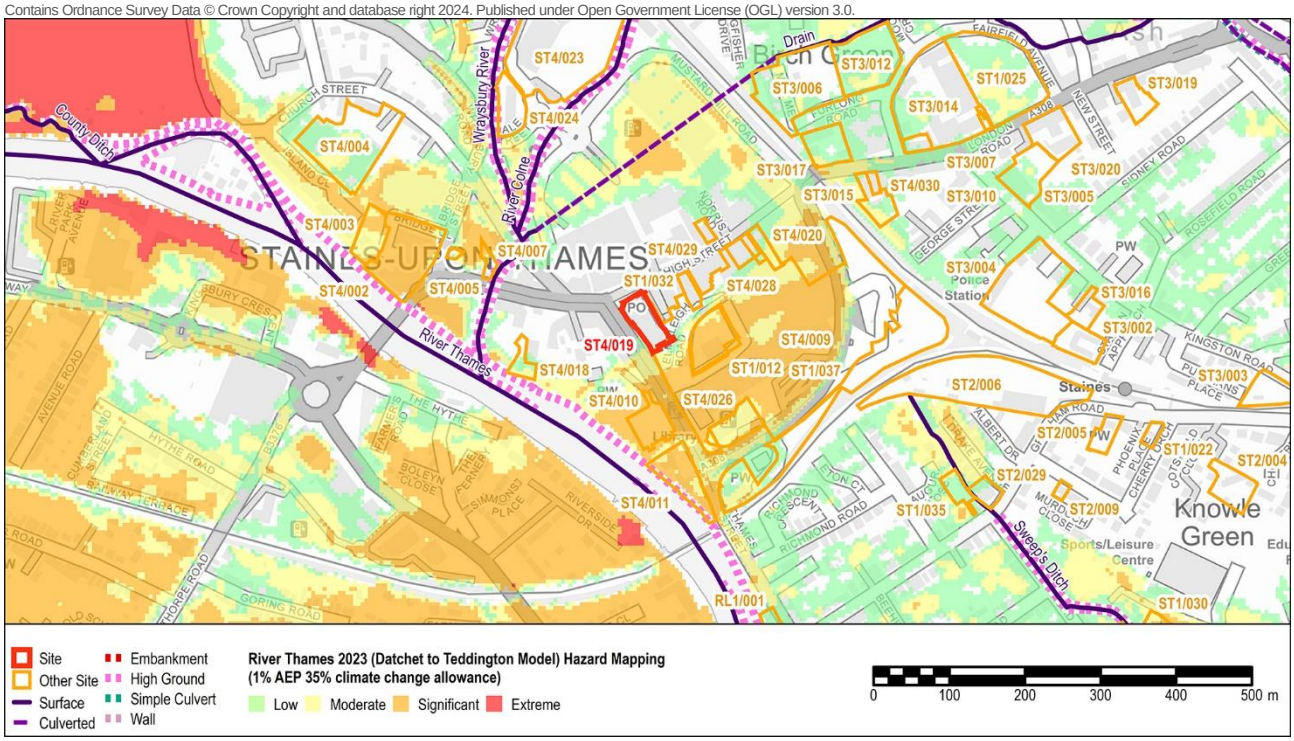
Flood Warning Area	River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 20; External property flooding 0; Section 19 Flood Investigation incident 28; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST4/019: Debenhams site, 35-45, High Street, TW18 4QU



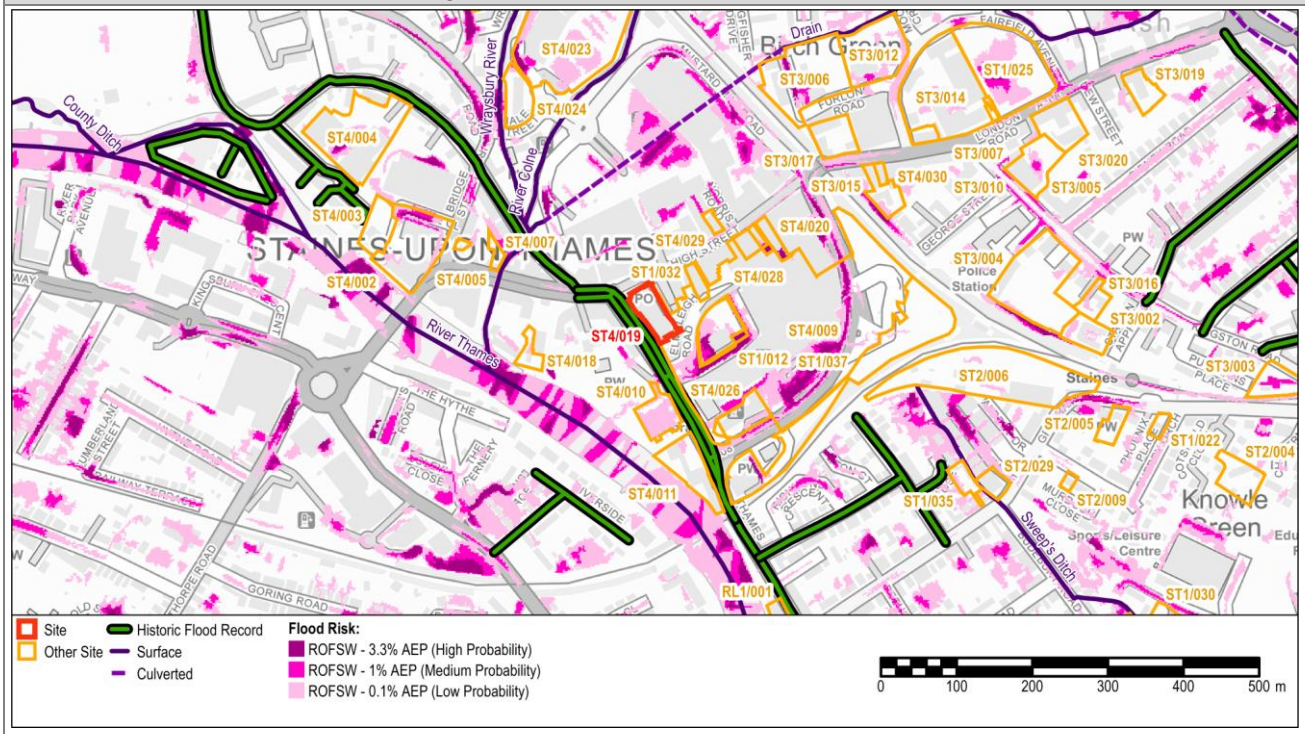
River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change



River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low

ST4/019: Debenhams site, 35-45, High Street, TW18 4QU



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames flows south east approximately 170m to the south west of the site. The majority of the site (95%) is defined as Flood Zone 1, Low probability of flooding from rivers, and 5% is defined as Flood Zone 2 Medium probability.
The site is located in a dry island within the modelled floodplain. Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates that the site is not at risk of flooding, but the shopping area to the south (Elmsleigh Gardens) is at risk with hazard ratings of Significant (Danger for Most), and access to the site from the High Street and London Road is also at risk.
The Risk of Flooding from Surface Water Map identifies the potential for surface water to pond along the nearby roadways. There are records of flooding along the A308 adjacent to the site.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

East along High Street 175m not at risk of flooding, 45m Low hazard, 40m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

More Vulnerable development is permitted in Flood Zones 1 and 2, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the route along the A308 are defined as Significant hazard ('Danger for Most'). Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 6-10 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be

ST4/019: Debenhams site, 35-45, High Street, TW18 4QU

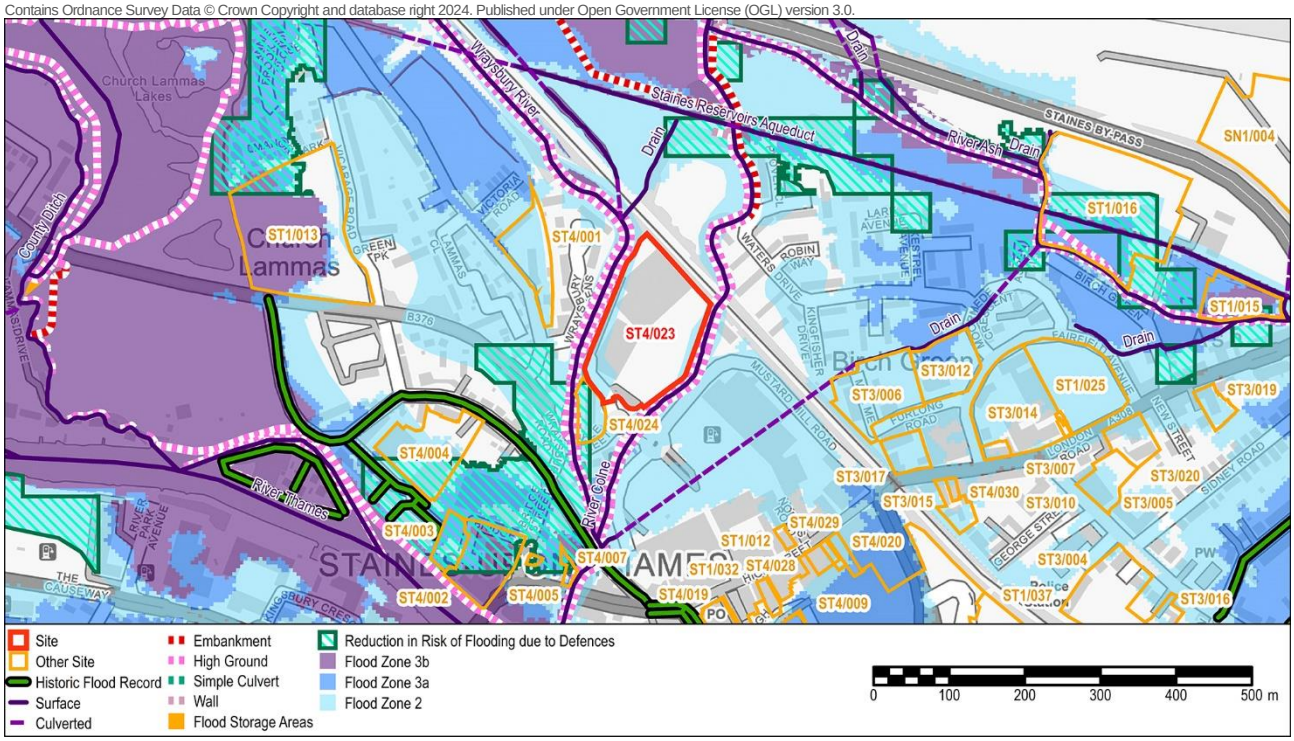
provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

Other requirements for the site are:

- An Emergency Plan should be prepared for the site and places of safe refuge should also be identified outside the flood extent of the design event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST4/023 (Two Rivers Retail Park Terrace, Mustard Mill Road, Staines)

ST4/023: Two Rivers Retail Park Terrace, Mustard Mill Road, Staines				
Site ID:	ST4/023	**Area (ha):**		2.29
Proposed Use: Residential (C3): 750 units (approx.) Ground floor commercial/community use			**Vulnerability Classification:** More Vulnerable, Less Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 80%	**Flood Zone 2 (0.1% AEP):** 20%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

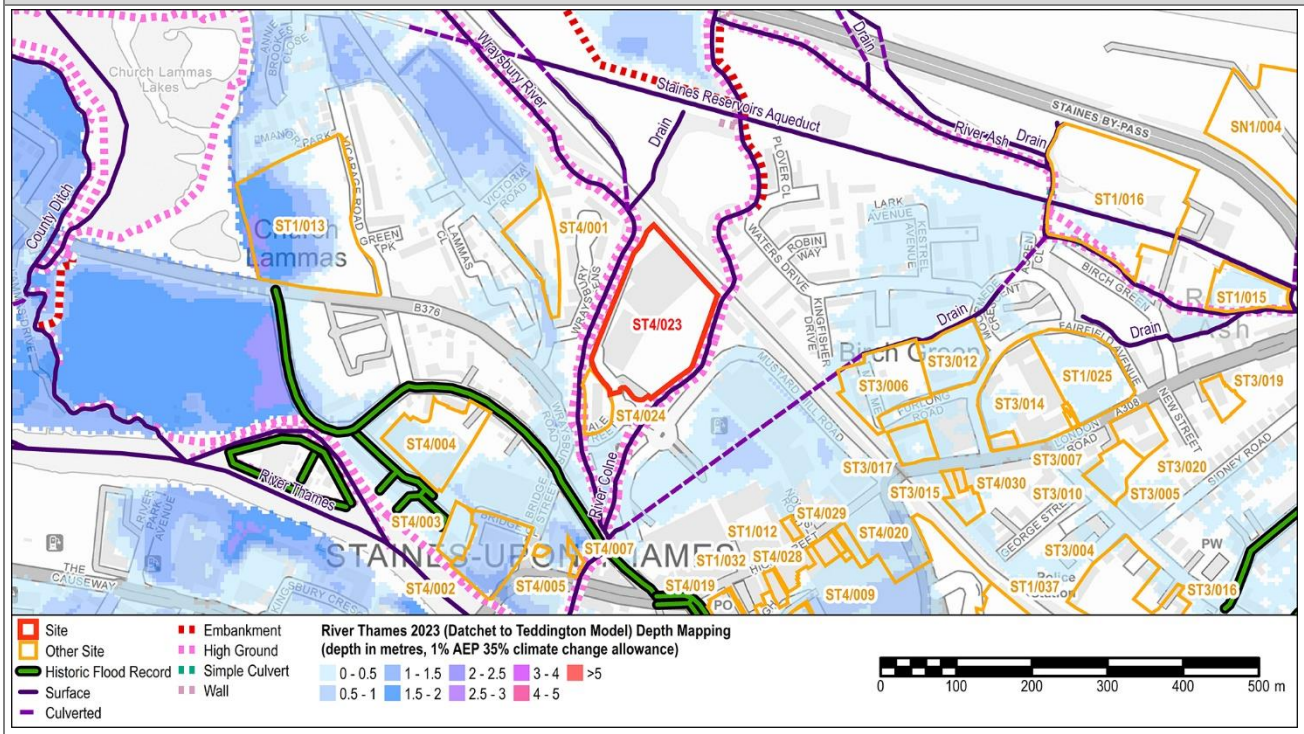


Flood Zones and Flood Records

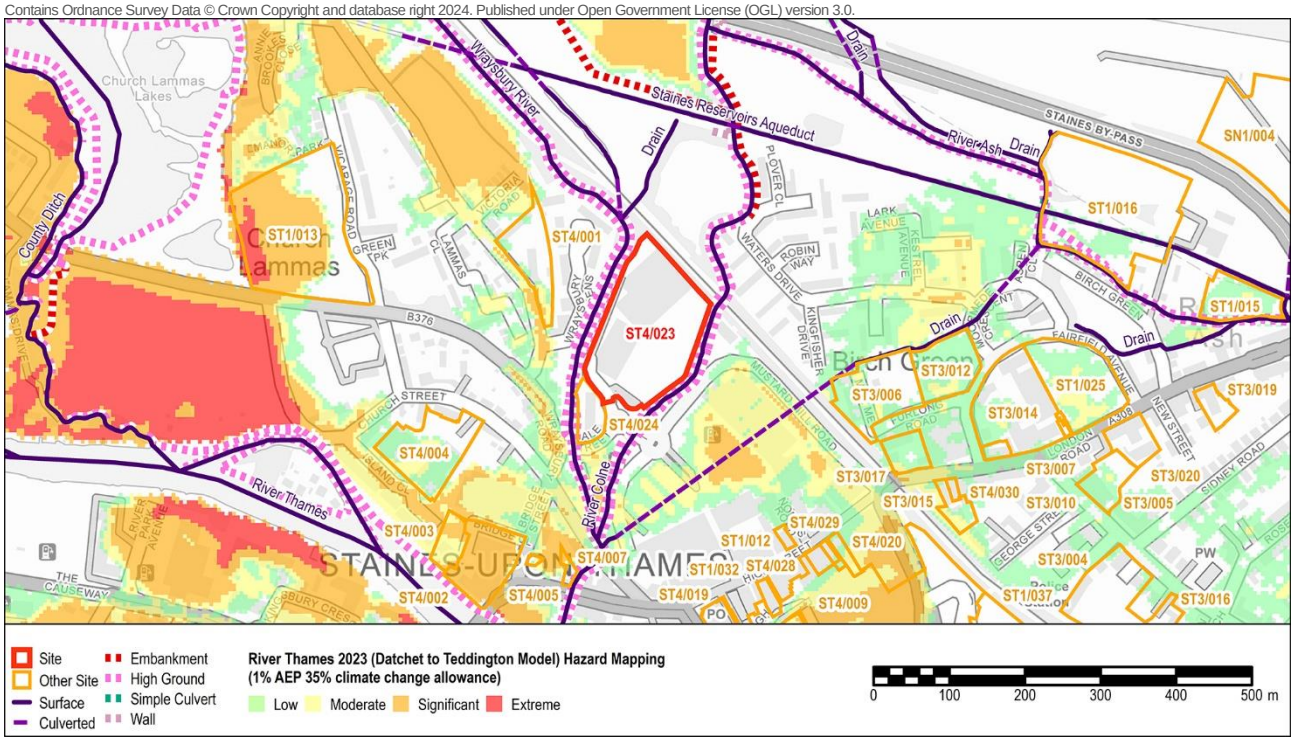
Flood Warning Area	Properties closest to the River Thames between Runnymede Pleasure Grounds, Staines and Penton Hook, River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947, EA06Winter13-14
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 12; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST4/023: Two Rivers Retail Park Terrace, Mustard Mill Road, Staines

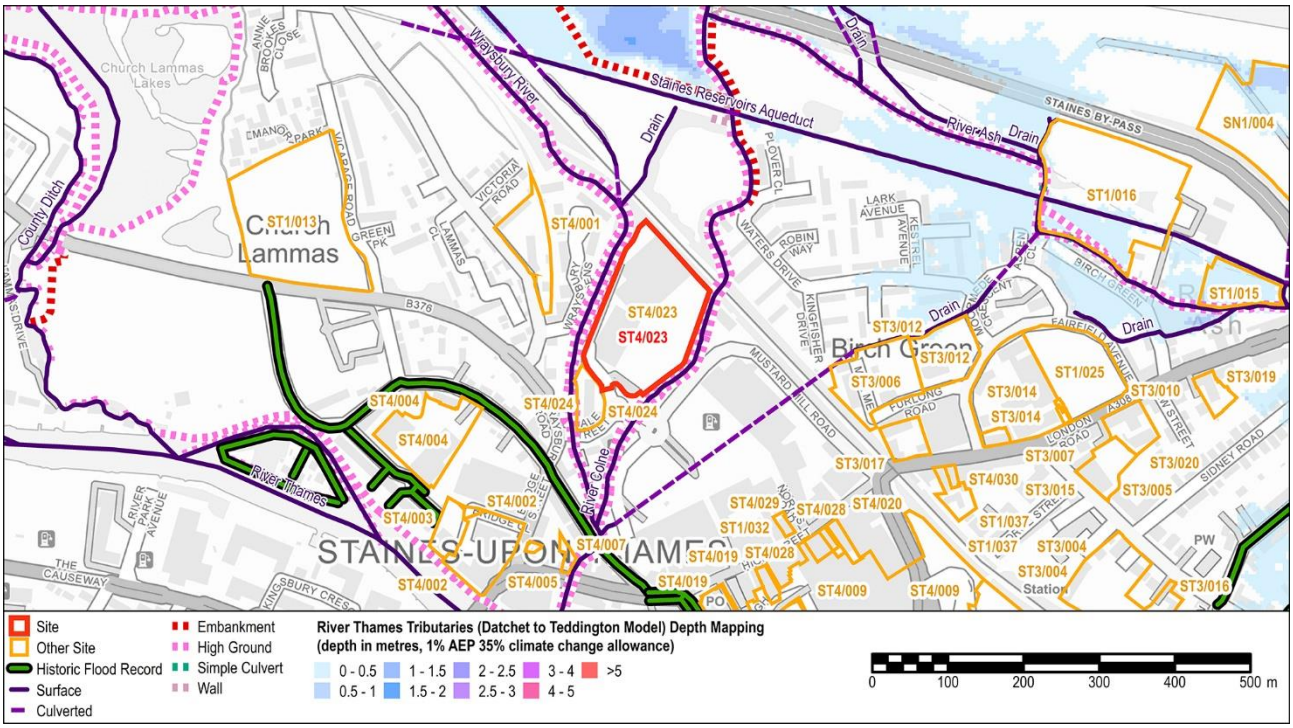


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

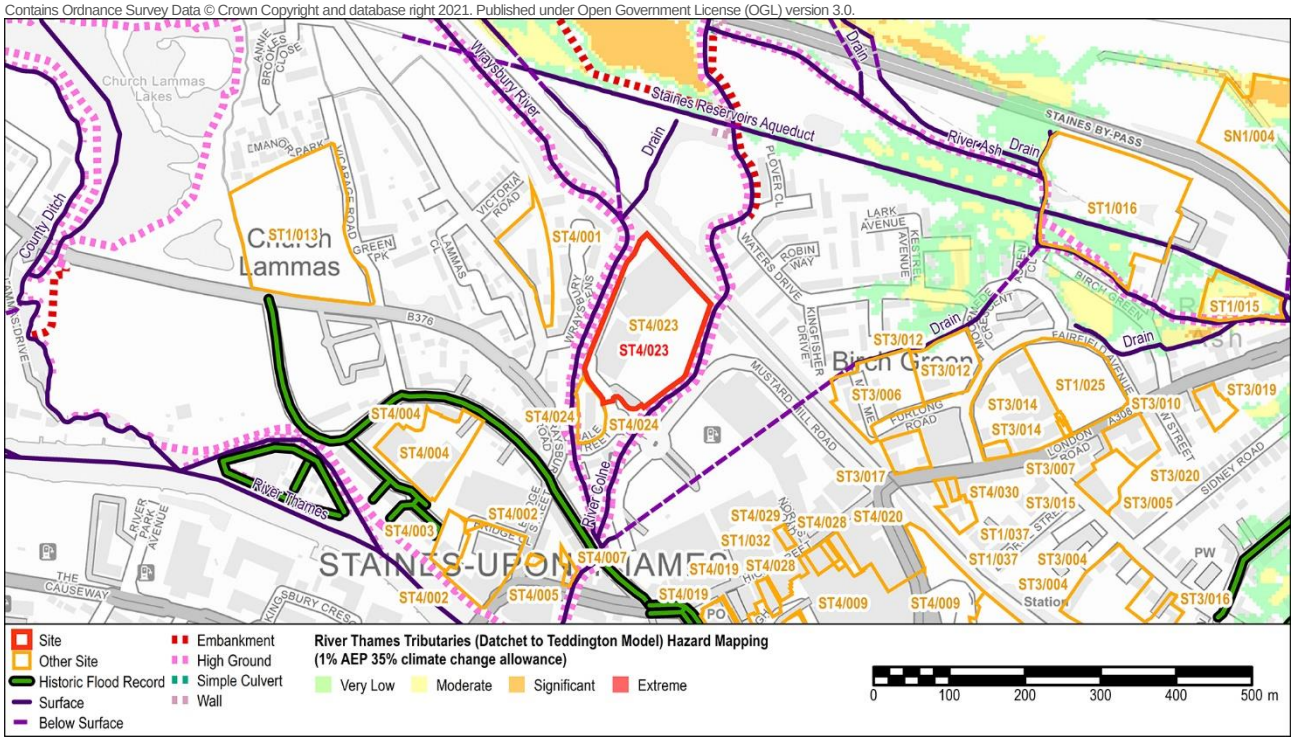


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/023: Two Rivers Retail Park Terrace, Mustard Mill Road, Staines

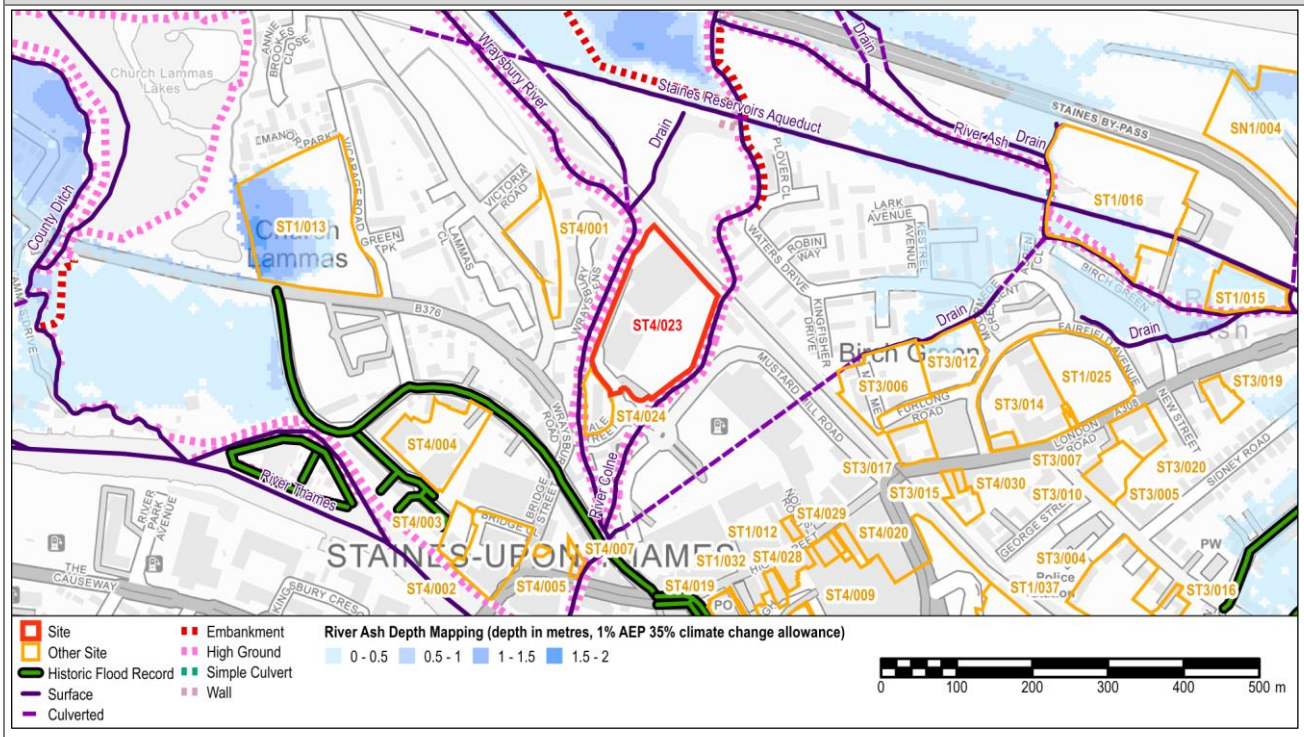


River Thames (Tributary Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

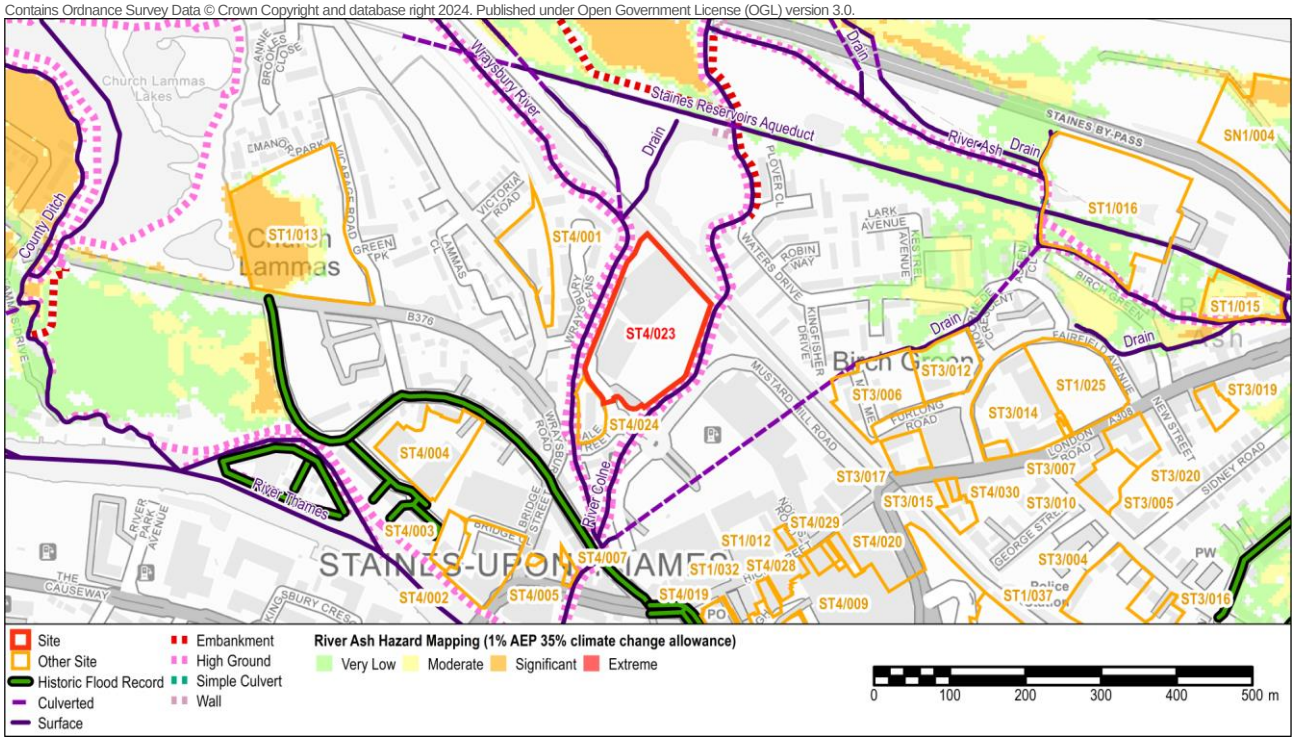


River Thames (Tributary Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/023: Two Rivers Retail Park Terrace, Mustard Mill Road, Staines

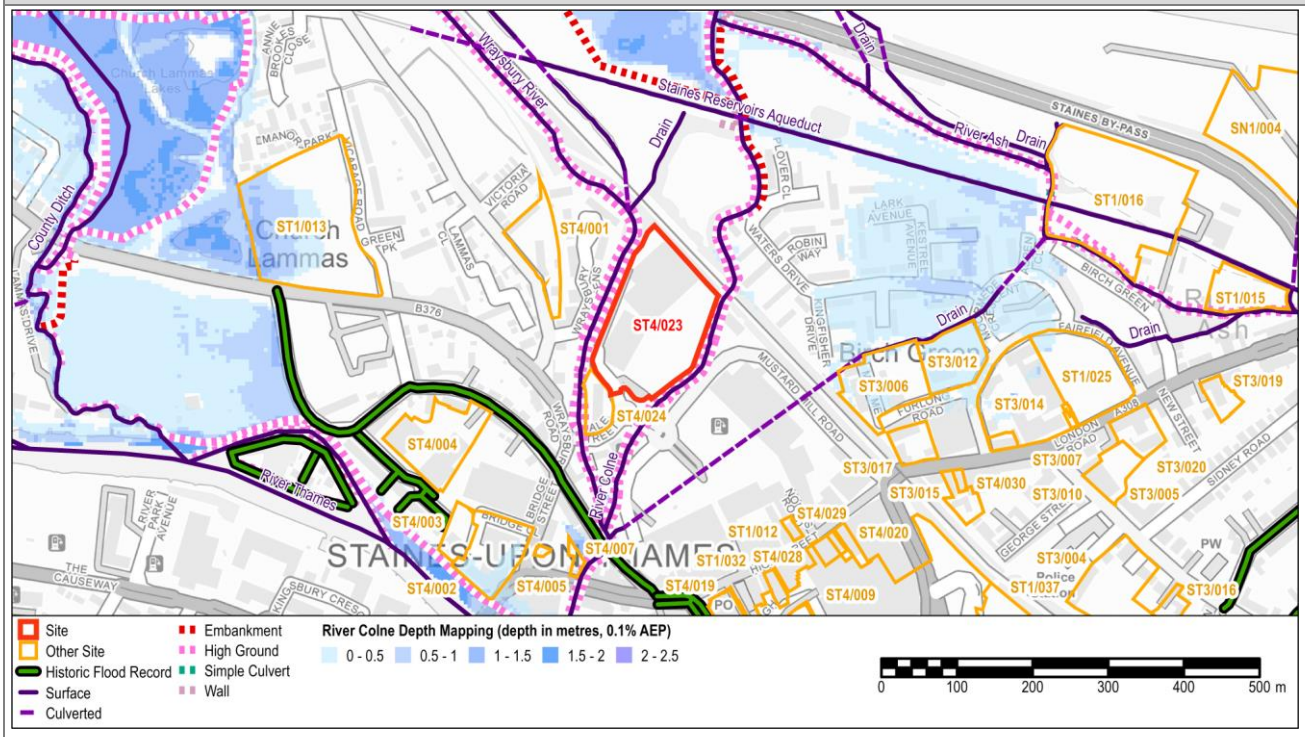


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



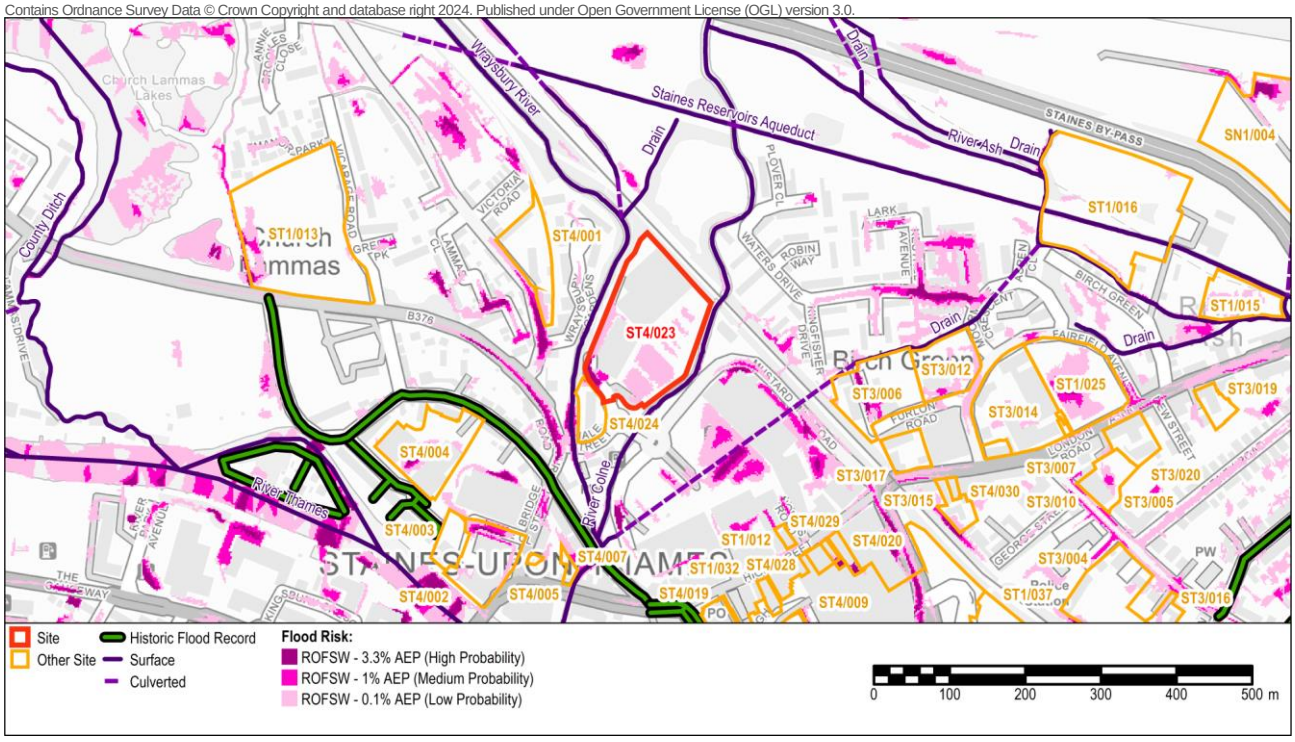
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/023: Two Rivers Retail Park Terrace, Mustard Mill Road, Staines



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group – Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

ST4/023: Two Rivers Retail Park Terrace, Mustard Mill Road, Staines

Other Sources

Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that the local area could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is located between the River Wraysbury on the west, and the River Colne on the east. These watercourses converge to the south of the site. The River Thames is located 500m to the south of the site. The majority of the site (80%) is within Flood Zone 1, low probability of flooding from rivers, and 20% is within Flood Zone 2, medium probability of flooding from rivers. Modelling of the River Thames (Thames dominated) shows that the site is not at risk of flooding during the 1% AEP flood event including 35% climate change allowance. However, access to the site and the surrounding area is shown to be at risk with hazard ratings Very Low – Significant. Modelling of the River Thames (Tributary dominated) shows that the site is not at risk of flooding during the 1% AEP flood event including 35% climate change allowance.

The Risk of Flooding from Surface Water mapping shows that the site is susceptible to surface water ponding. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

Route along Mustard Mill Road, 240m not at risk, 40m Low hazard, 25m Moderate hazard, 70m Low hazard, 50m Moderate hazard, 35m Low hazard, 30m not at risk, 22m Low hazard, 15m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 2 in accordance with Table 2 of the PPG and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

(The site is located in the Colne Management Catchment, however the dominant flood source in this location is the River Thames, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant, 35% (central) and 47% (higher central)).

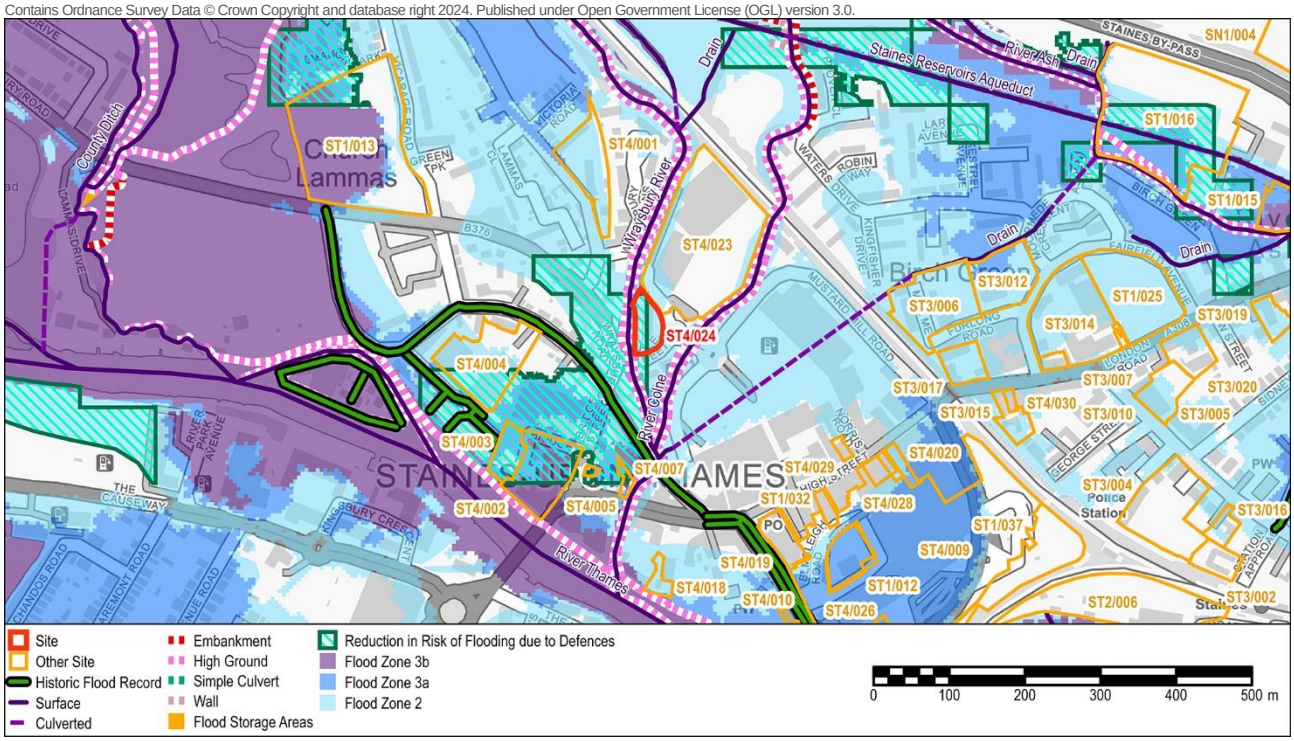
The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP including an allowance for climate change). The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP including an allowance climate change). The site will not be available for development until Years 6-10 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

Other requirements for the site are:

- An 8m buffer zone is required between built development and the Main river (measured from top of bank). A Flood Risk Activity Permit will be required for any works within 8m of a main river/culvert/flood defence (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).
- Finished floor levels should be set 300mm above the 1% AEP flood event including climate change.
- Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST4/024 (Frankie & Benny's/Travelodge, Two Rivers, Hale Street, Staines)

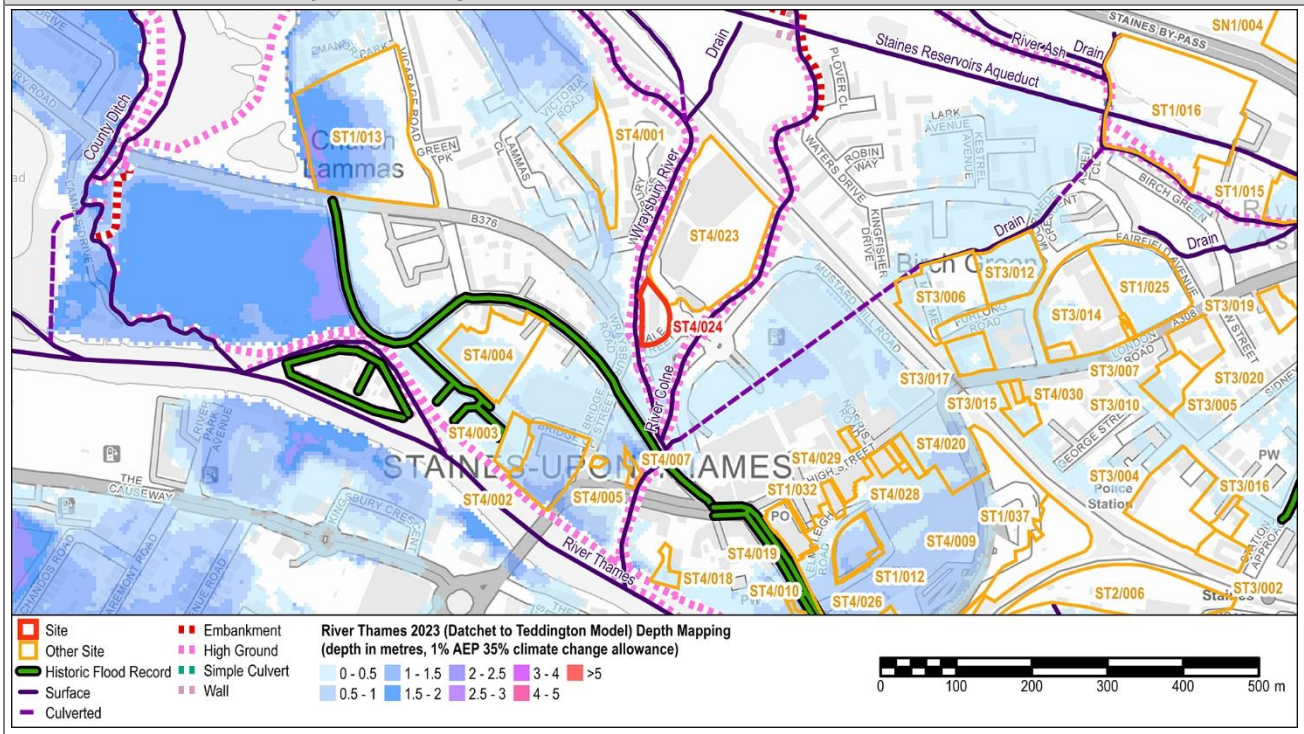
ST4/024: Frankie & Benny's/Travelodge, Two Rivers, Hale Street, Staines				
Site ID:	ST4/024	**Area (ha):**		0.24
Proposed Use: Residential (C3): 55 units (approx.)			**Vulnerability Classification:** More Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 2%	**Flood Zone 2 (0.1% AEP):** 98%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 52%



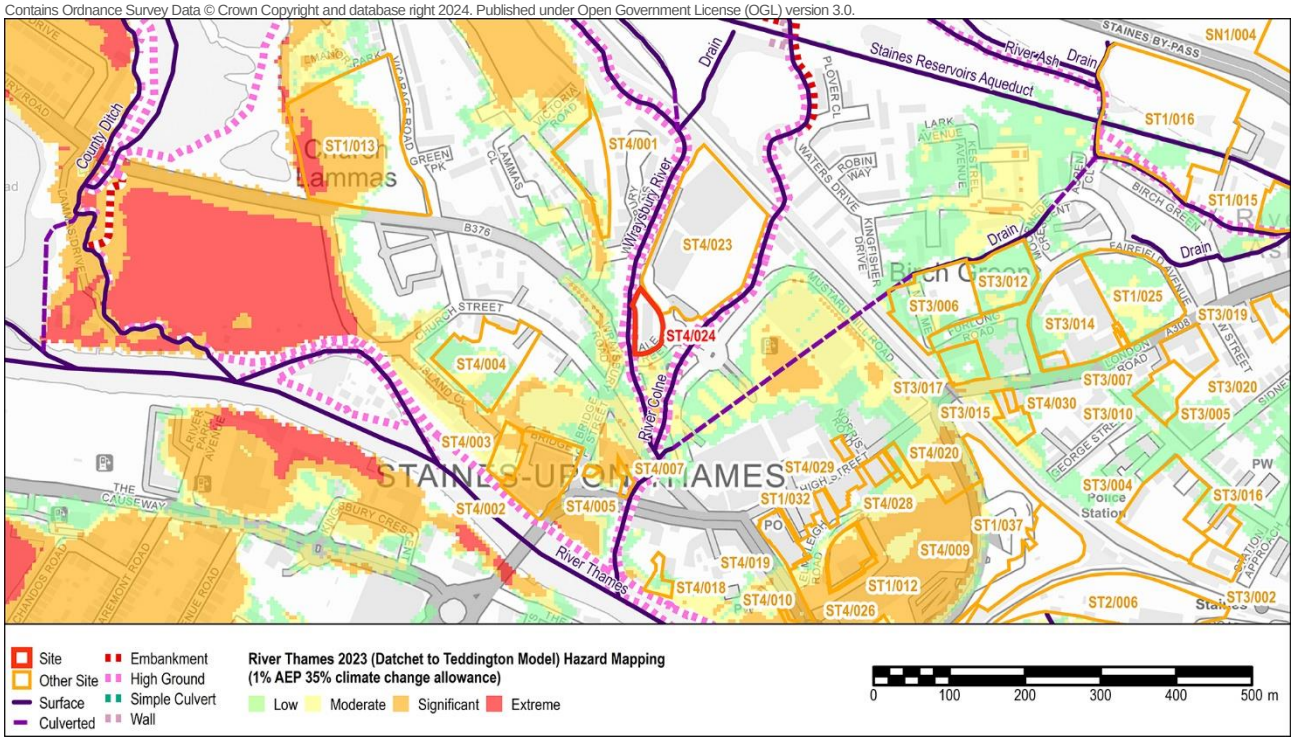
Flood Zones and Flood Records	
Flood Warning Area	River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947, EA06Winter13-14
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 14; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST4/024: Frankie & Benny's/Travelodge, Two Rivers, Hale Street, Staines

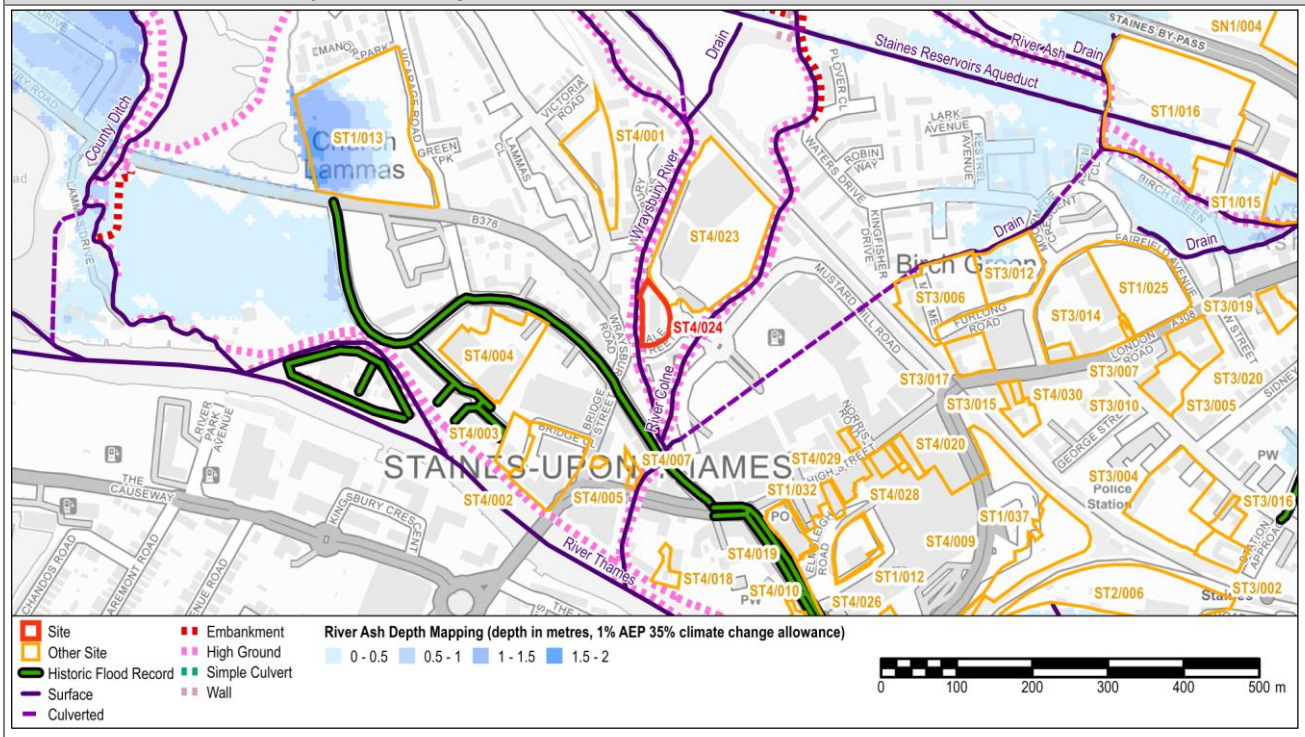


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

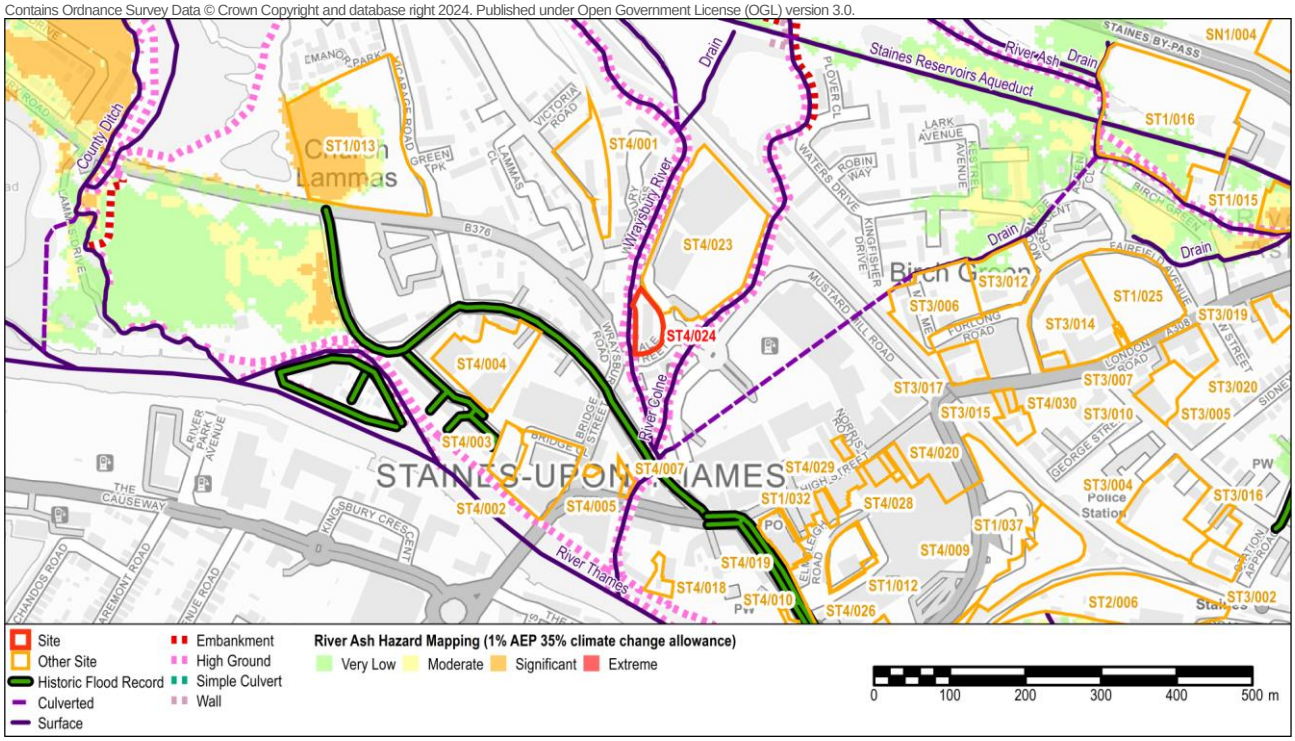


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/024: Frankie & Benny's/Travelodge, Two Rivers, Hale Street, Staines

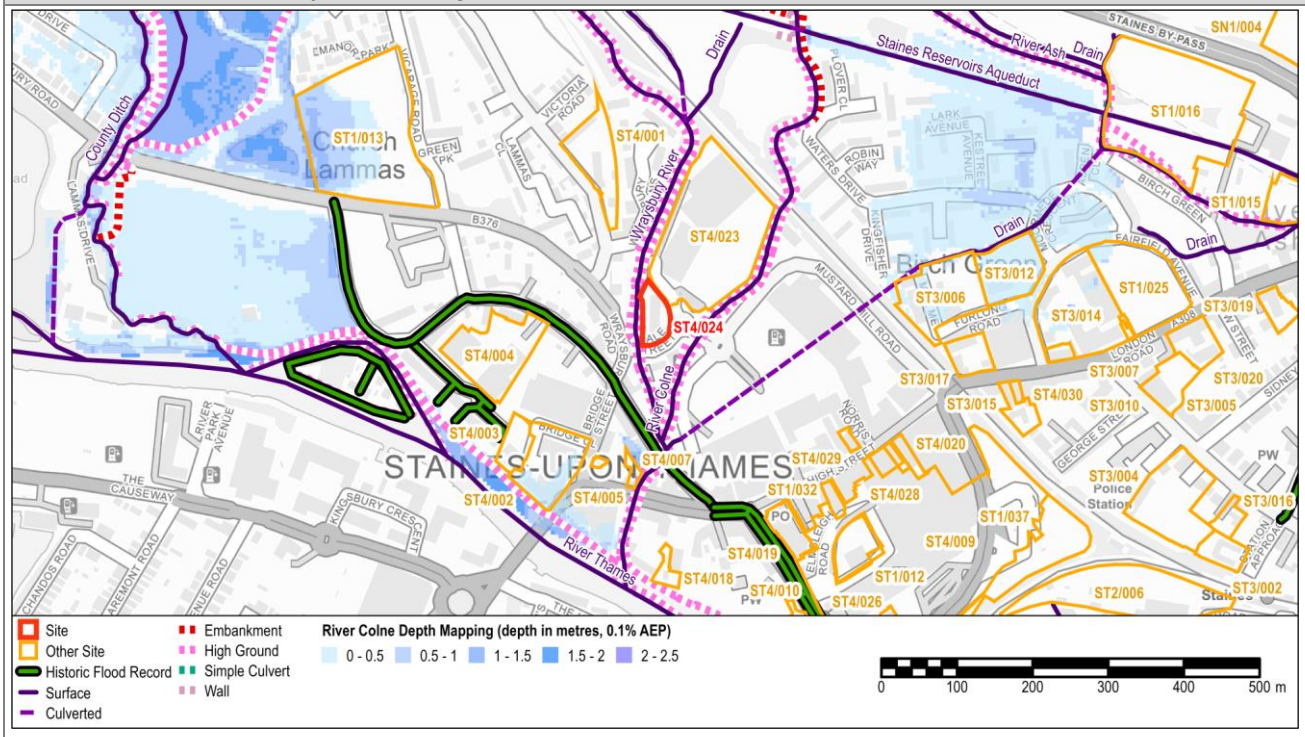


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



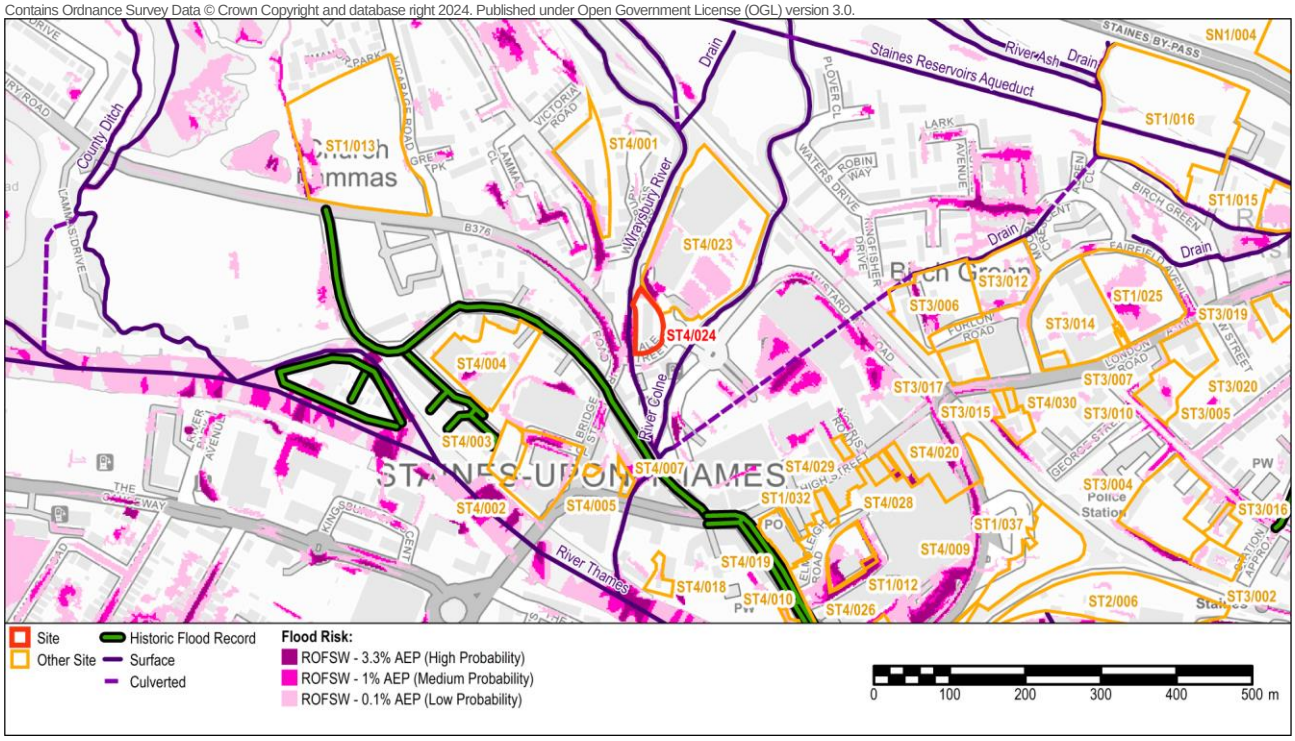
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/024: Frankie & Benny's/Travelodge, Two Rivers, Hale Street, Staines



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources

ST4/024: Frankie & Benny's/Travelodge, Two Rivers, Hale Street, Staines	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that the local area could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is located between the River Wraysbury on the west, and the River Colne on the east. These watercourses converge to the south of the site. The River Thames is located 500m to the south of the site. The site is shown to be largely within Flood Zone 2 (98%), medium probability of flooding from rivers. Modelling of the River Thames shows that the site is not at risk of flooding during the 1% AEP flood event including 35% climate change allowance. However, access to the site and the surrounding area is shown to be at risk with hazard rating of Very Low - Significant. The Risk of Flooding from Surface Water mapping shows that the site is susceptible to surface water ponding. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

Route along Mustard Mill Road, 240m not at risk, 40m Low hazard, 25m Moderate hazard, 70m Low hazard, 50m Moderate hazard, 35m Low hazard, 30m not at risk, 22m Low hazard, 15m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is compatible with Flood Zone 2 in accordance with Table 2 of the PPG and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

(The site is located in the Colne Management Catchment, however the dominant flood source in this location is the River Thames, and therefore the climate change allowances for the Maidenhead and Sunbury Management Catchment are relevant, 35% (central) and 47% (higher central)).

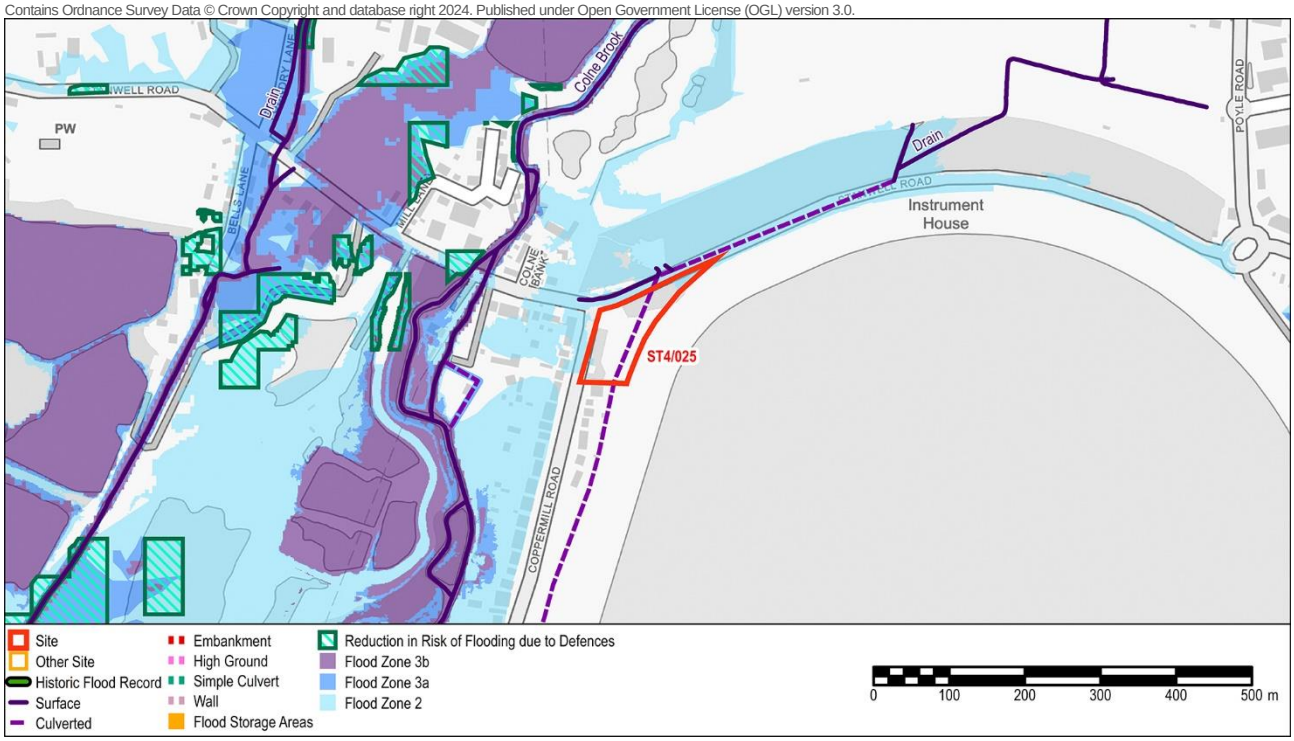
The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 6-10 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

Other requirements for the site are:

- An 8m buffer zone is required between built development and the Main river (measured from top of bank). A Flood Risk Activity Permit will be required for any works within 8m of a main river/culvert/flood defence (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).
- Finished floor levels should be set 300mm above the 1% AEP flood event including climate change.
- Development proposals for the site should seek to restrict surface water runoff rates to greenfield rates; demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

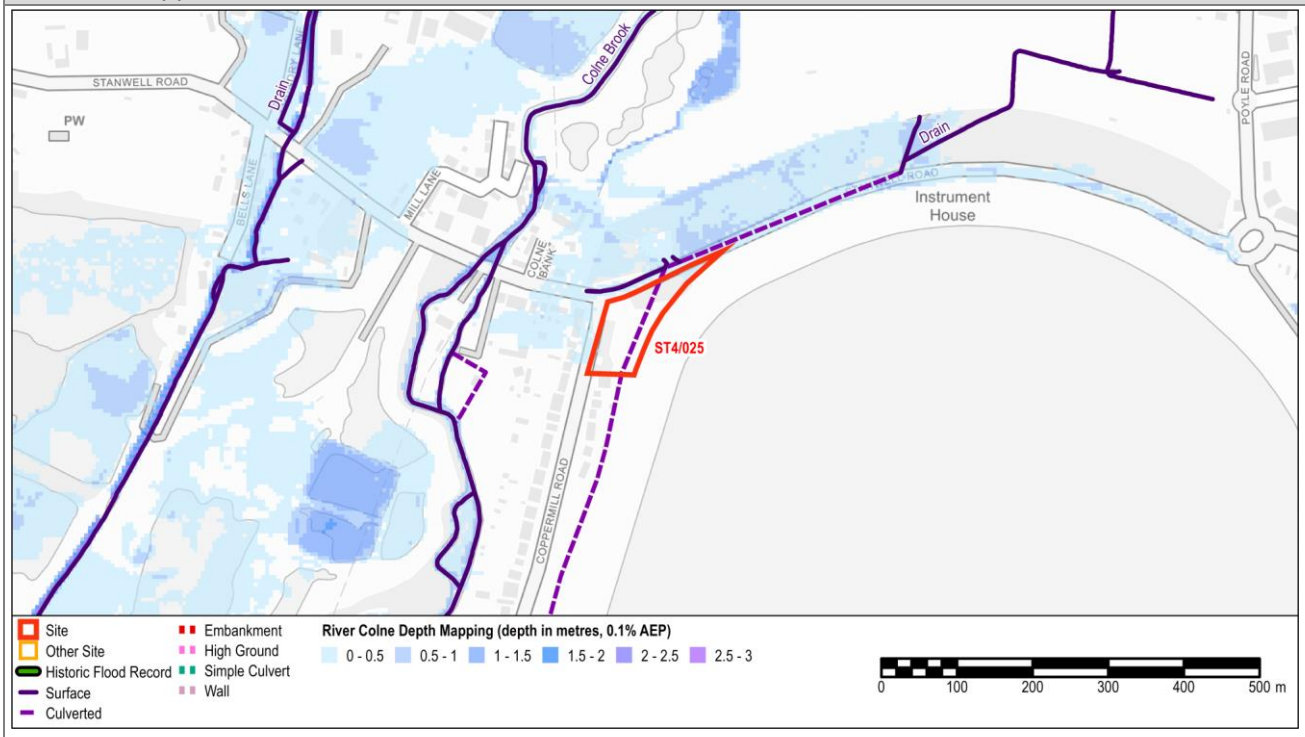
ST4/025 (Coppermill Road)

ST4/025: Coppermill Road				
Site ID:	ST4/025	**Area (ha):**		0.92
Proposed Use:	Residential C3 15 units approx..	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 92%	**Flood Zone 2 (0.1% AEP):** 8%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



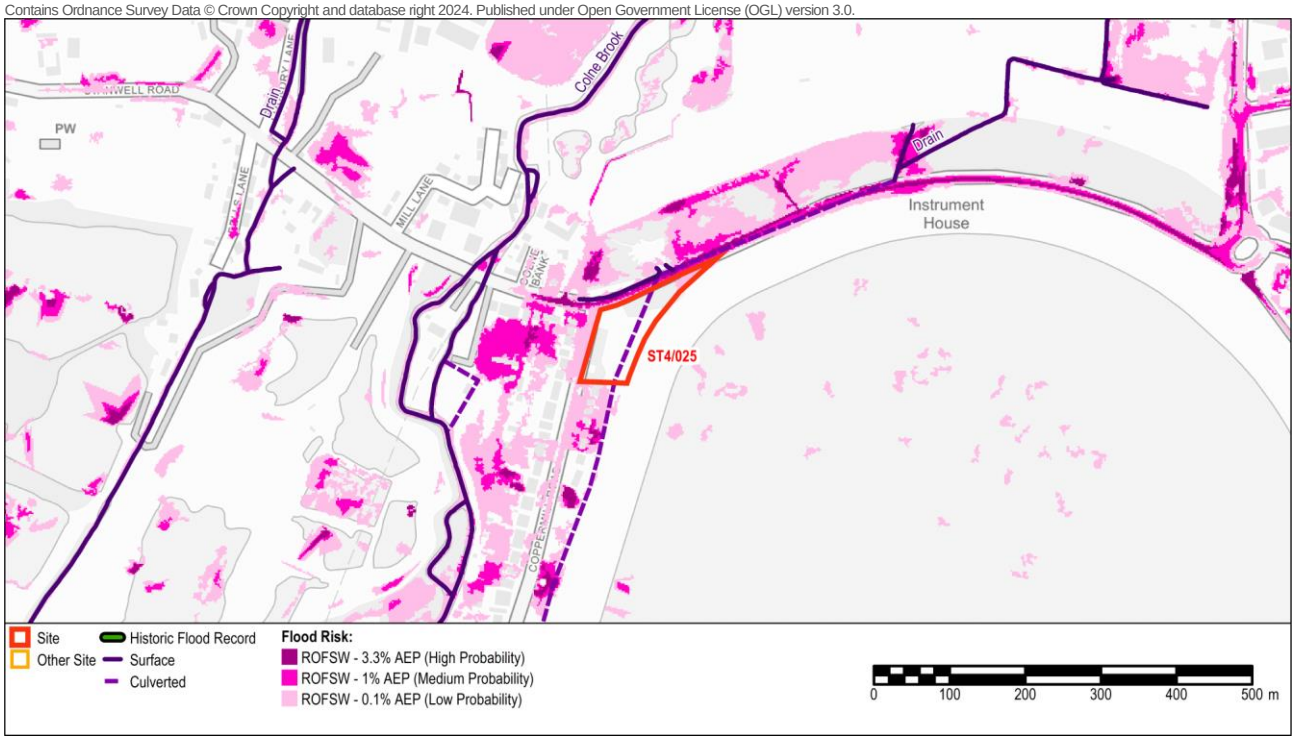
Flood Zones and Flood Records	
Flood Warning Area	None
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 0; External property flooding 0; Section 19 Flood Investigation incident 0; Surrey County Council Wetspots 0
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST4/025: Coppermill Road



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand, Sand And Gravel
Areas Susceptible to Groundwater Flooding	>=25% <50%		
BGS Susceptibility to Groundwater Flooding	Limited potential for groundwater flooding to occur.		
Aquifer Designation	Secondary A, Unproductive		

Other Sources

ST4/025: Coppermill Road	
Risk of flooding from reservoirs	The site is adjacent to Wraysbury Reservoir and there are other reservoirs in the local area including King George VI Reservoir, Queen Mary Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The site is located on the edge of the Colne Brook floodplain. Whilst the site itself is not shown to be at risk of flooding during the 0.1% AEP flood event, the surrounding area and access routes away from the site are shown to be at risk. The area around the site is also shown to be susceptible to surface water flooding which is likely to increase in the future due to the impacts of climate change.

Access/Egress Route Summary

The routes along Stanwell Road to the west and north of the site are shown to be at risk of flooding up to 0.5m during the 0.1% AEP event. A revised model for the Lower Colne is due to be published by the Environment Agency later in 2024/2025, and it is assumed this will contain the relevant climate change allowances for consideration in this management catchment with corresponding hazard mapping.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable development is compatible in Flood Zones 1 and 2 according to Table 2 of the PPG, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Colne Management Catchment. The climate change allowances for peak river flow are 21% (central) and 35% (higher central).

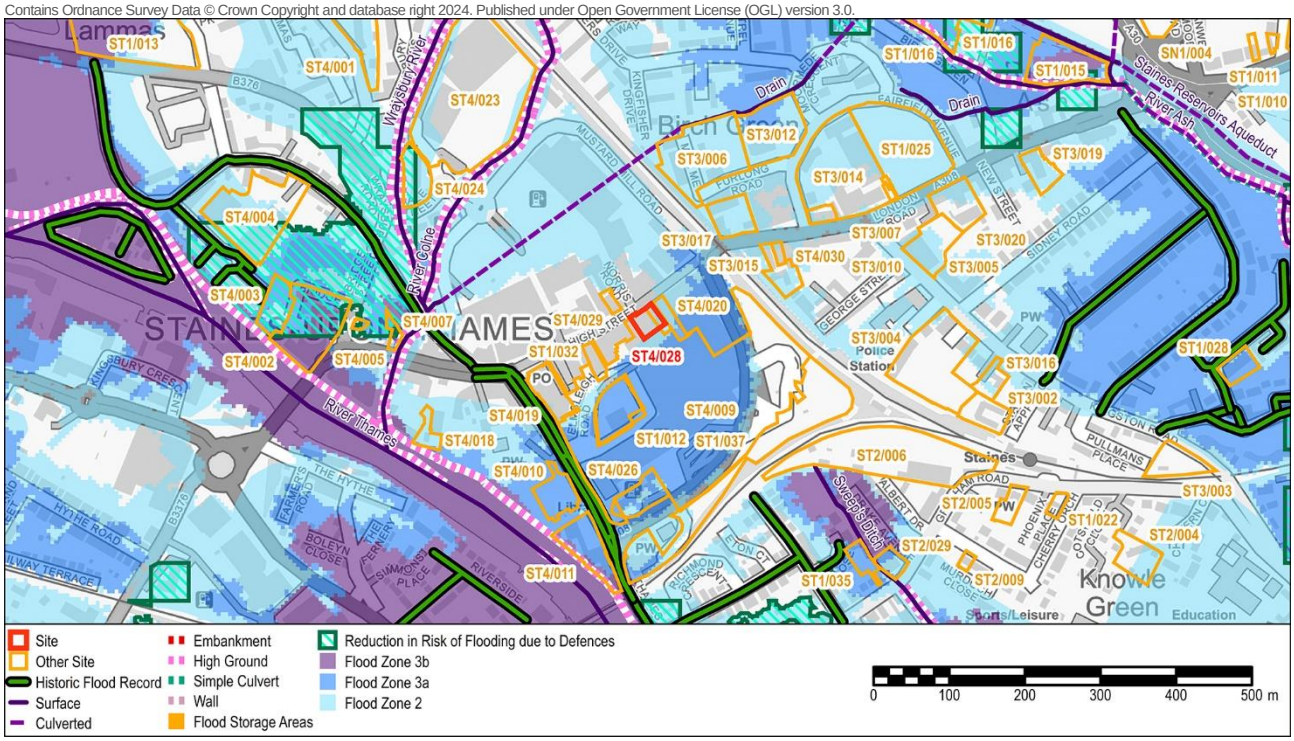
Based on a review of the available modelling outputs (0.1% AEP flood extent for River Colne), the access routes to the site are at risk of flooding. Further analysis of flood depths will be required to determine whether safe access can be provided to the site. A revised model for the Lower Colne is due to be published by the Environment Agency later in 2024/2025, and it is assumed this will contain the relevant climate change allowances for consideration in this management catchment. Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). If safe access cannot be provided, permission should not be granted. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

Subject to the provision of safe access, other requirements for the site include:

- A culverted watercourse crosses the site, the risk posed from this needs to be fully assessed as part of a site specific flood risk assessment along with any need for diversion or potential opportunities to de-culvert and incorporate a blue corridor within the site. An 8m buffer zone is required between built development and a culverted main river (measured from edge of culvert). A Flood Risk Activity Permit will be required for any works within 8m of a culverted main river (https://www.gov.uk/guidance/flood-risk-activities-environmental-permits).
- Finished floor levels must be set 300mm above the design flood event (1% AEP including climate change).
- An Emergency Plan should be prepared for the site and places of safe refuge identified outside the flood extent of the design event (1% AEP including climate change).
- Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Wraysbury Reservoir.

ST4/028 (William Hill / Vodafone/ Monsoon, High Street)

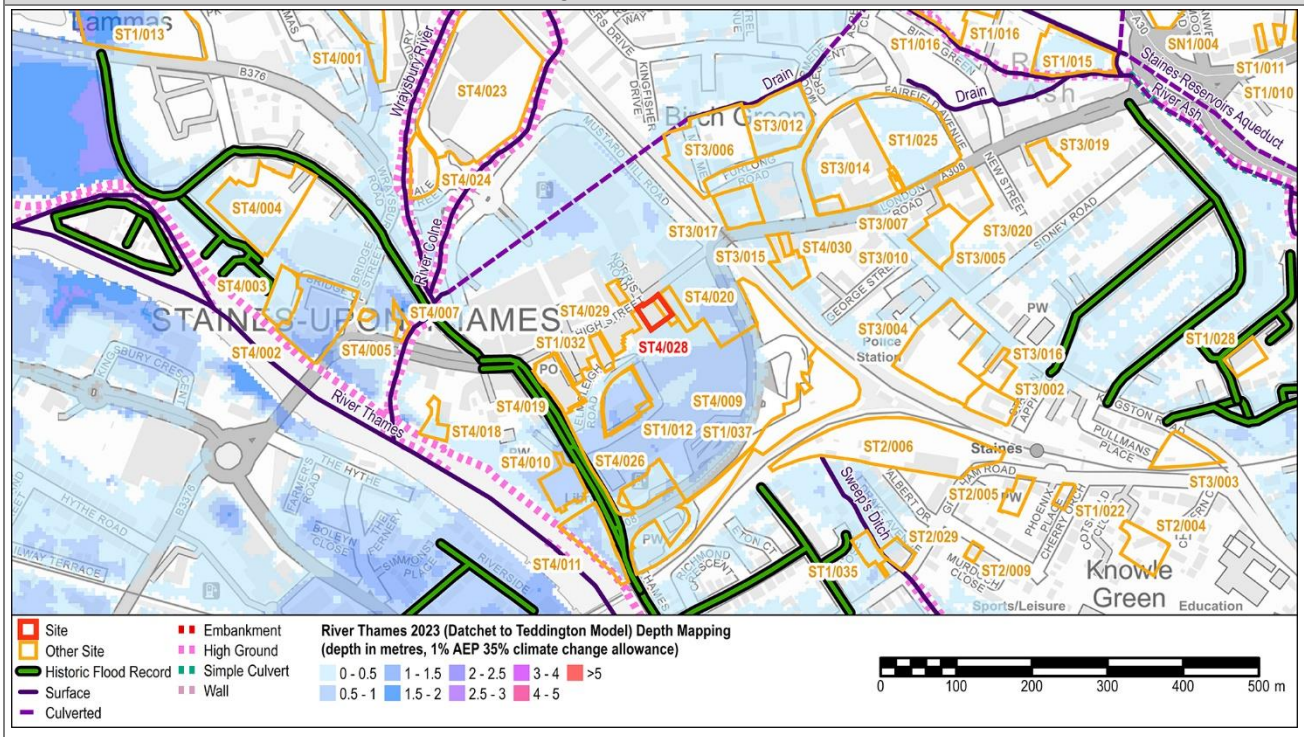
ST4/028: William Hill / Vodafone, Monsoon, High Street				
Site ID:	ST4/028	**Area (ha):**		0.11
Proposed Use: Residential (C3): 14 units (approx.) Commercial (Class E): 400 sqm (approx.) (retain existing)		**Vulnerability Classification:** More Vulnerable Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 74%	**Flood Zone 2 (0.1% AEP):** 26%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%



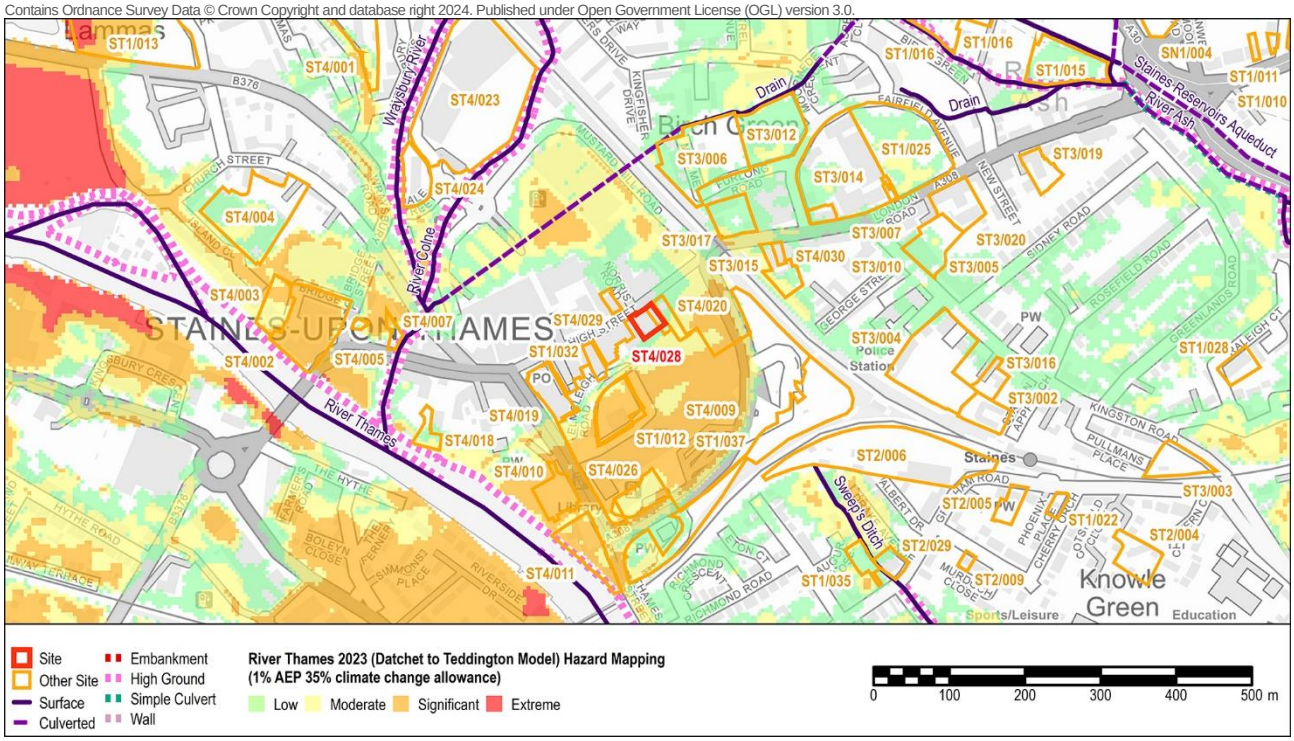
Flood Zones and Flood Records

Flood Warning Area	River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	None
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 20; External property flooding 0; Section 19 Flood Investigation incident 26; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST4/028: William Hill / Vodafone, Monsoon, High Street

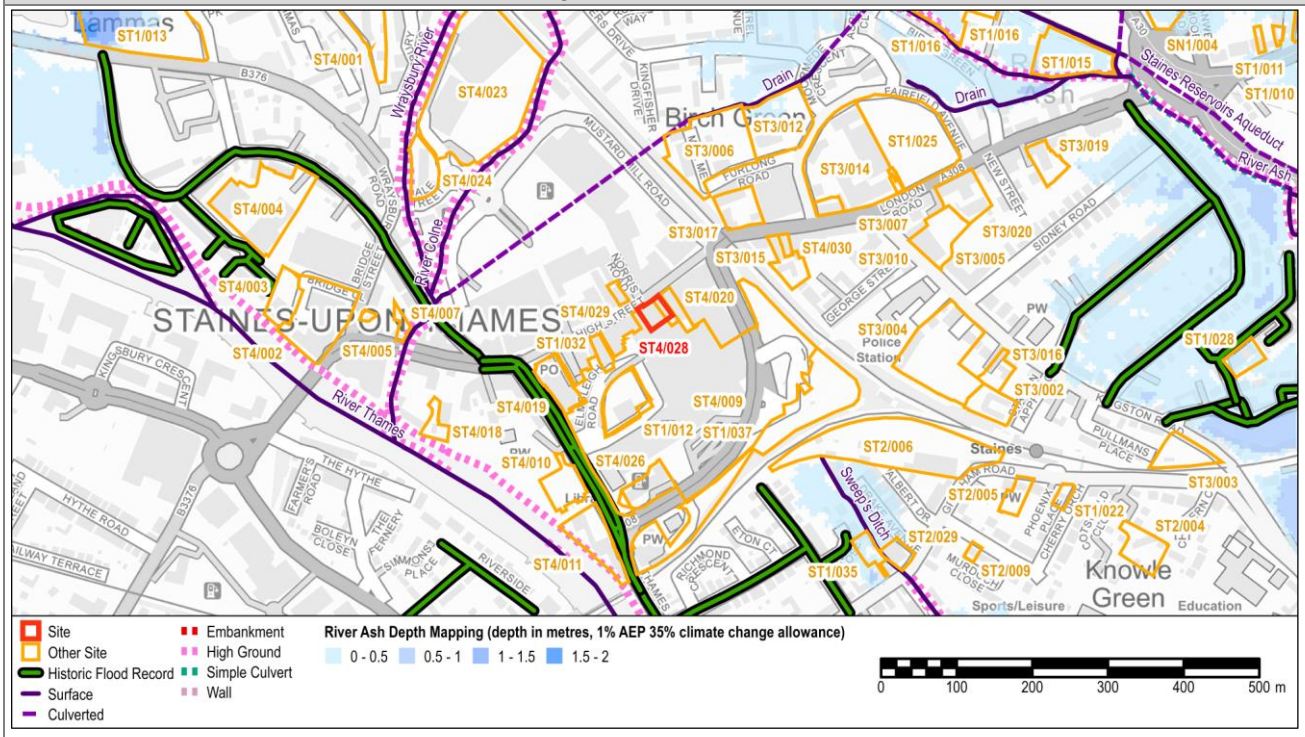


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

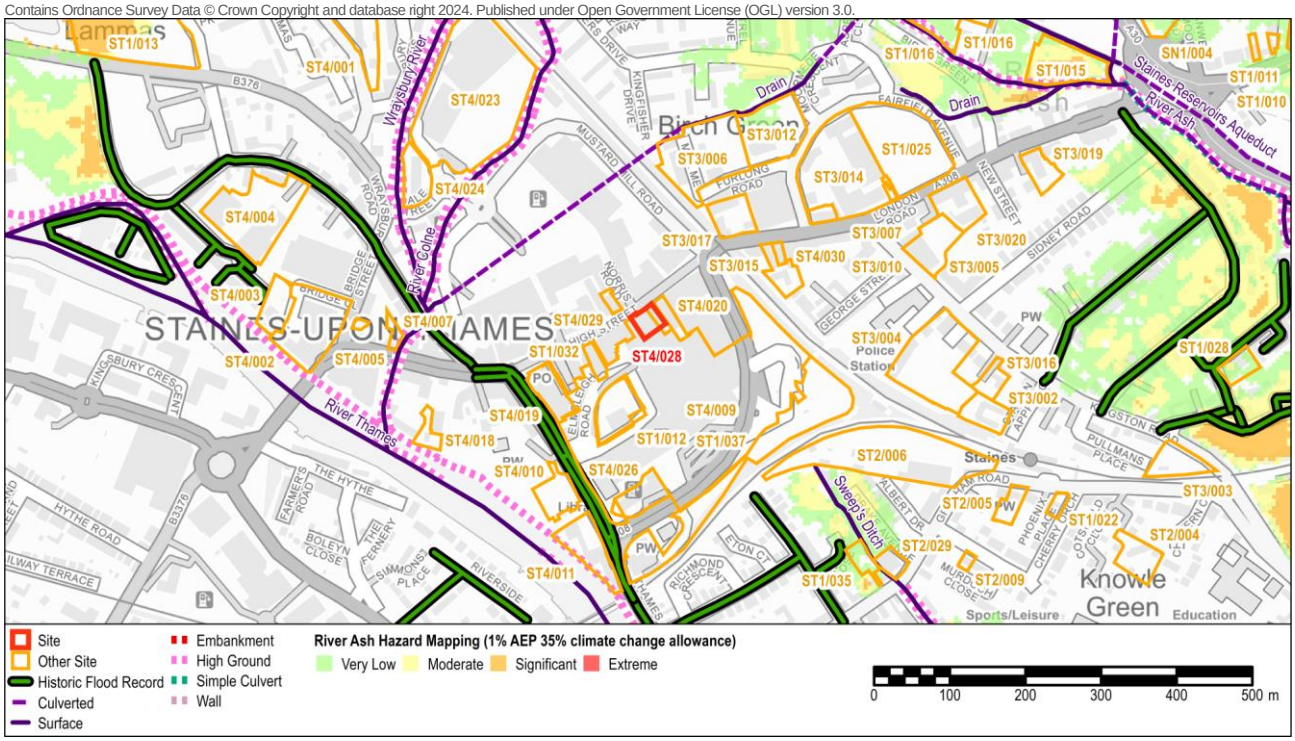


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/028: William Hill / Vodafone, Monsoon, High Street

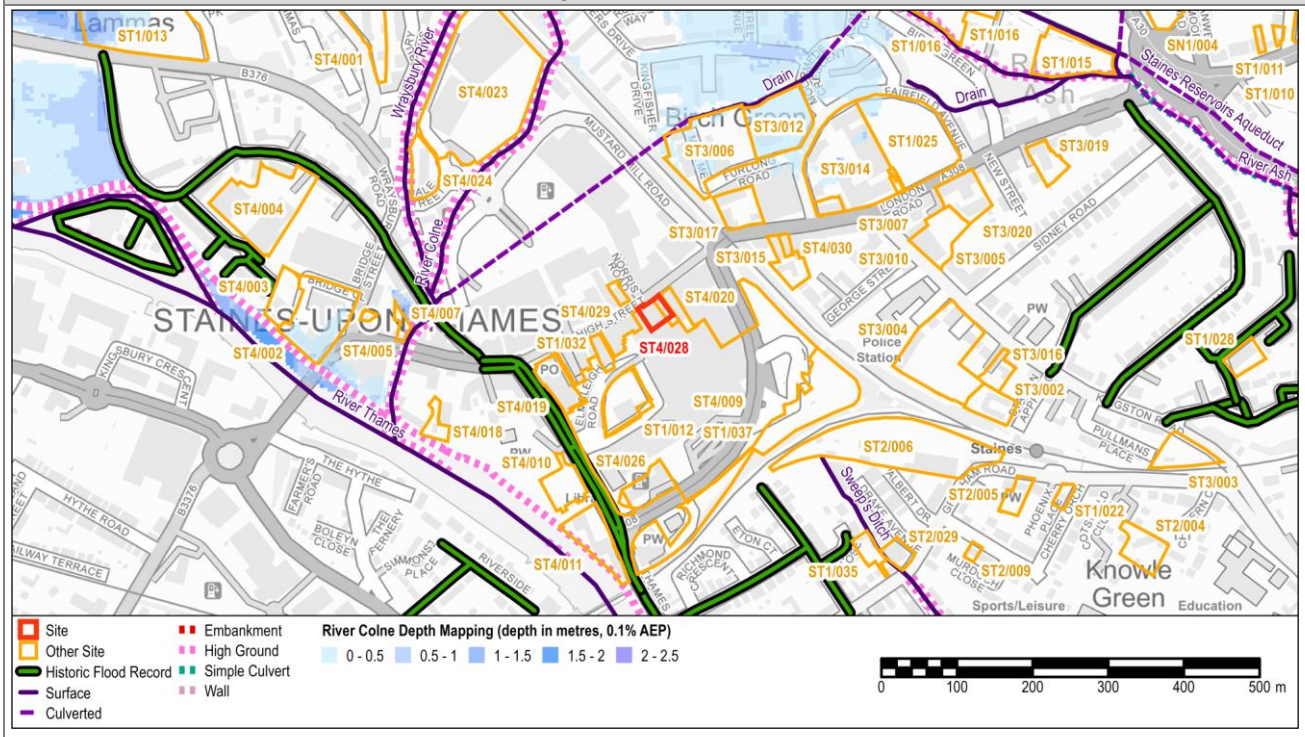


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



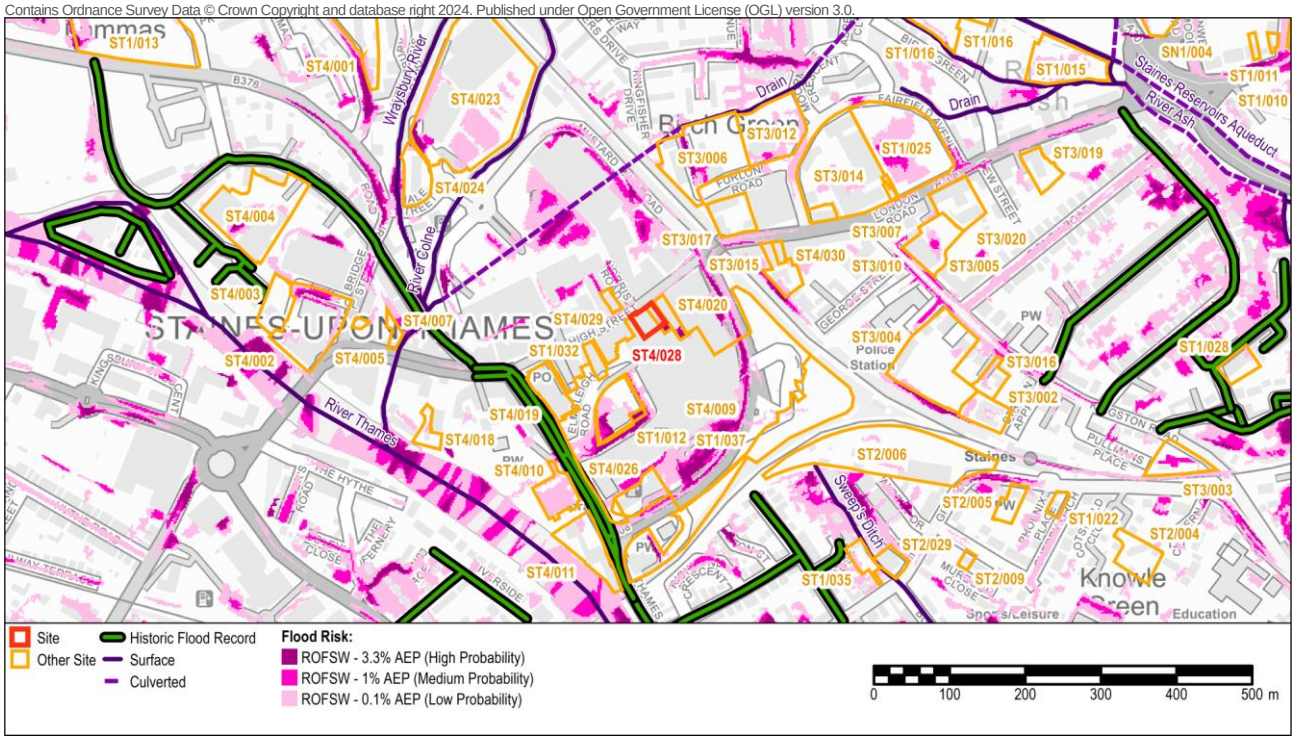
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/028: William Hill / Vodafone, Monsoon, High Street



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding at surface		
Aquifer Designation	Secondary A, Secondary A		
Other Sources			

ST4/028: William Hill / Vodafone, Monsoon, High Street	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The River Thames flows south east approximately 200m to the south west of the site. The majority of the site (75%) is defined as Flood Zone 1, Low probability of flooding from rivers, and 25% is defined as Flood Zone 2 Medium probability.
The site is located on the edge of a dry island within the modelled floodplain. Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates that the edge of the site is at risk of flooding, with a Very Low hazard rating. The surrounding area is at risk with hazard ratings of Moderate (Danger for Some) and Significant (Danger for Most), and access to the site from the High Street and London Road is also at risk.
The Risk of Flooding from Surface Water Map identifies the potential for surface water to pond along the nearby roadways. The site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

East along High Street 30m not at risk of flooding, 45m Low hazard, 40m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable development is permitted in Flood Zones 1 and 2, and the Exception Test is not required. A site specific FRA will be required to demonstrate that the proposed development will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the route along the A308 are defined as Significant hazard ('Danger for Most').

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced.

Spelthorne BC propose to move this site to Years 11-15 of the plan period.

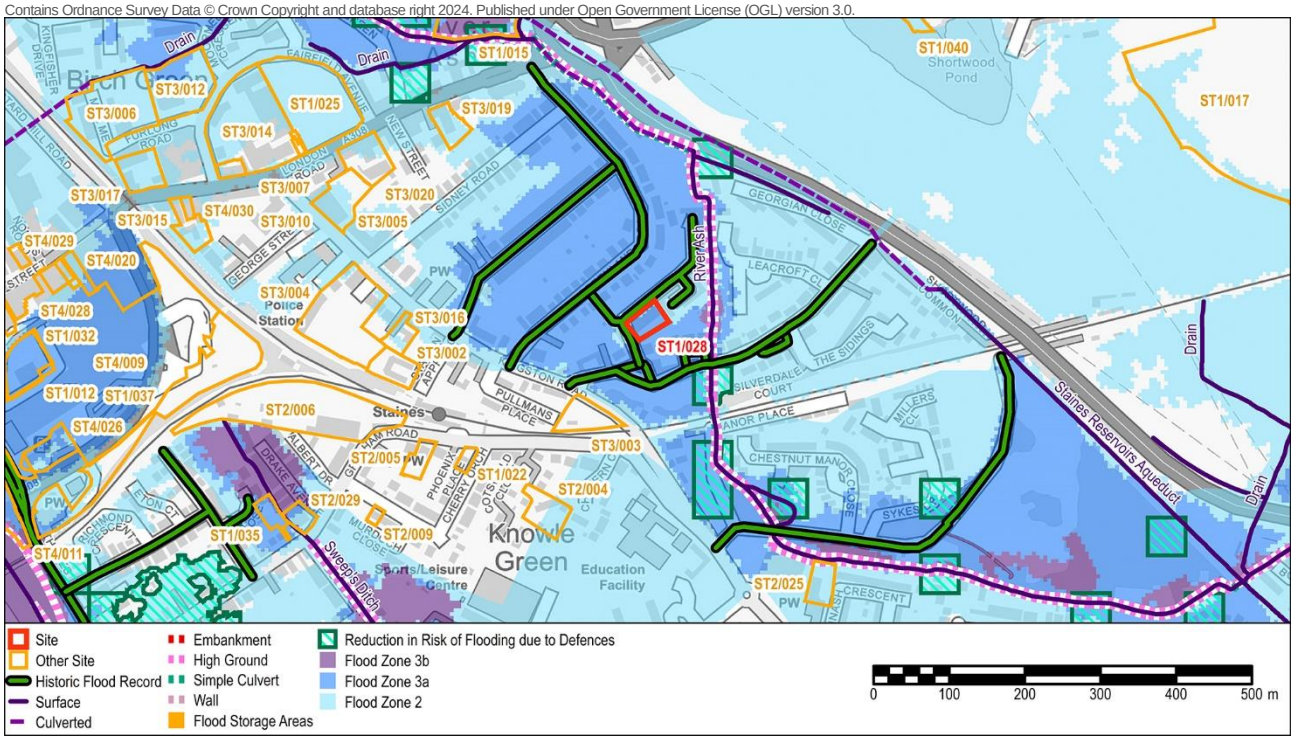
Other requirements for the site are:

- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within Flood Warning Areas for the Thames and Colne. An Emergency Plan should be prepared for the site and places of safe refuge designated, outside the flood extent for the design event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Group 9 Sites in Flood Zone 3 with no access that is dry, or at low hazard

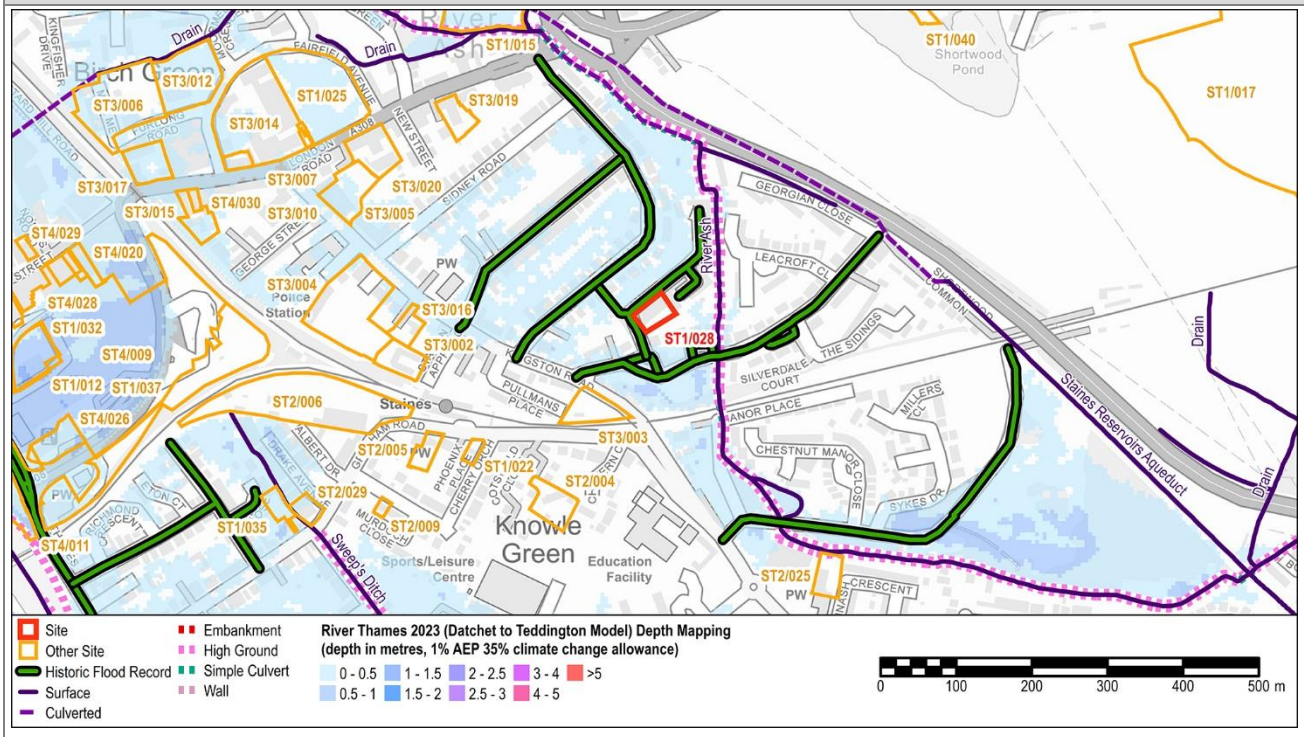
ST1/028 (Leacroft Centre, Leacroft, Staines)

ST1/028: Leacroft Centre, Leacroft, TW18 4PB				
Site ID:	ST1/028	**Area (ha):**		0.15
Proposed Use: Residential (C3): 17 units (approx.). Ground floor community units or re-provision off site		**Vulnerability Classification:** More Vulnerable, Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 16%	**Flood Zone 3 (1% AEP):** 84%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

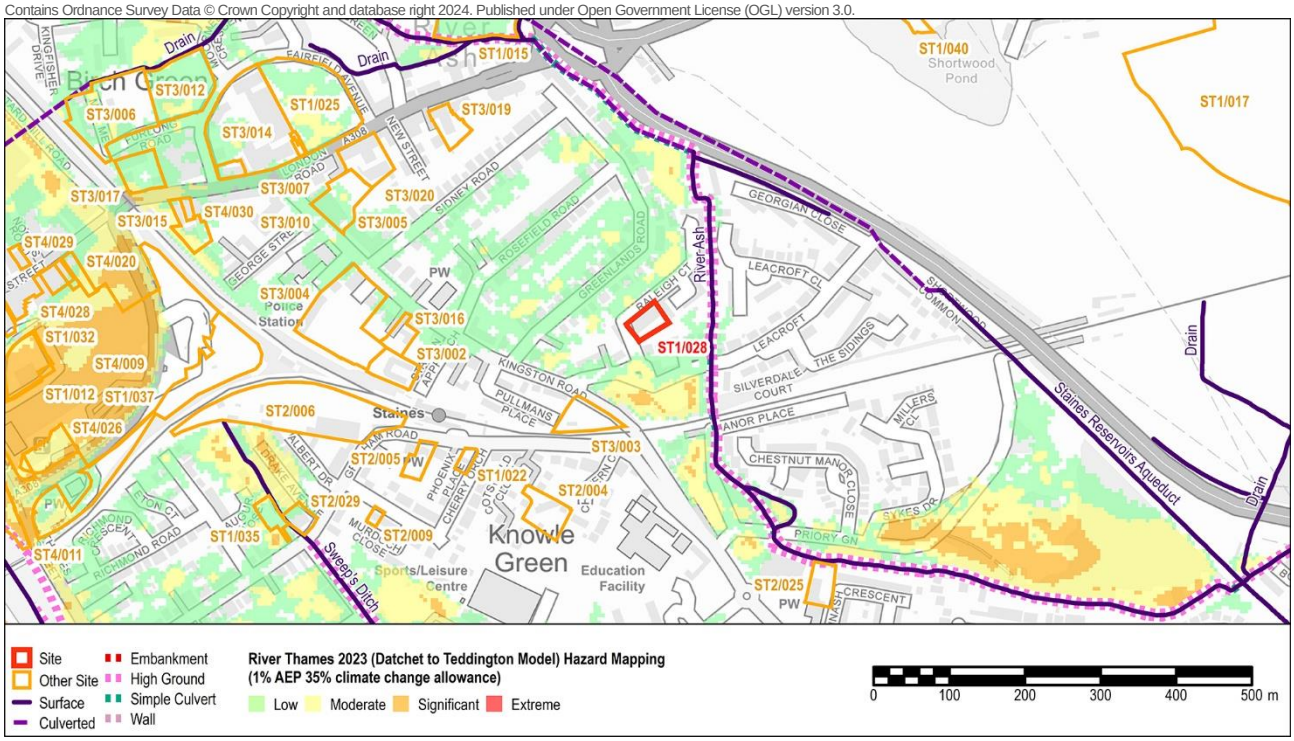


Flood Zones and Flood Records	
Flood Warning Area	River Ash at Ashford and Staines, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 30; External property flooding 0; Section 19 Flood Investigation incident 26; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST1/028: Leacroft Centre, Leacroft, TW18 4PB

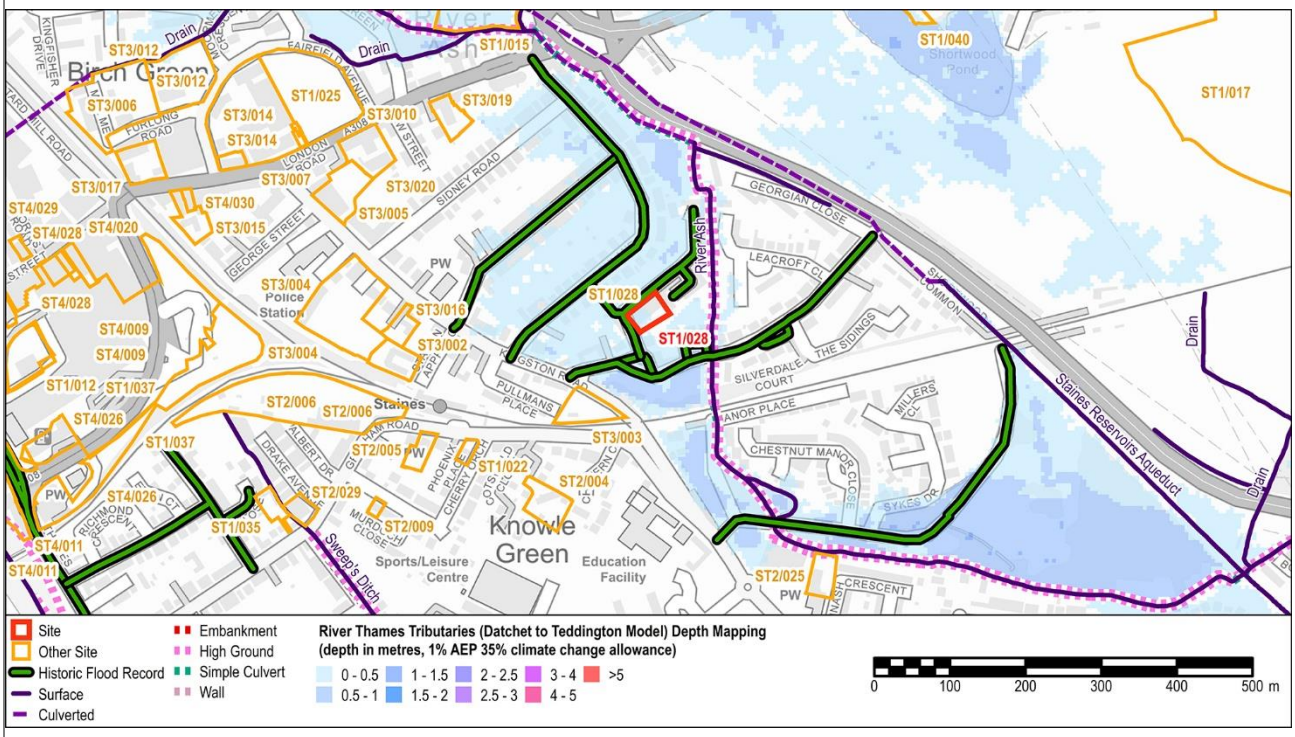


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

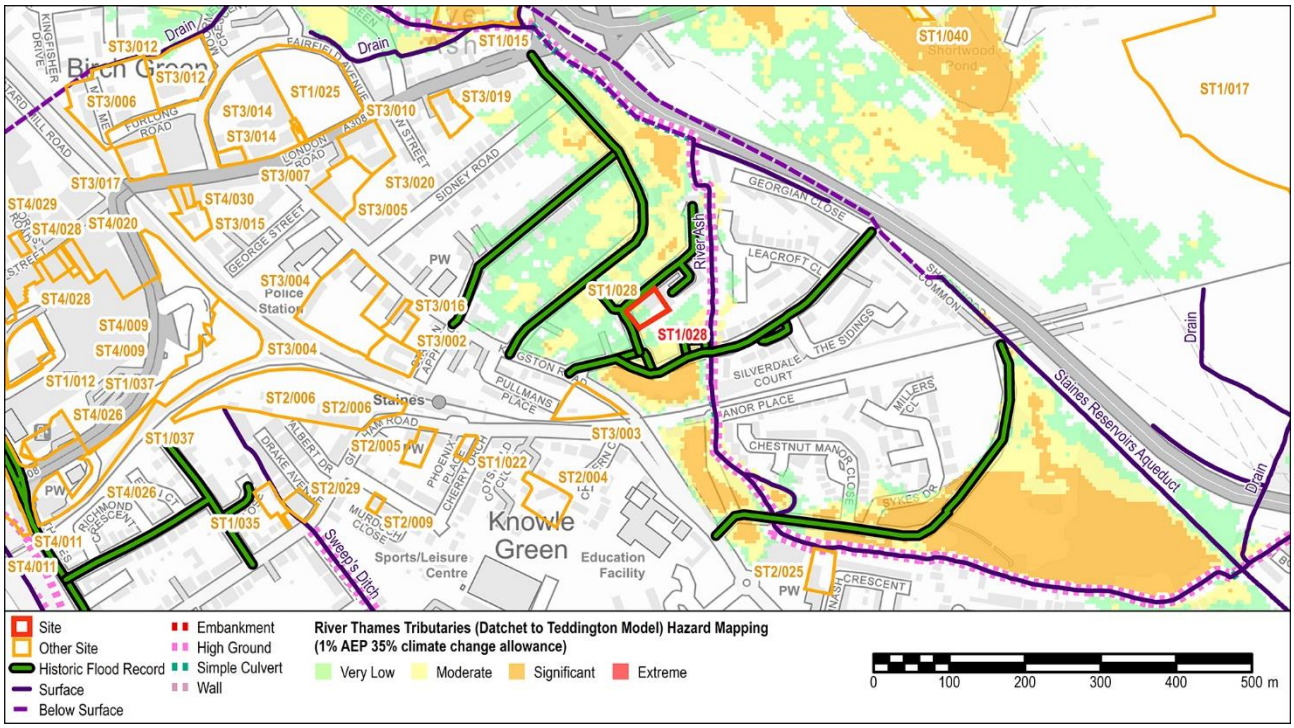


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST1/028: Leacroft Centre, Leacroft, TW18 4PB

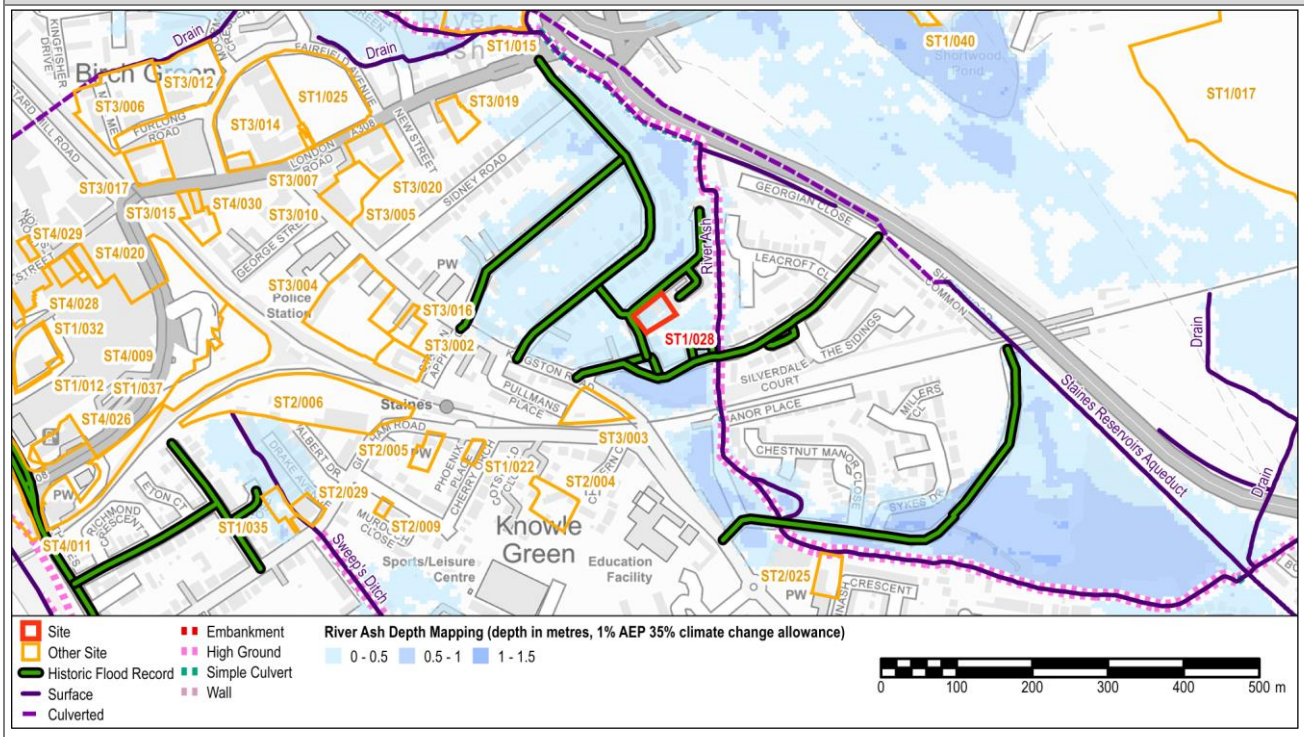


River Thames (Tributary Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

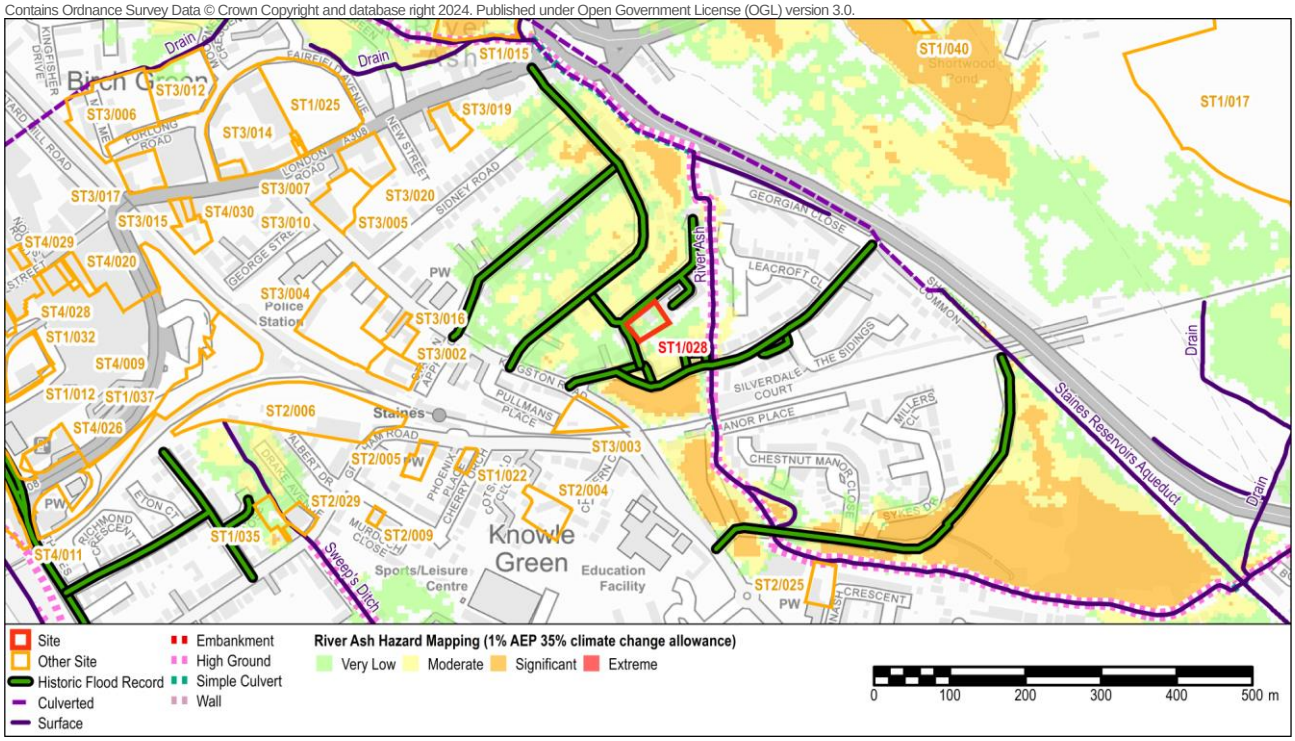


River Thames (Tributary Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST1/028: Leacroft Centre, Leacroft, TW18 4PB



River Ash Maximum Flood Depth 1% AEP plus 35% climate change

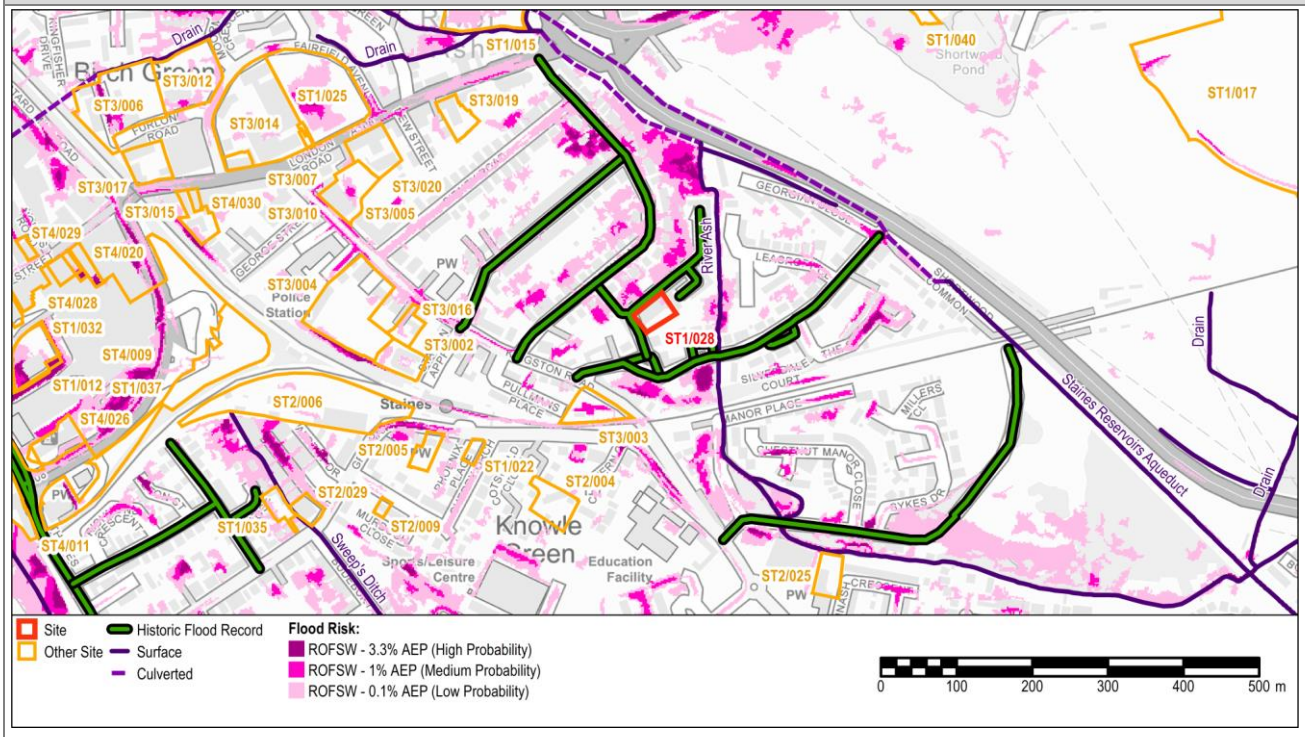


River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Medium

ST1/028: Leacroft Centre, Leacroft, TW18 4PB



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand And Gravel
Areas Susceptible to Groundwater Flooding	25% to 50%		
BGS Susceptibility to Groundwater Flooding	Not considered to be prone to groundwater flooding.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Ash flows south approximately 50m to the east of the site. The channel has high ground on either site. The River Thames is located approximately 1km to the south west of the site. The majority of the site (84%) is defined as Flood Zone 3 High probability of river flooding. The remainder (16%) is defined as Flood Zone 2 Medium probability. The site is shown to benefit from the presence of defences.

Modelling outputs for the River Thames (Thames dominated) for the 1% AEP event including a 35% increase in peak river flow as a result of climate change does not indicate flooding at the site.

Modelling outputs for the River Thames (Tributary dominated) for the 1% AEP event including a 35% increase in peak river flow as a result of climate change indicates depths of up to 0.5m across the west of the site, with a corresponding hazard rating of Very Low.

Modelling outputs for the River Ash for the 1% AEP event including 35% allowance for climate change indicates flood depths of up to 0.5m on the site, with a corresponding hazard rating of Very Low.

The Risk of Surface Water Map shows the potential risk of surface water ponding in proximity to the site, especially along Raleigh Crescent to the north of the site. The risk of flooding from surface water is likely to increase in the future due to the impacts of climate change. The site is located in an area which has experienced internal and external flooding in the past, as recorded by the Lead Local Flood Authority SCC.

Access/Egress Route Summary

River Thames (Thames Dominated) Modelled Scenario

30m not at risk of flooding, 30m Moderate hazard, 30m Low hazard, east on to Kingston Road 2km not at risk of flooding. A 45m section at Low hazard, east along B377 before junction with A308. A308 not at risk of flooding.

River Thames (Tributary Dominated) Modelled Scenario

40m Low hazard, 40m Moderate hazard, 10m Low hazard, east on to Kingston Road 2km not at risk of flooding. A 45m section at Low hazard, east along B377 before junction with A308. A308 not at risk of flooding.

ST1/028: Leacroft Centre, Leacroft, TW18 4PB

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is defined as More Vulnerable and is only permitted in Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

This site is located in the Colne Management Catchment. The climate change allowances for peak river flow are 21% (central) and 35% (higher central). However, the site is also at risk of flooding from the River Thames in the neighbouring Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The following recommendations are made for this site:

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates parts of the access route (approximately 40m) is at Moderate hazard rating during the 1% AEP including 35% climate change allowance.

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period, to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime).

In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced.

Other requirements for the site are:

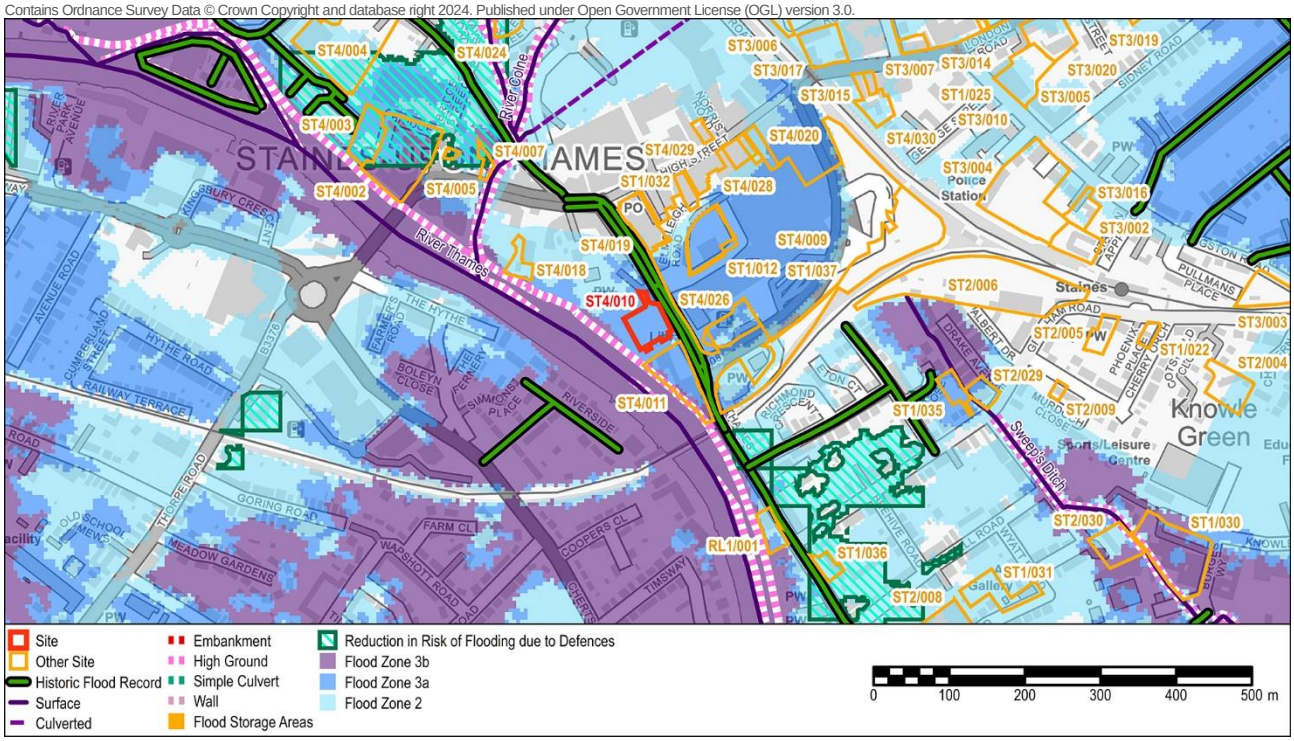
- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within Flood Warning Area for the Thames and Ash. An Emergency Plan should be prepared for the site and places of safe refuge designated, outside the flood extent for the design event (1% AEP including climate change).
- The site is located in an area which has experienced internal and external flooding in the past. Future development must be undertaken in consultation with the Lead Local Flood Authority SCC to identify opportunities to alleviate flooding in the local area. Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

ST4/010 (Riverside Car Park, Thames Street, Staines)

Updated Status: Removed from Local Plan.

ST4/010: Riverside Surface Carpark, Thames Street, TW18 4UD			
Site ID:	ST4/010	**Area (ha):**	0.25
Proposed Use: Residential (C3): 35 units (approx.) Community Café/ Commercial (Class E): 150 sqm (approx.) Open space linking to Memorial Gardens		**Vulnerability Classification:** More Vulnerable, Less Vulnerable, Water Compatible	

Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 100%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

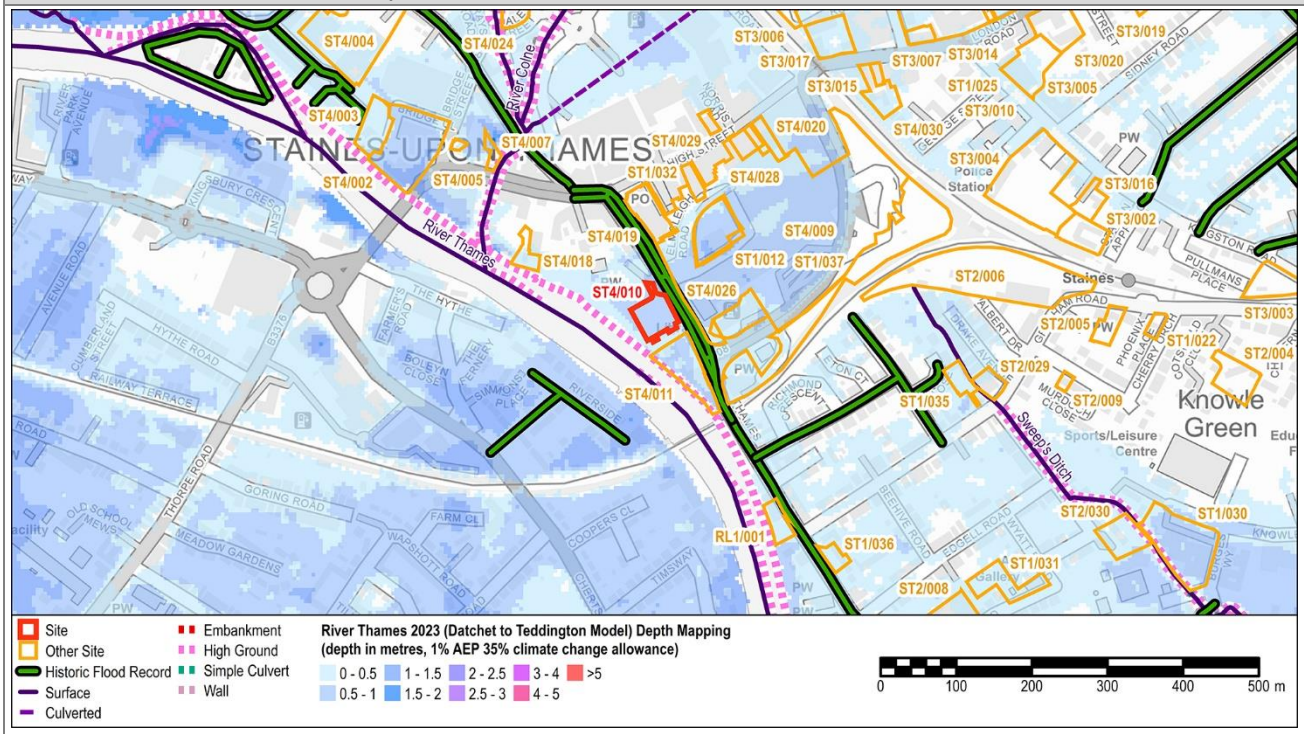


Flood Zones and Flood Records

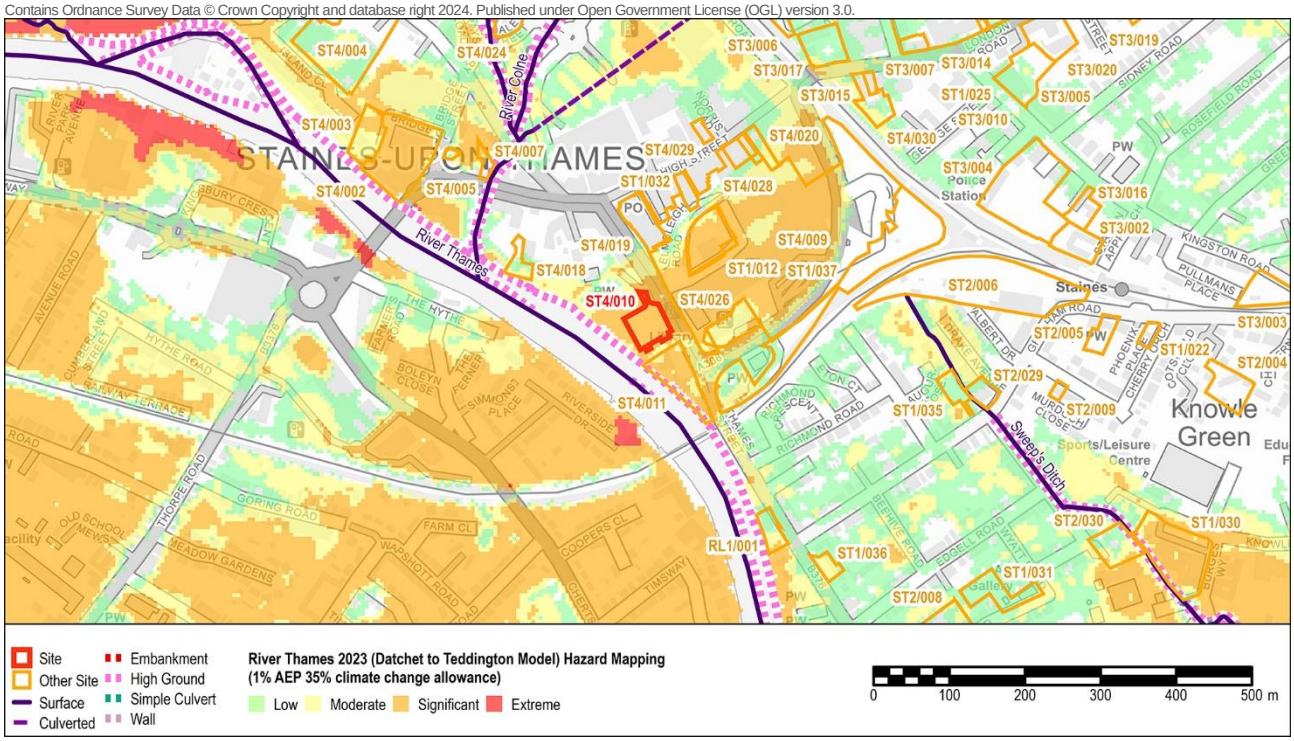
Flood Warning Area	Properties closest to the River Thames between Runnymede Pleasure Grounds, Staines and Penton Hook, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 22; External property flooding 0; Section 19 Flood Investigation incident 26; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A

River Flooding

ST4/010: Riverside Surface Carpark, Thames Street, TW18 4UD

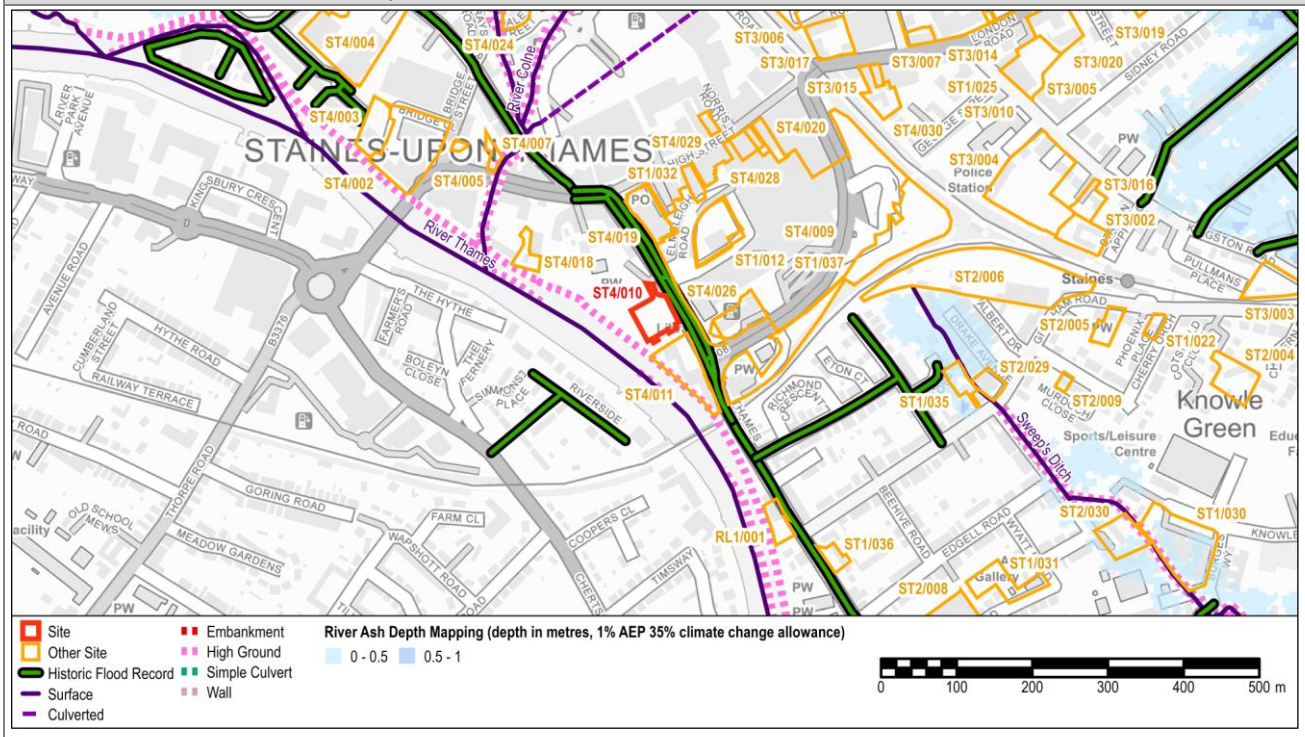


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

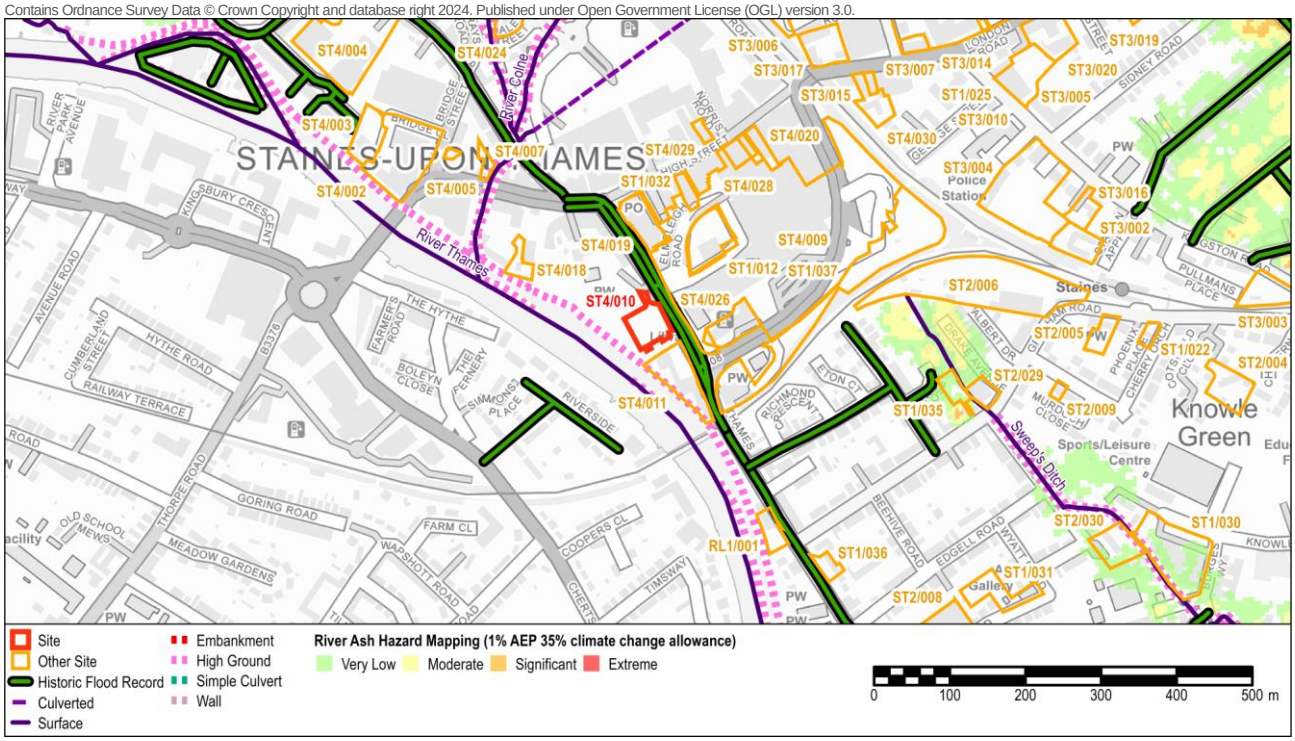


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/010: Riverside Surface Carpark, Thames Street, TW18 4UD

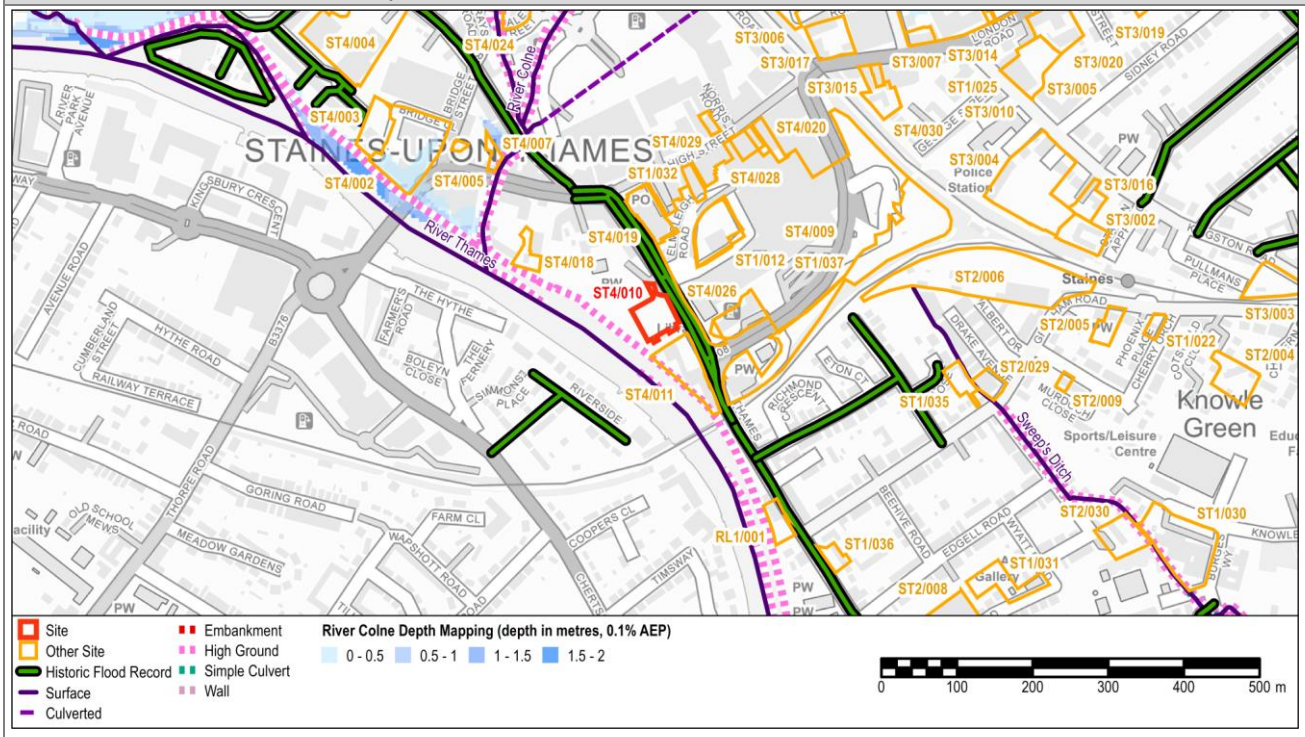


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



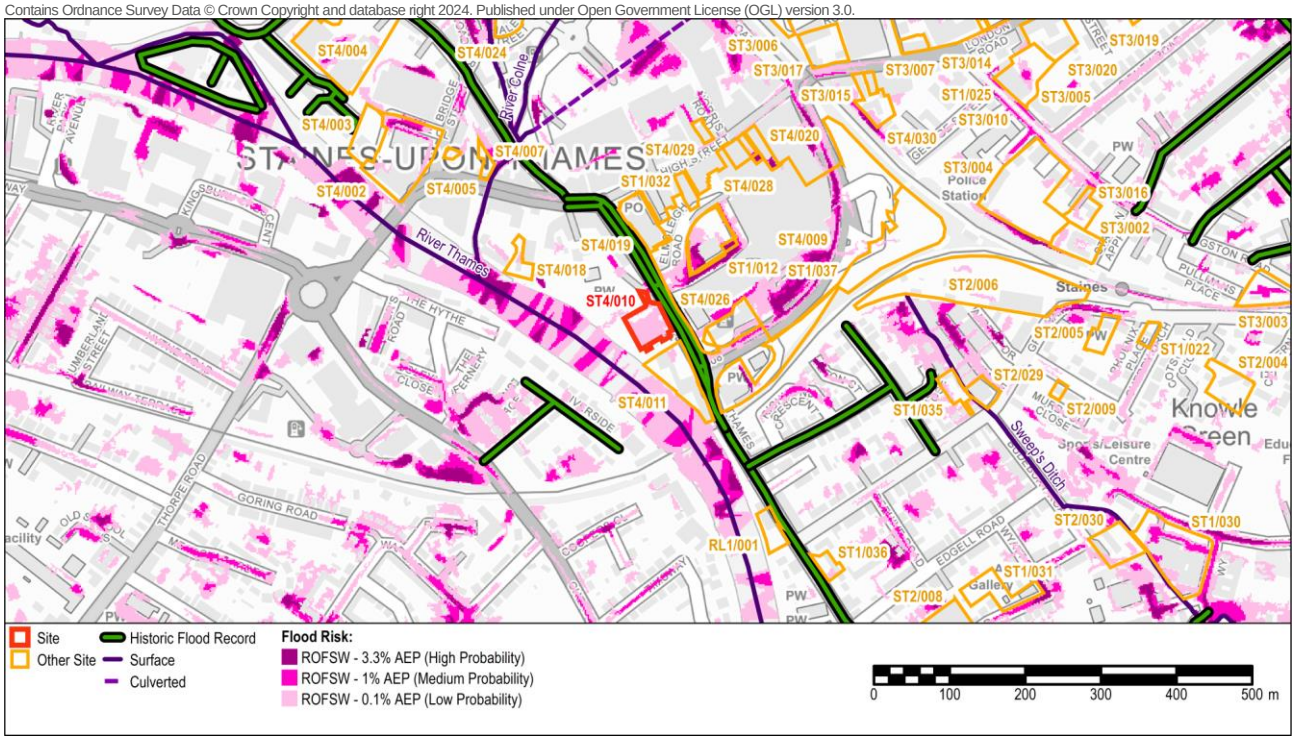
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/010: Riverside Surface Carpark, Thames Street, TW18 4UD



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand

Areas Susceptible to Groundwater Flooding	>75%
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.
Aquifer Designation	Secondary A, Secondary A

Other Sources

Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

ST4/010: Riverside Surface Carpark, Thames Street, TW18 4UD

Flood Risk Summary

The River Thames flows south east approximately 30m to the south west of the site. The River Colne joins the River Thames approximately 250m upstream of the site. The entire site is defined as Flood Zone 3 High probability of flooding.
Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates flood depths of 0.5-1m. The hazard rating is Significant (Danger for Most).
The Risk of Flooding from Surface Water Map shows the majority of the site is at low probability and therefore likely to be at risk in the future due to the impacts of climate change. There are numerous records of flooding in proximity to the site as recorded by Lead Local Flood Authority SCC.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

Adjacent to the site and north west along A308 (Thames Street), 80m Significant hazard, 40m Moderate hazard, 75m not at risk. East on to High Street 280m not at risk of flooding, 45m Low hazard, 40m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, residential development is defined as More Vulnerable and is only permitted in Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the route along the A308 are defined as Significant hazard ('Danger for Most').

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced. As there is no existing built footprint on this site, this is likely to limit the number of units that can be delivered on the site.

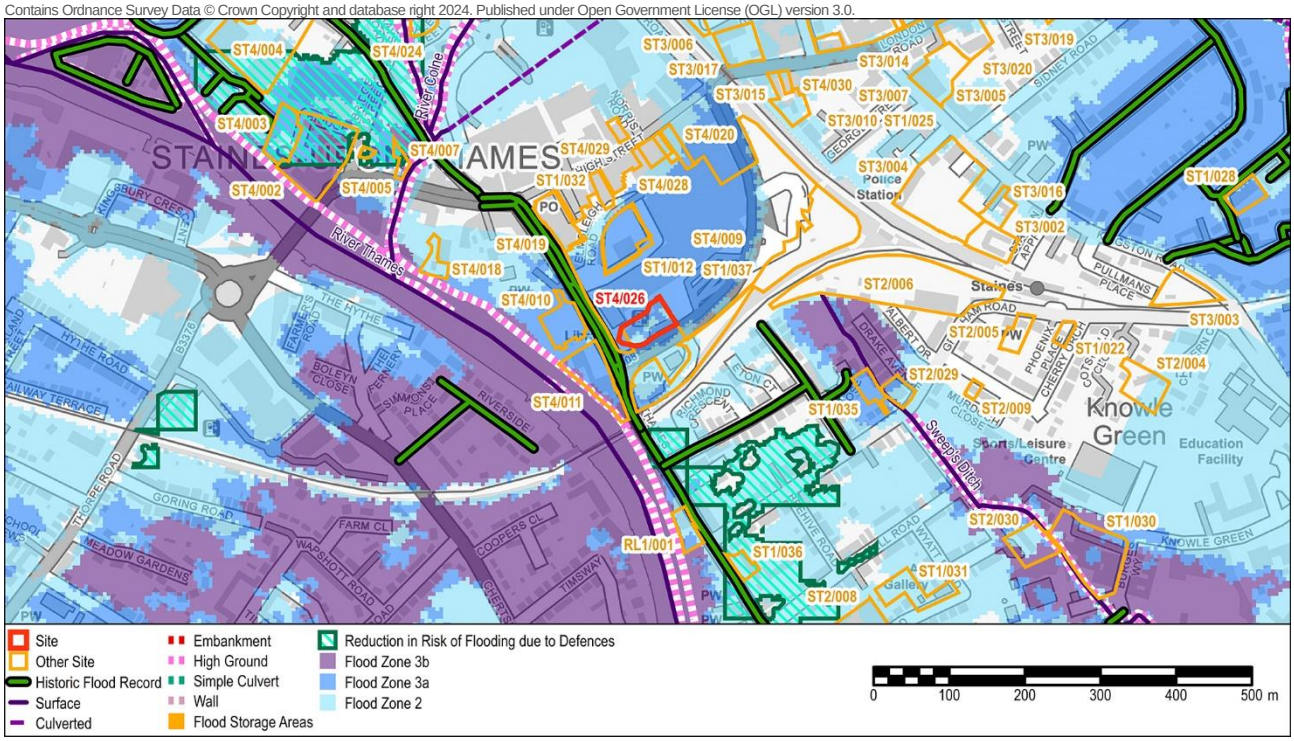
Other requirements for the site are:

- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within Flood Warning Area for the Thames. An Emergency Plan should be prepared for the site and places of safe refuge designated, outside the flood extent for the design event (1% AEP including climate change).
- Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Due to the constraints posed by the risk of flooding, Spelthorne BC have removed this site from the Local Plan.

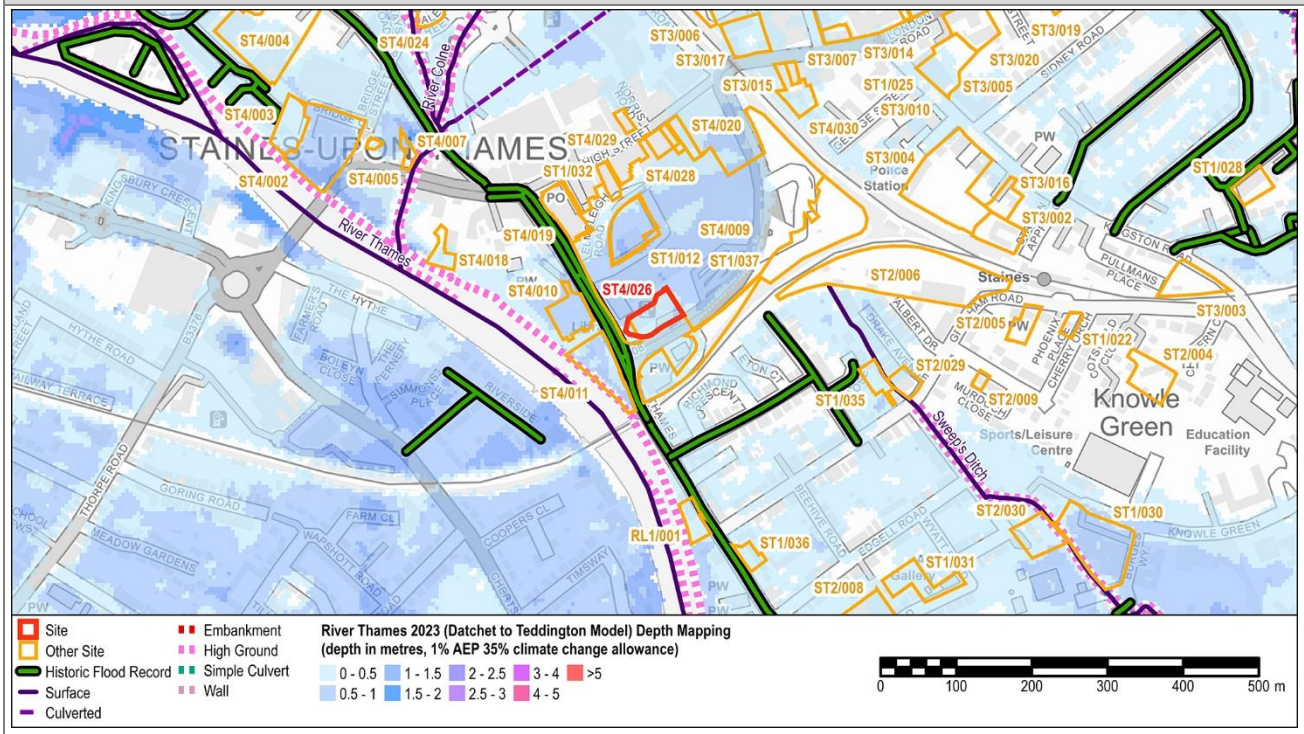
ST4/026 (Communications House, South Street, Staines)

ST4/026: Communications House, South Street, Staines				
Site ID:	ST4/026	**Area (ha):**		0.25
Proposed Use:	Residential (C3): 120 units (approx.)	**Vulnerability Classification:**		More Vulnerable
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 28%	**Flood Zone 3 (1% AEP):** 72%	**Flood Zone 3b:** 0%	**Area with reduced risk of flooding due to defences:** 0%

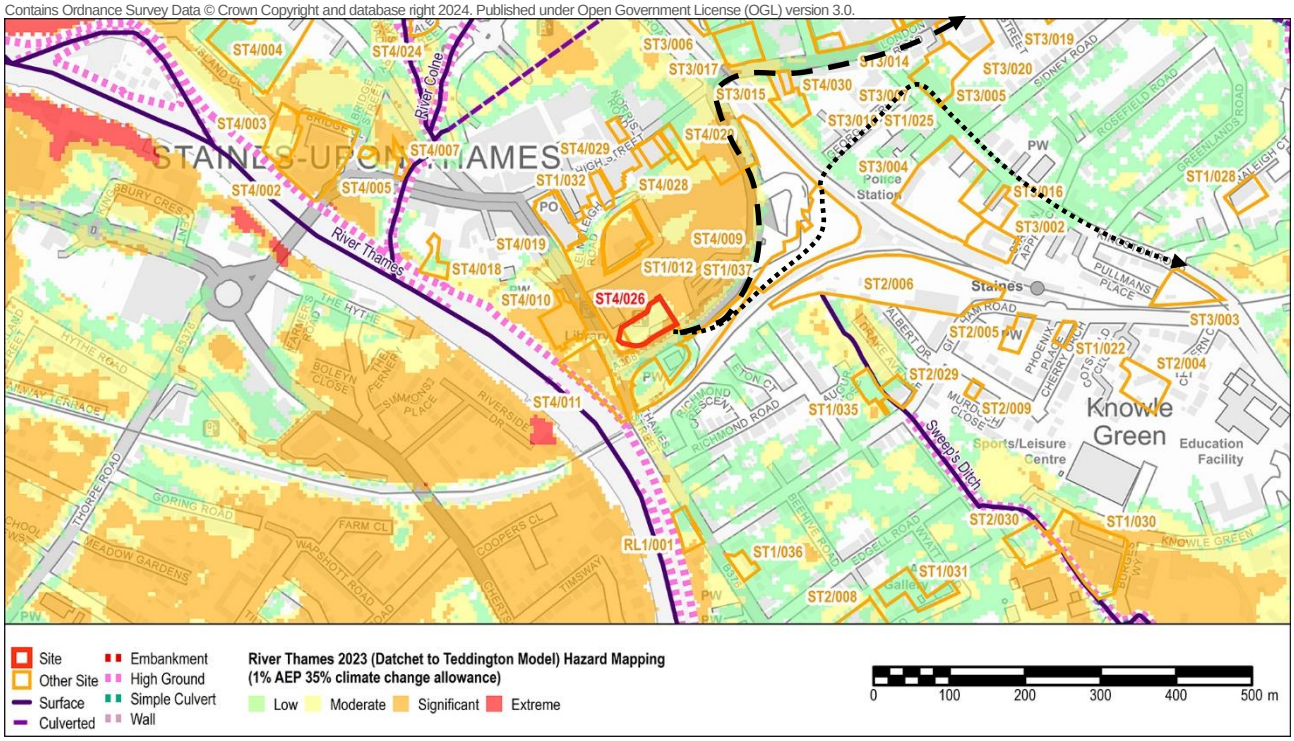


Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 24; External property flooding 0; Section 19 Flood Investigation incident 28; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST4/026: Communications House, South Street, Staines



River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

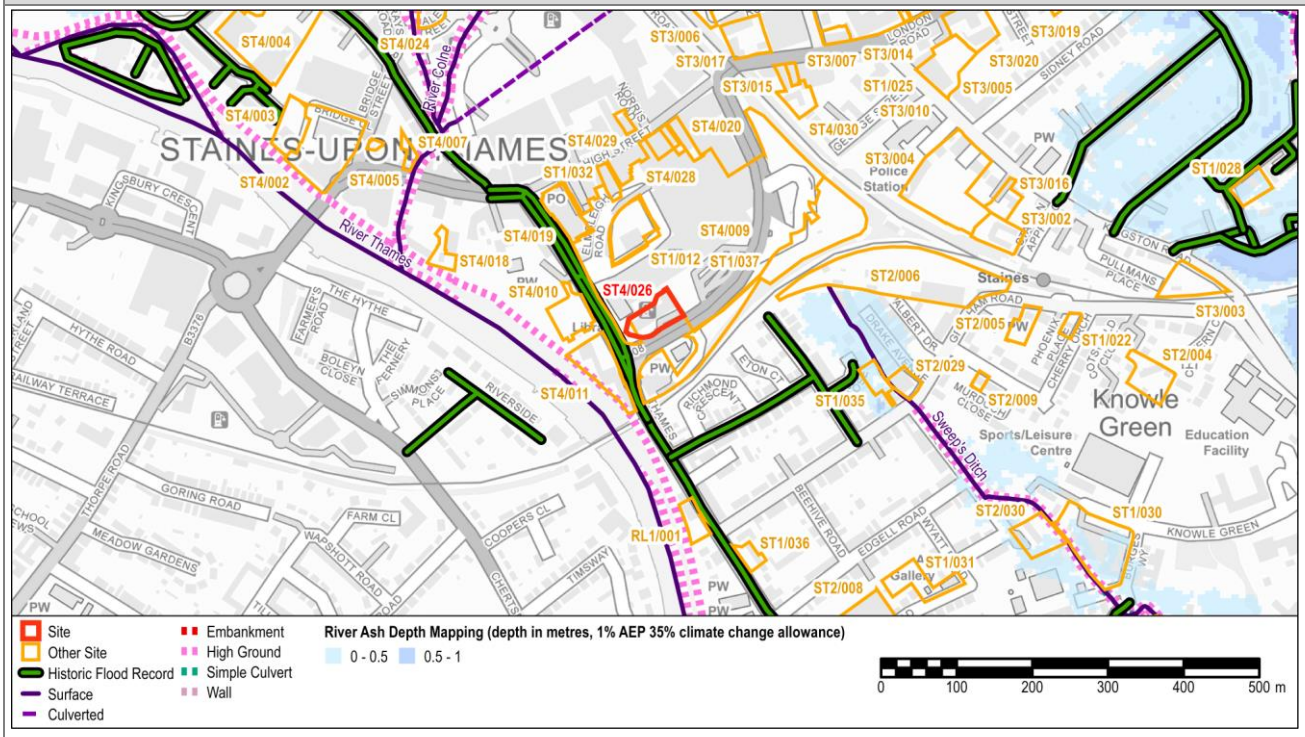


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Medium

ST4/026: Communications House, South Street, Staines



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>=75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding at surface		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	There are multiple reservoirs in the local area including Queen Mary Reservoir, Staines Reservoirs, King George VI Reservoir, Wraysbury Reservoir, Queen Mother Reservoir. The Long Term Flood Risk Map shows that this site could be at risk of flooding in the event of a breach of one of these reservoirs.

Flood Risk Summary

The majority of the site (84%) is defined as Flood Zone 3a, high probability of flooding from the River Thames. Modelling of the 1% AEP flood event including 35% climate change identifies that the site is at Moderate hazard (Danger for Some), and the surrounding area at Significant hazard (Danger for Most).
The site and surrounding area are at risk of surface water flooding and the Lead local Flood Authority SCC have records of internal and external flooding in this area. The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

East from the site, along A308 (South Street) 240m Moderate hazard, 140m Significant hazard, 25m Moderate hazard, 25m at Low hazard), beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Subject to the satisfaction of the Sequential Test, More Vulnerable (residential) development is only permitted within Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the route along the A308 are defined as Significant hazard ('Danger for Most').

ST4/026: Communications House, South Street, Staines

Any residential development on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). The site will not be available for development until Years 11-15 of the Local Plan period to allow time for provision of a safe route for access and egress. Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced.

Spelthorne BC propose to move this site to Years 11-15 of the plan period.

Other requirements for the site are:

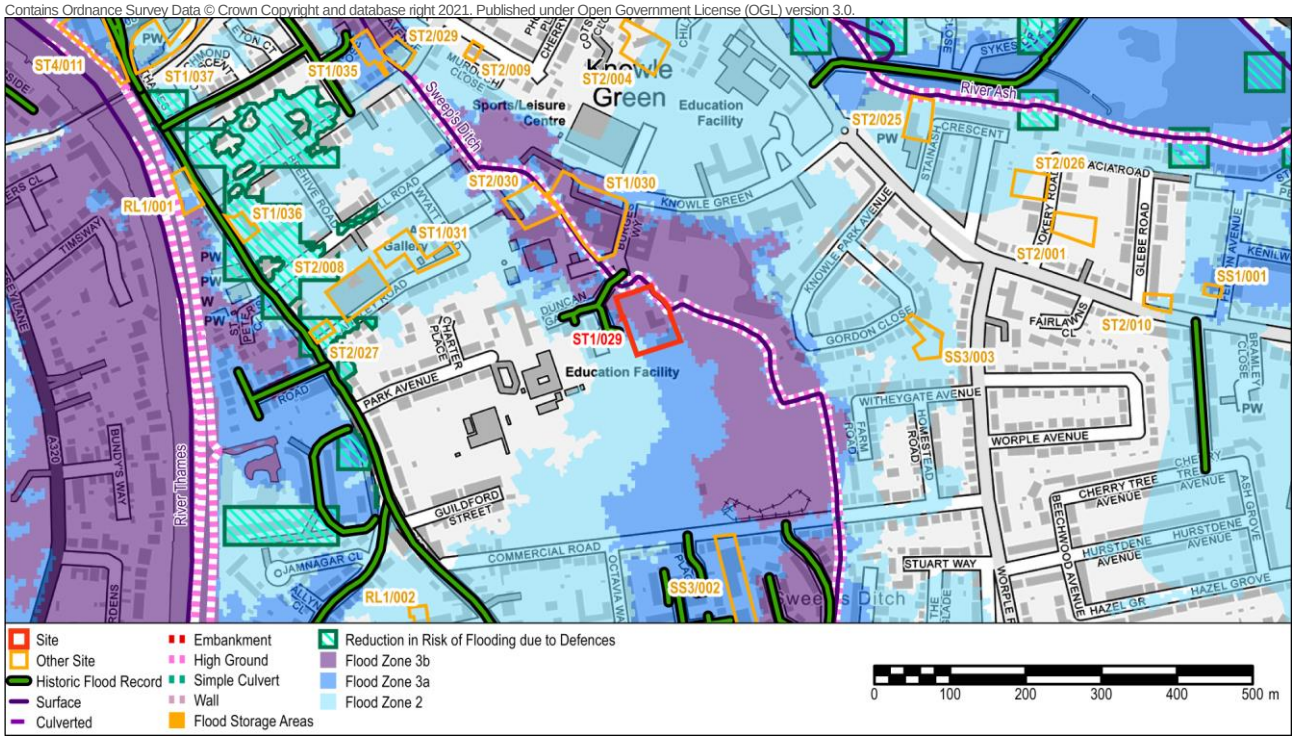
- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within several Flood Warning Areas for the Thames and River Colne. An Emergency Plan should be prepared for the site and places of safe refuge should also be identified outside the flood extent of the design event (1% AEP including climate change).
- Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report.
- Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs.

Group 10 Sites partially within Flood Zone 3b

ST1/029 Surrey CC Buildings, Burges Way

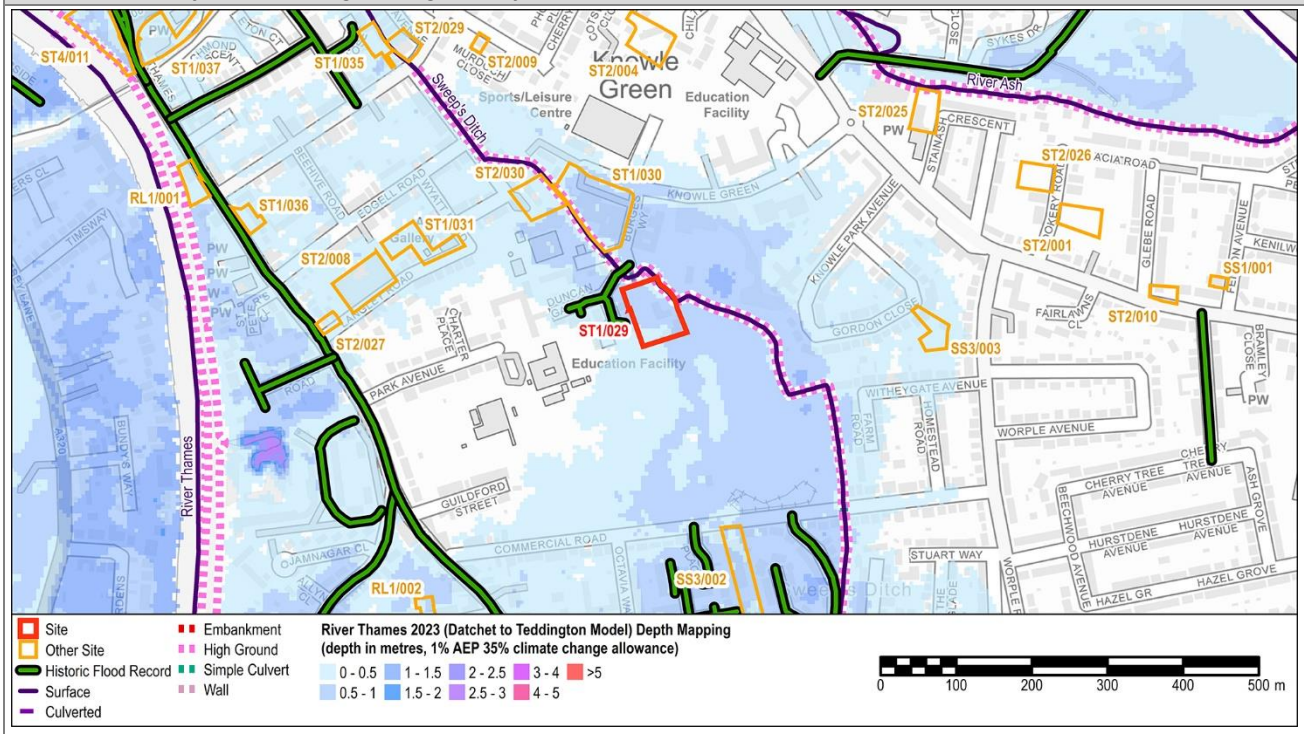
Updated Status: Removed from Local Plan.

ST1/029: Surrey CC Buildings, Burges Way				
Site ID:	ST1/029	**Area (ha):**		0.47
Proposed Use: Residential (C3): 30 units (approx.) Ground floor community units or re-provision off site.		**Vulnerability Classification:** More Vulnerable, Less Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 11%	**Flood Zone 3 (1% AEP):** 29%	**Flood Zone 3b:** 61%	**Area with reduced risk of flooding due to defences:** 0%

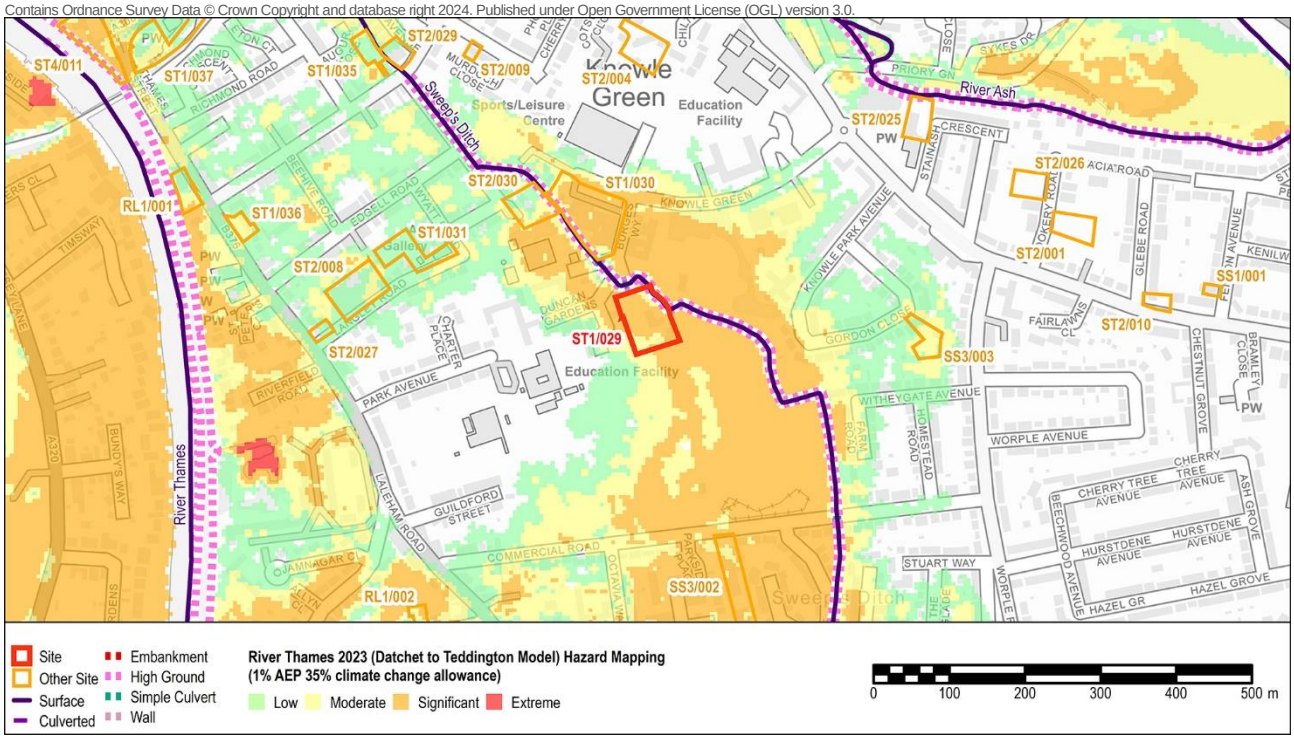


Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 42; External property flooding 8; Section 19 Flood Investigation incident 54; Surrey County Council Wetspots 3
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 15
River Flooding	

ST1/029: Surrey CC Buildings, Burges Way

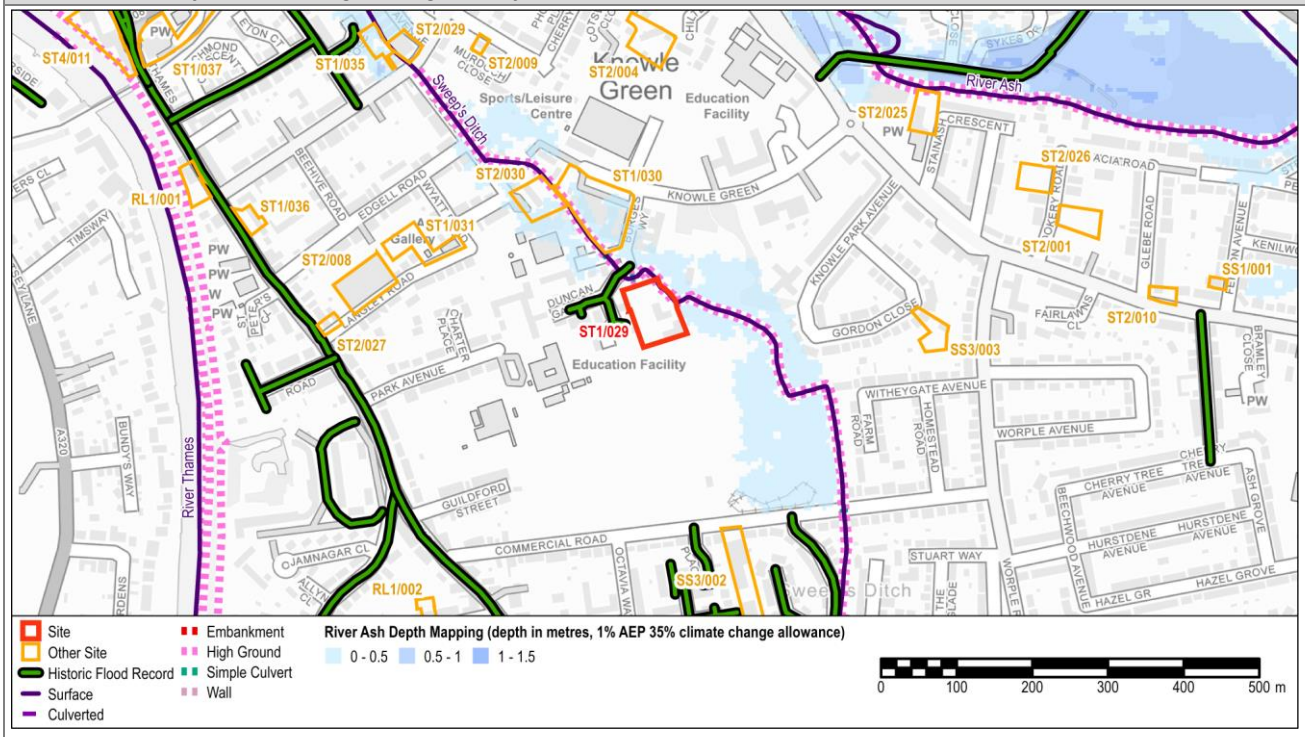


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

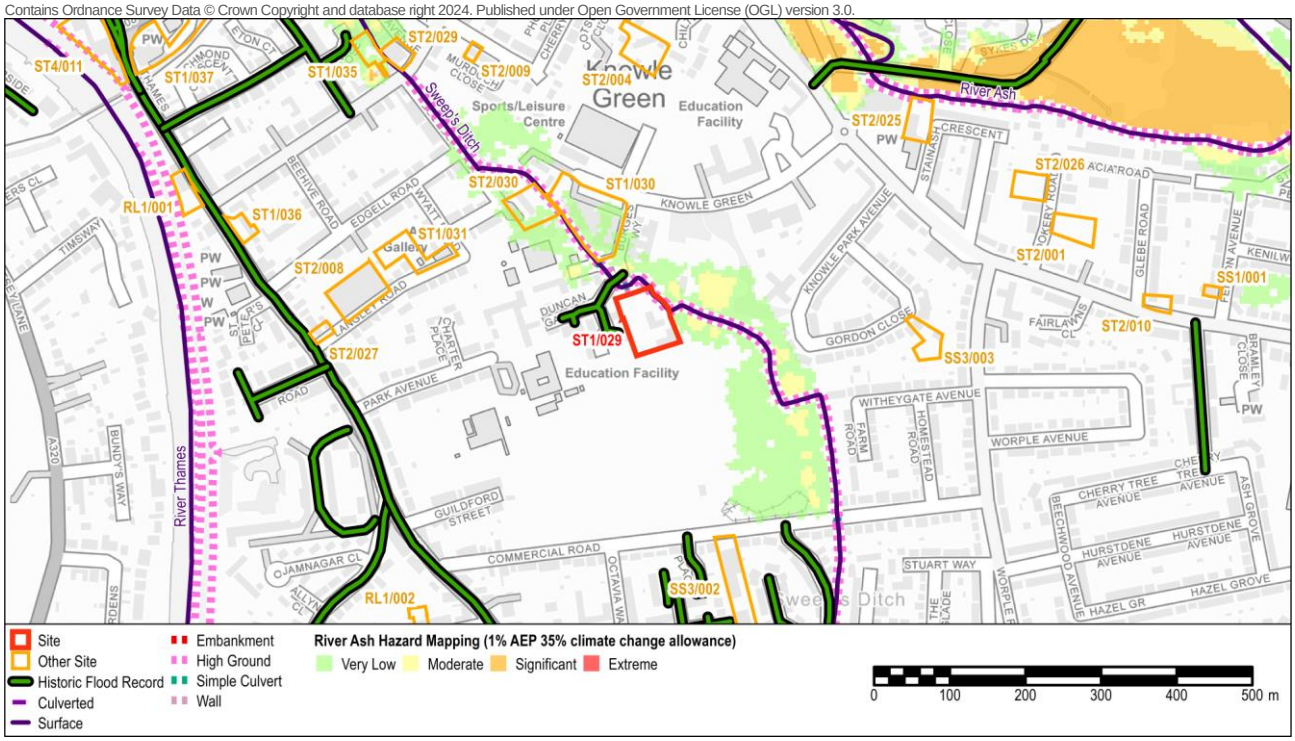


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST1/029: Surrey CC Buildings, Burges Way



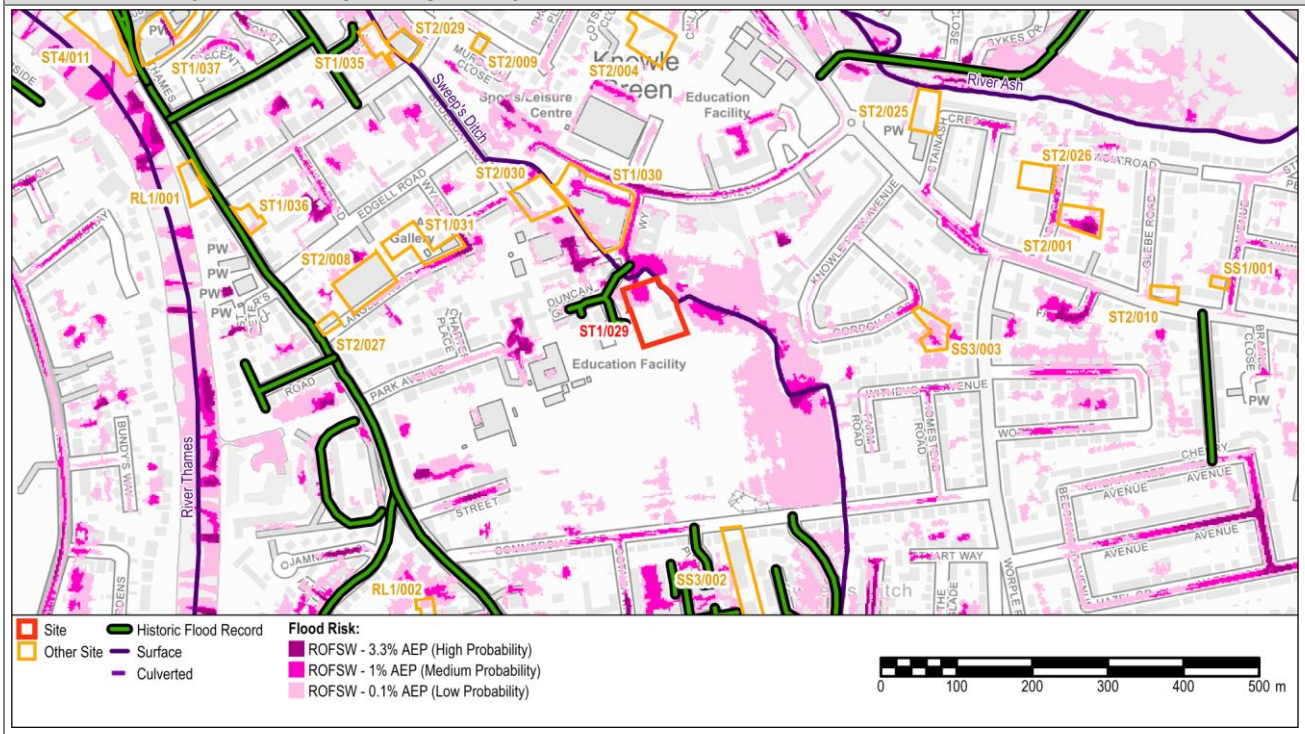
River Ash Maximum Flood Depth 1% AEP plus 35% climate change



River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

ST1/029: Surrey CC Buildings, Burges Way



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Sand and Gravel
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

Sweep's Ditch, a tributary of the River Thames, flows along the north eastern edge of the site. The River Thames flows south approximately 580m to the west of the site. The majority of the site (61%) is defined as Flood Zone 3b Functional Floodplain.
Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicate flood depths of 0-1m on the site. This increases to up to 1.5m in the east. The hazard rating is Moderate to Significant (Danger for Most).
The area to the north, east and southeast of the site is shown to be at risk of flooding from the River Ash, but the site itself is not at risk from these sources during the 1% AEP including 35% climate change allowance.
The Risk of Flooding from Surface Water Map shows that the site is at Low to Medium risk of flooding in the north.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

North from the site along Burgess Way 130m Significant hazard. East onto Knowle Green 85m Significant hazard, 105m Moderate hazard, 90m Low hazard, 40m not at risk of flooding. South east along Kingston Road 1.75km not at risk of flooding. East along B377 before junction with A308 45m Low hazard. A308 not at risk of flooding.

Site Specific Recommendations

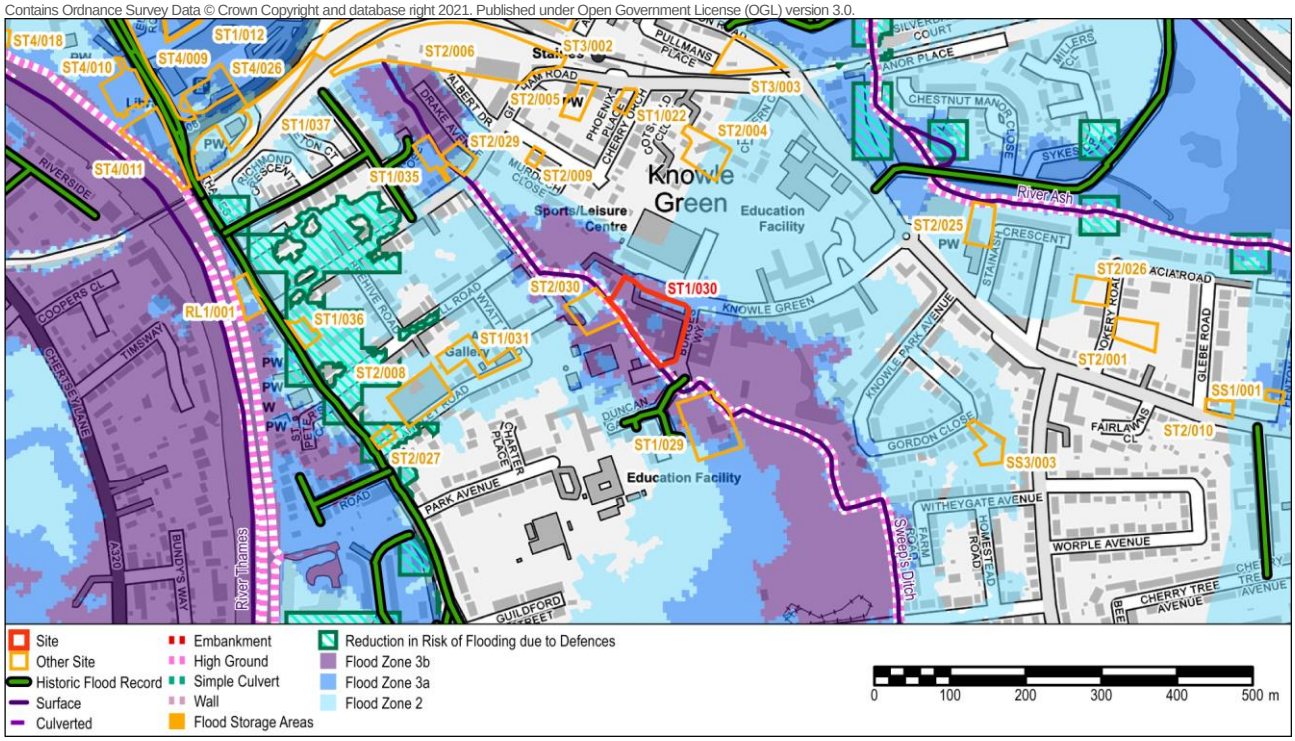
Development is not permitted in areas of Flood Zone 3b Functional Floodplain. This part of the site should be retained as floodplain and steps taken to restore the flood storage function of the site and a more natural edge of the River Thames. The main access route for this site along Burges Way is shown to have a hazard rating of Significant (Danger for Most) during the design event (1% AEP including climate change) and is therefore not an appropriate safe access/egress route once floodwaters have advanced.

Spelthorne BC have removed this site from their Local Plan.

ST1/030 Fairways Day Centre

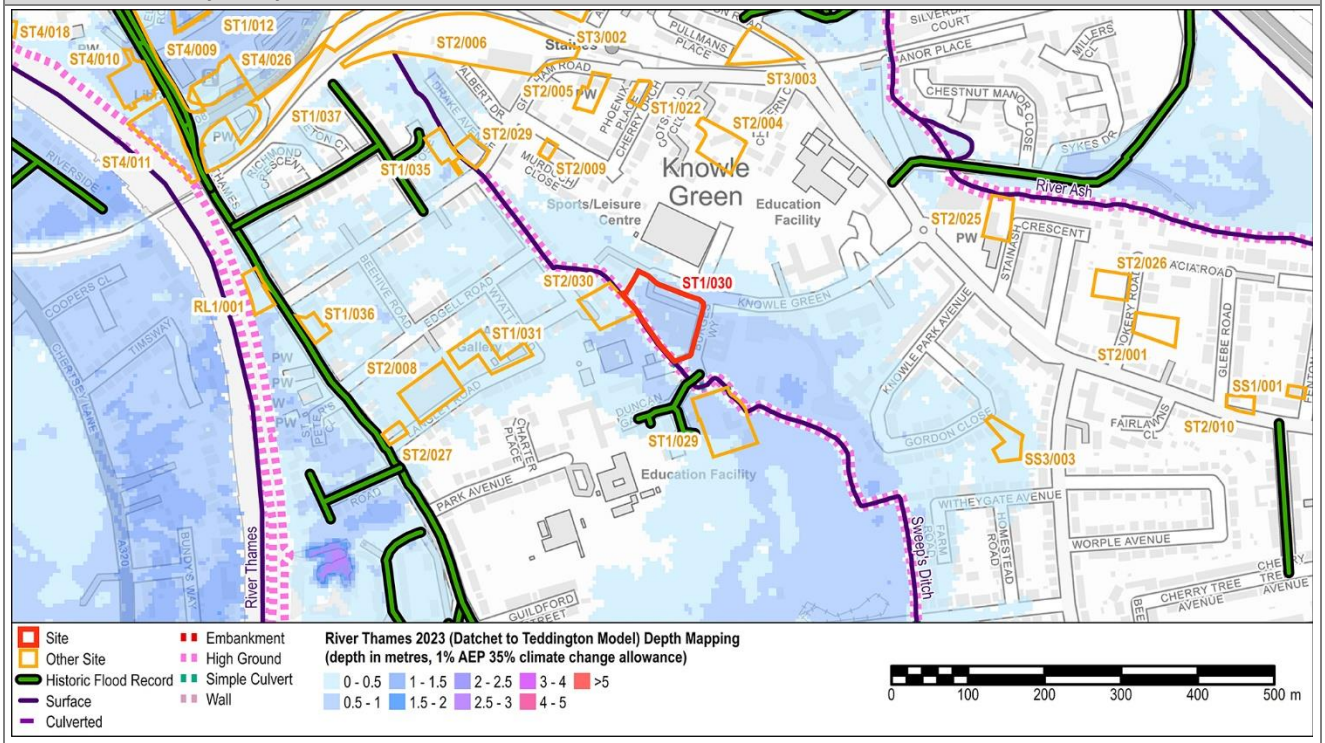
Updated Status: Removed from Local Plan.

ST1/030: Fairways Day Centre, Knowle Green, TW18 1AJ				
Site ID:	ST1/030	**Area (ha):**		0.36
Proposed Use: Residential (30 units), Ground floor community units or re-provision off site.			**Vulnerability Classification:** More Vulnerable, Less Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 4%	**Flood Zone 3 (1% AEP):** 15%	**Flood Zone 3b:** 81%	**Area with reduced risk of flooding due to defences:** 0%

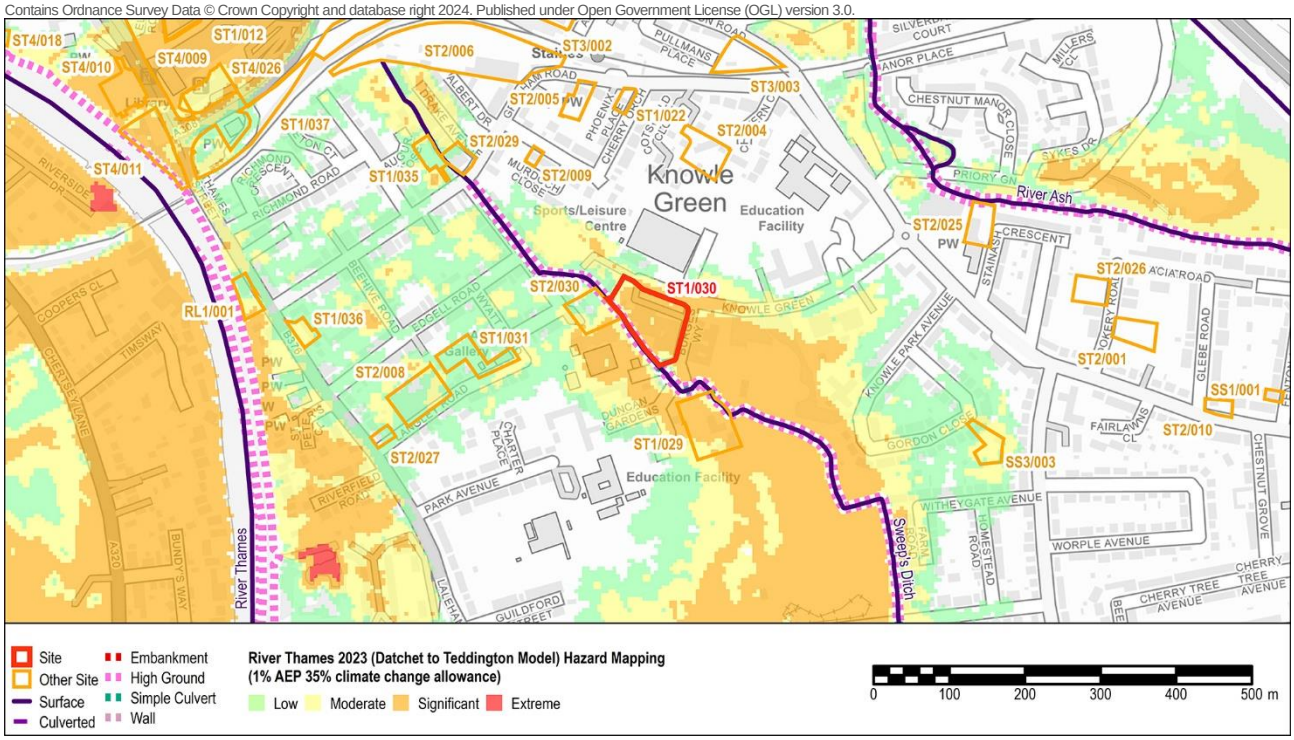


Flood Zones and Flood Records	
Flood Warning Area	River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06MarchSpring1947, EA06Winter13-14
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 66; External property flooding 2; Section 19 Flood Investigation incident 62; Surrey County Council Wetspots 4
Sewer flooding records within the post code area in which the site is located:	Internal 2; External 15
River Flooding	

ST1/030: Fairways Day Centre, Knowle Green, TW18 1AJ

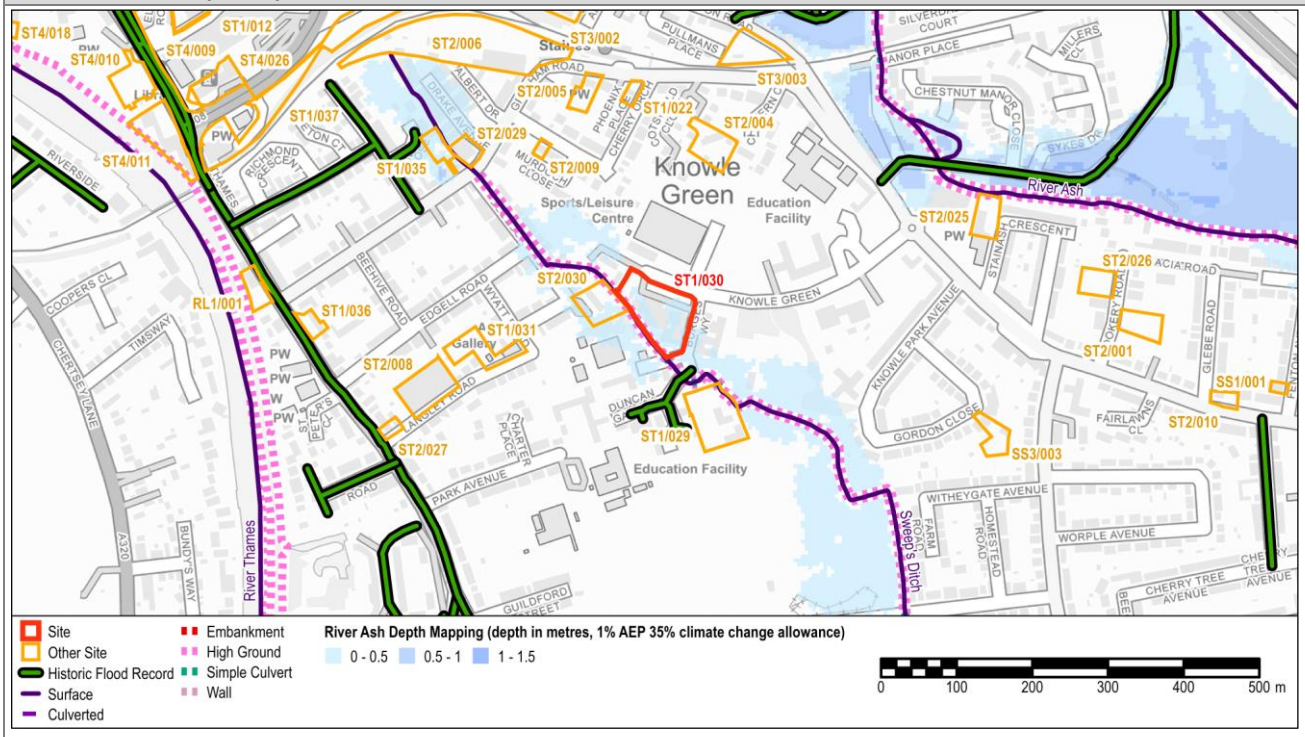


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

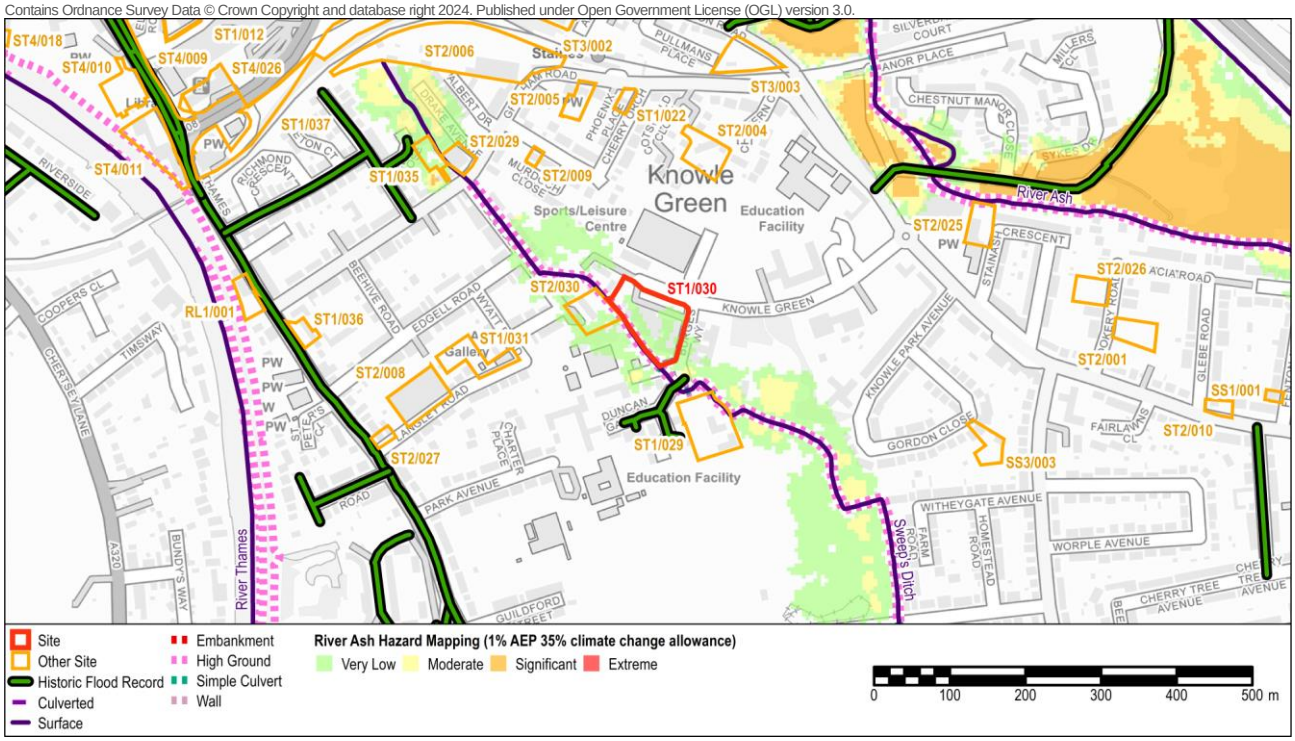


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST1/030: Fairways Day Centre, Knowle Green, TW18 1AJ



River Ash Maximum Flood Depth 1% AEP plus 35% climate change

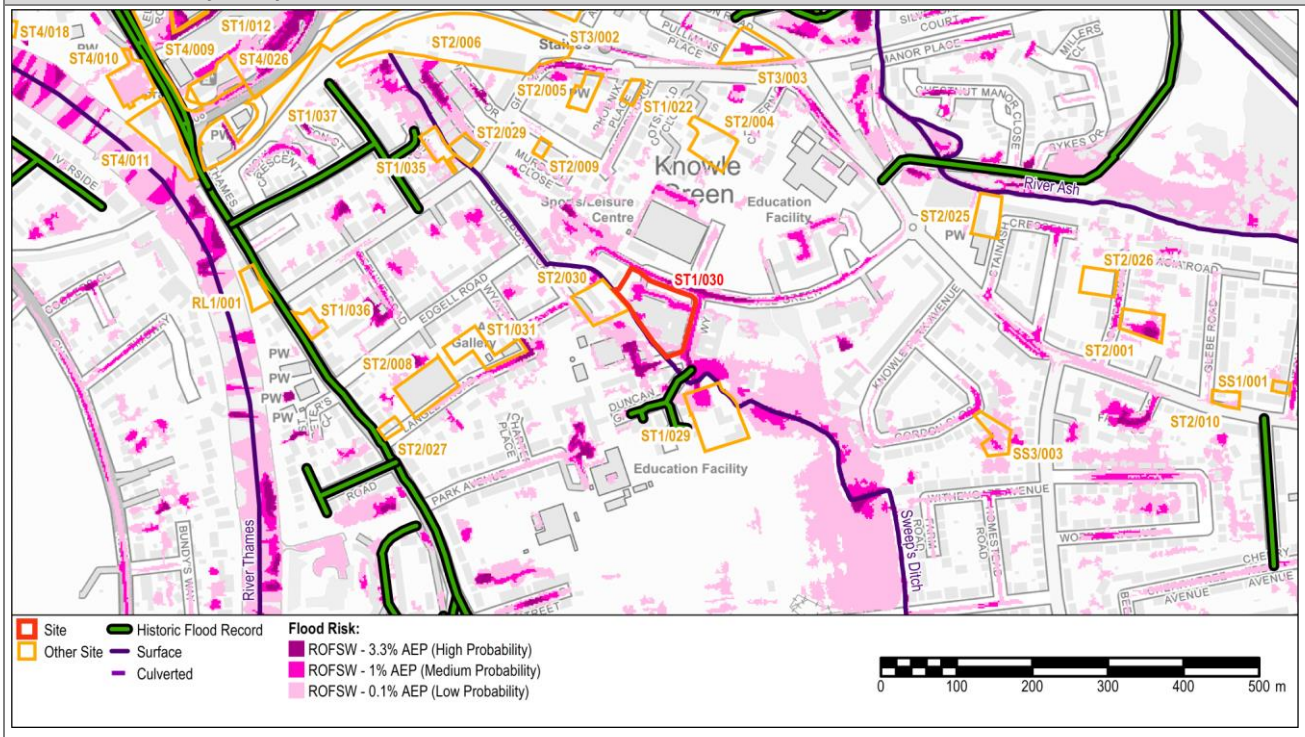


River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Medium

ST1/030: Fairways Day Centre, Knowle Green, TW18 1AJ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand

Areas Susceptible to Groundwater Flooding	>75%
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.
Aquifer Designation	Secondary A, Secondary A

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

Sweep's Ditch flows along the western boundary of the site. The River Thames flows south approximately 580m to the west of the site. The majority of the site (81%) is defined as Flood Zone 3b with the remaining defined as Flood Zone 3a (25%) and Flood Zone 2 (2%). Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicates flood depths of 0.5-1m. The hazard rating for the site is Significant (Danger for Most).
The site is also shown to be at risk of flooding from the Thames Tributaries and River Ash, with flood depths of 0-0.5m and a corresponding hazard rating of Low.
The Risk of Flooding from Surface Water Map shows the site to be at Low to Medium risk of flooding in the north, south and east of the site.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

Along the northern edge of the site, heading east along Knowle Green 140m Significant hazard, 105m Moderate hazard, 90m Low hazard, 40m not at risk of flooding. South east along Kingston Road 1.75km not at risk of flooding. East along B377 before junction with A308 45m Low hazard. A308 not at risk of flooding.

Site Specific Recommendations

The majority of this site is located in the flood extent for the 3.3% AEP (1 in 30 year) event.

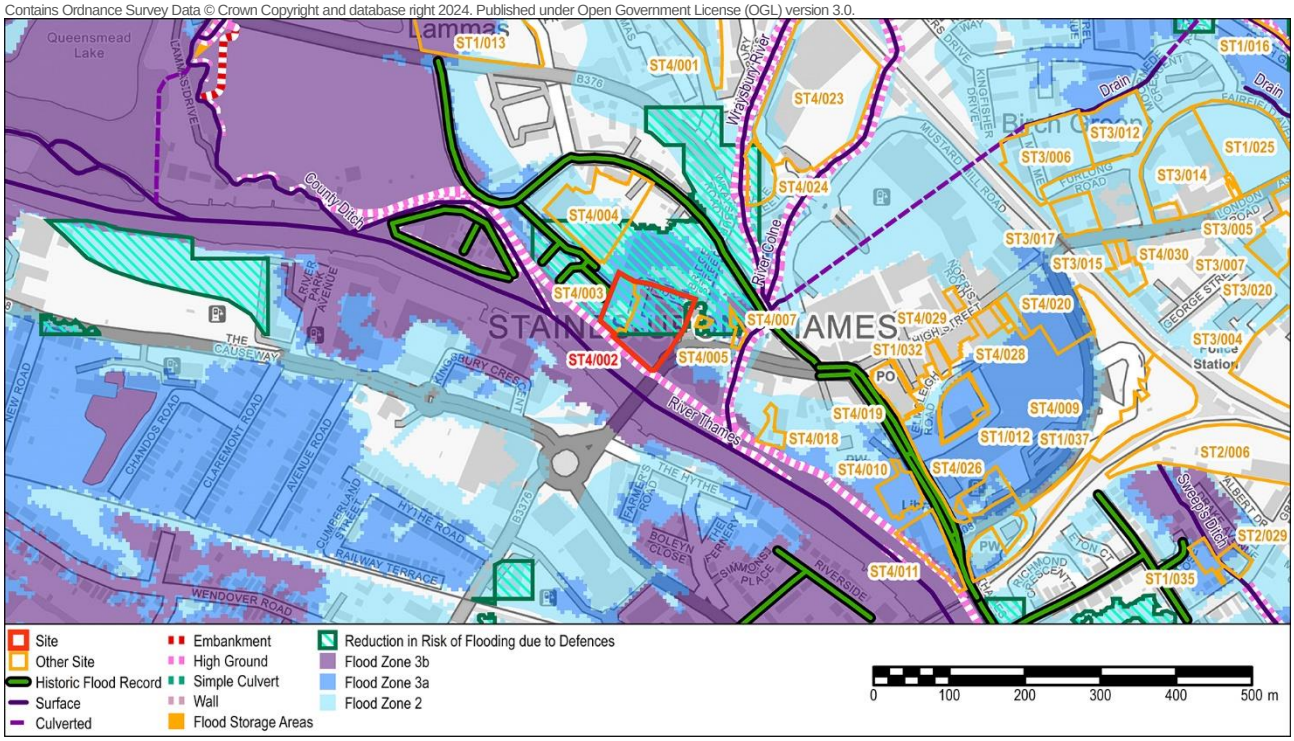
The Level 1 SFRA states that within the 3.3% AEP (1 in 30 year) event, existing infrastructure or solid buildings that resist water ingress are not included within the definition of Flood Zone 3b Functional Floodplain and the associated planning requirements do not apply. However, redevelopment is not permitted that will increase the vulnerability classification of the development and the number of occupants on the site. It is therefore considered that redevelopment of this site to include residential uses is not appropriate.

Spelthorne BC have removed this site from the Local Plan.

ST4/002 (Bridge Street Car Park, Hanover House & Sea Cadet Building, Bridge Street, Staines)

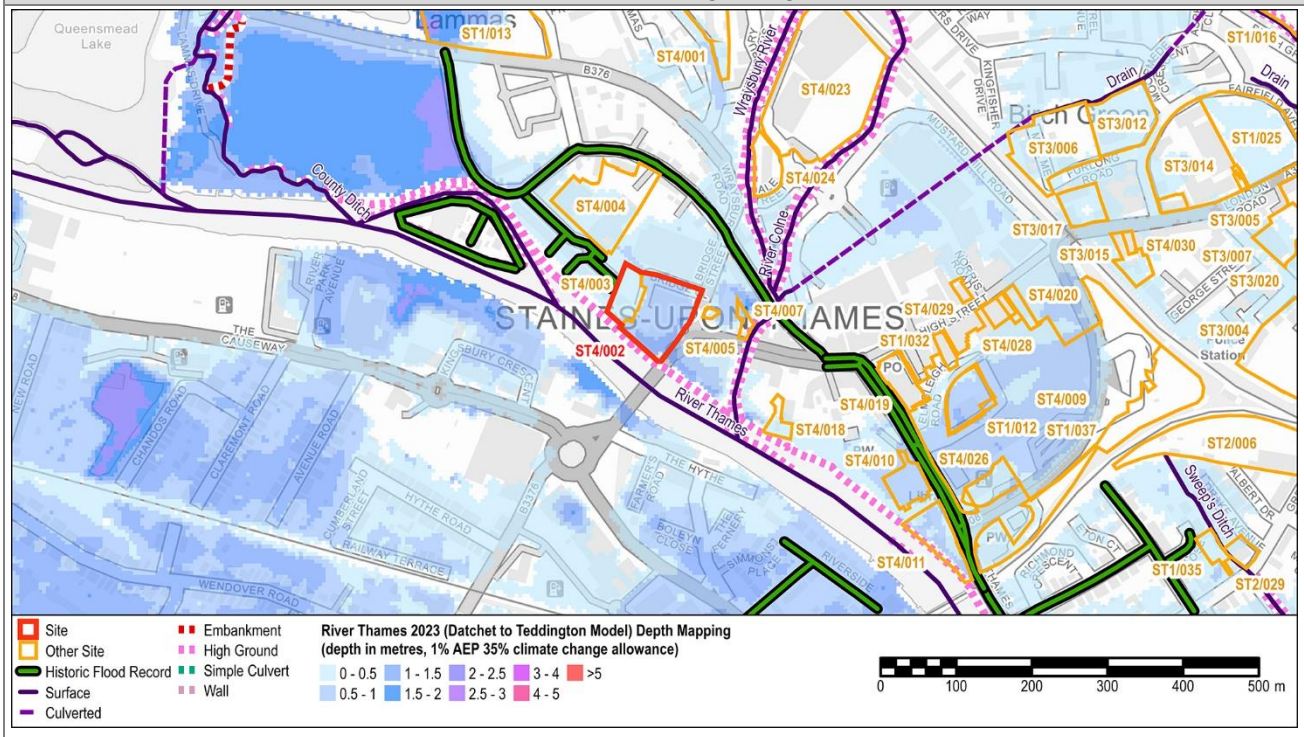
Updated Status: Removed from Local Plan.

ST4/002: Car Park, Hanover House and Sea Cadet Building, Bridge Street, TW18 4TG				
Site ID: ST4/002		**Area (ha):** 0.92		
Proposed Use: Leisure/Recreation to include Hotel		**Vulnerability Classification:** More Vulnerable		
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 1%	**Flood Zone 2 (0.1% AEP):** 10%	**Flood Zone 3 (1% AEP):** 41%	**Flood Zone 3b:** 48%	**Area with reduced risk of flooding due to defences:** 74%

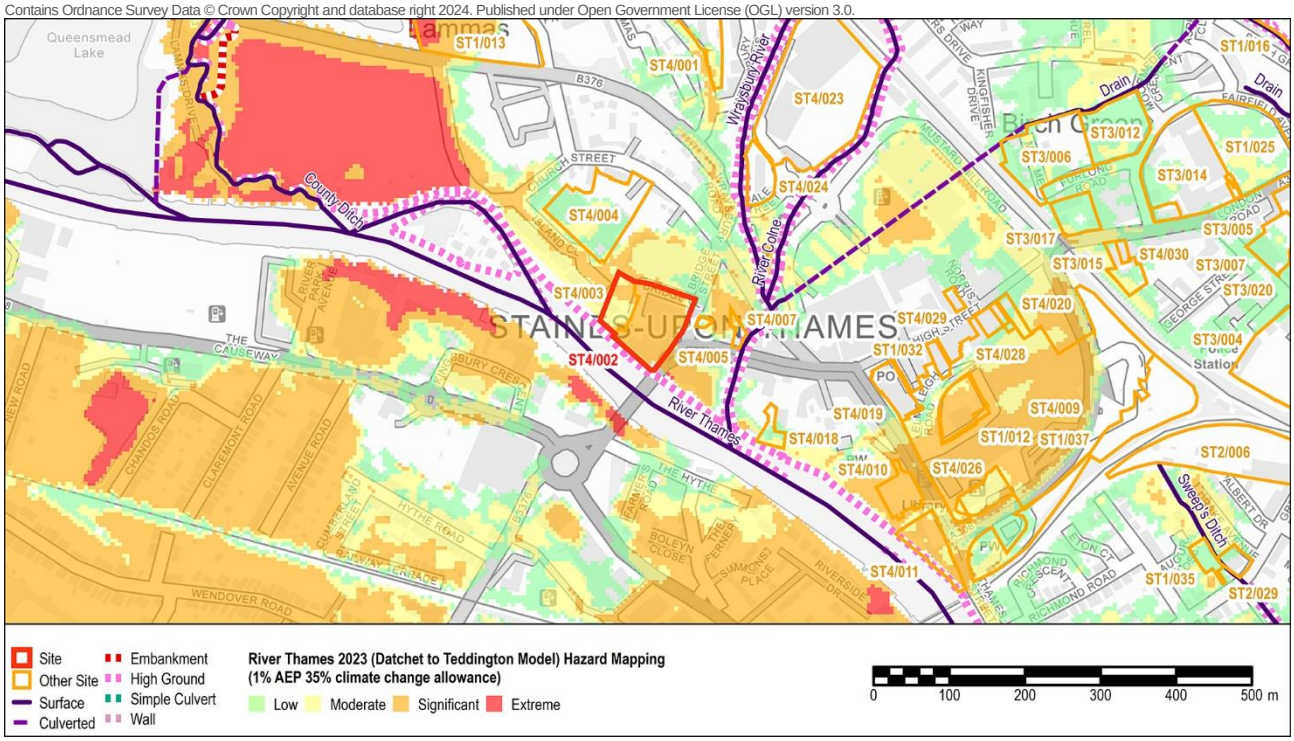


Flood Zones and Flood Records	
Flood Warning Area	Properties closest to the River Thames between Runnymede Pleasure Grounds, Staines and Penton Hook, River Colne and Frays River at West Drayton and Stanwell Moor, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06DecemberWinter2000, 06JanuaryNewYear2003, 06MarchSpring1947, EA06Winter13-14
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 6; External property flooding 0; Section 19 Flood Investigation incident 16; Surrey County Council Wetspots 2
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST4/002: Car Park, Hanover House and Sea Cadet Building, Bridge Street, TW18 4TG

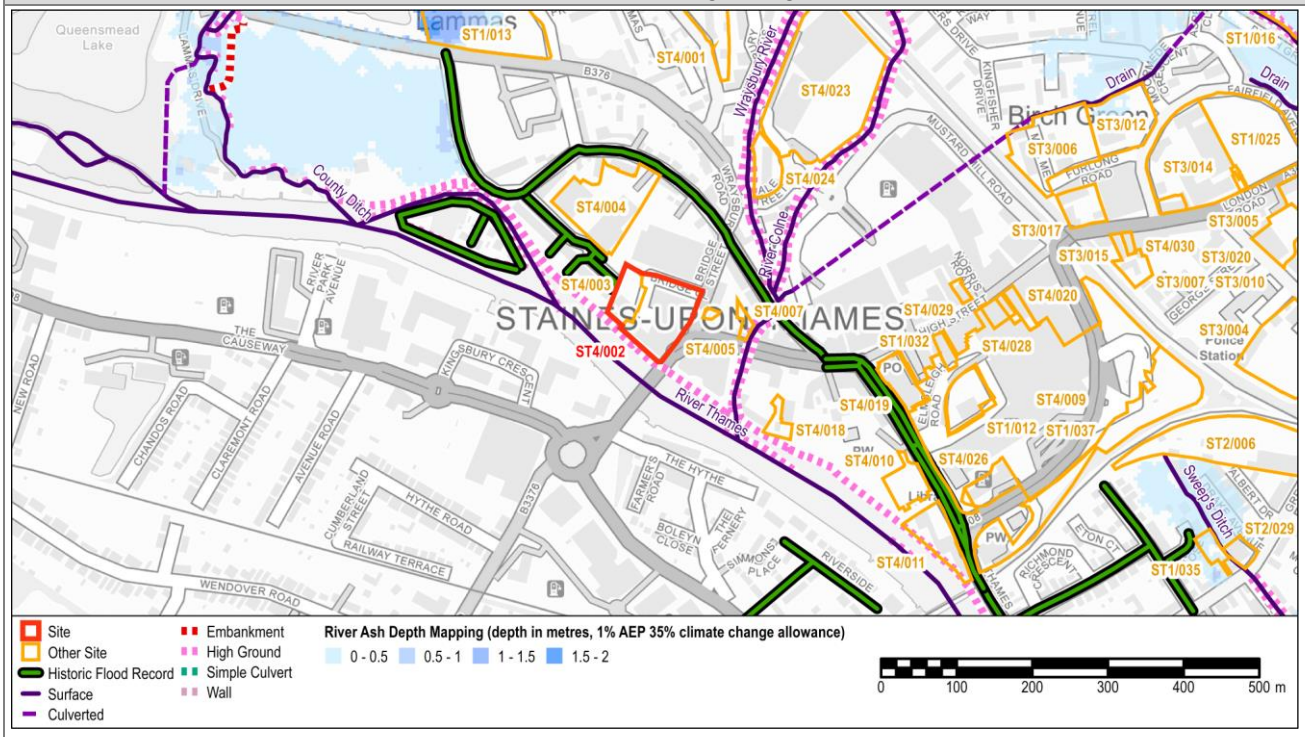


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

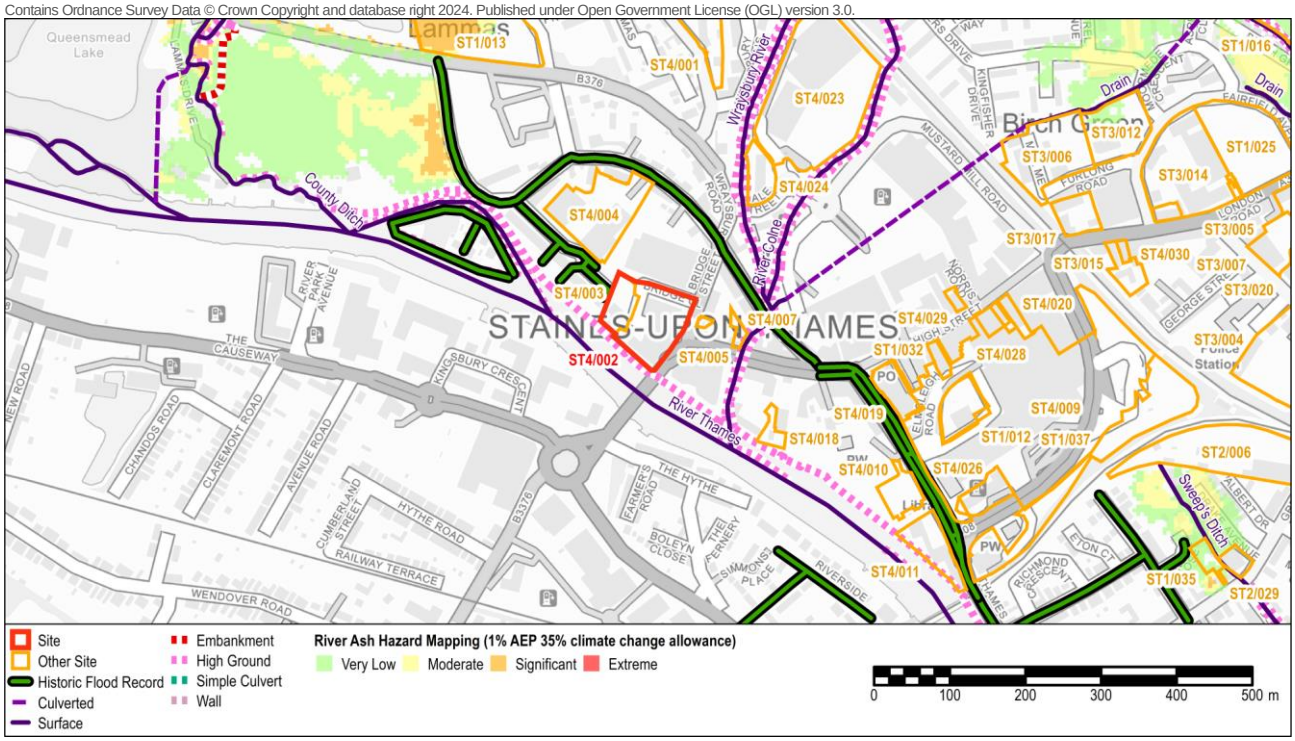


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/002: Car Park, Hanover House and Sea Cadet Building, Bridge Street, TW18 4TG

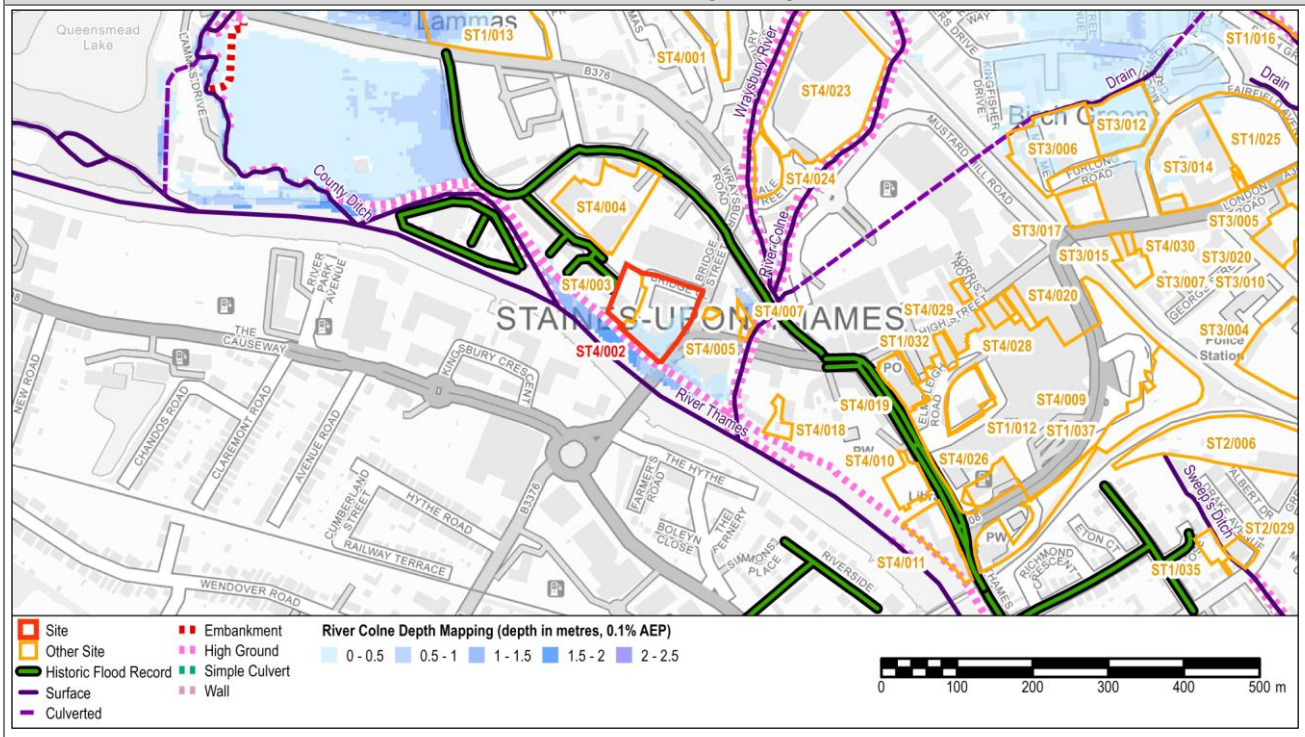


River Ash Maximum Flood Depth 1% AEP plus 35% climate change



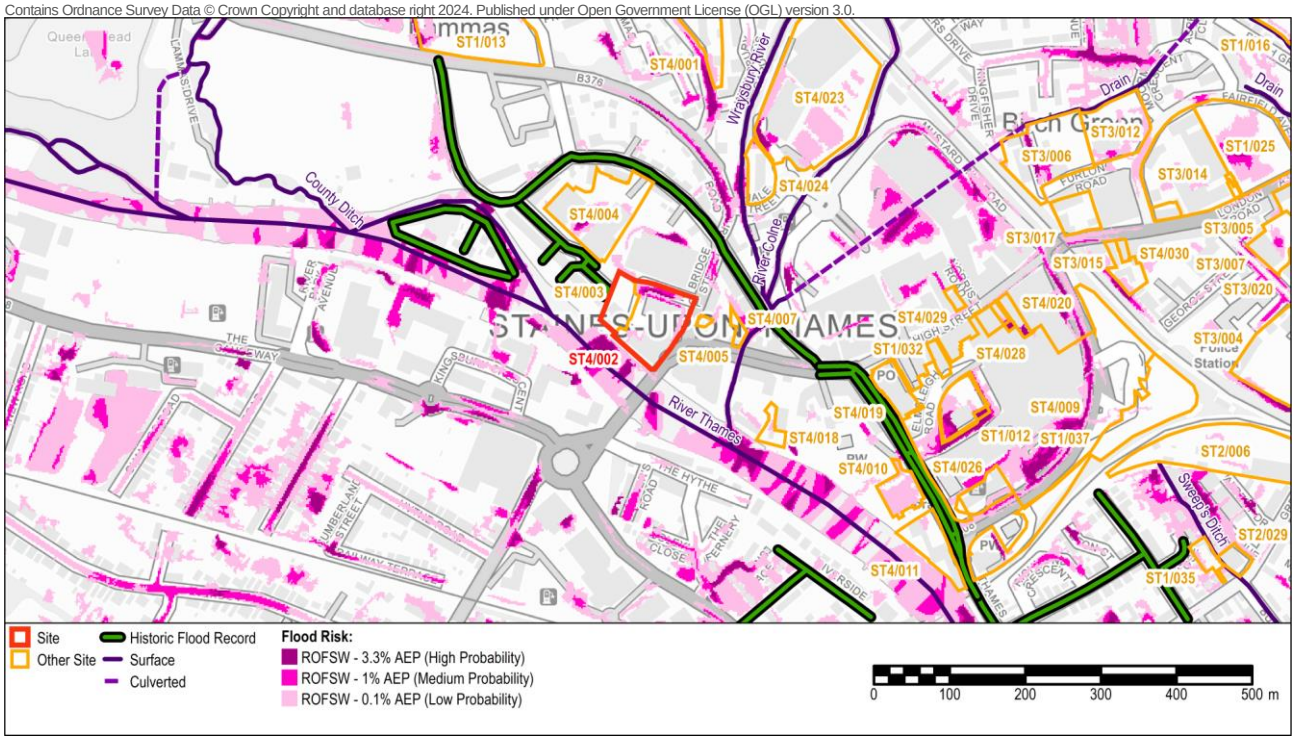
River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/002: Car Park, Hanover House and Sea Cadet Building, Bridge Street, TW18 4TG



River Colne Maximum Flood Depth 0.1% AEP

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		
Other Sources			

ST4/002: Car Park, Hanover House and Sea Cadet Building, Bridge Street, TW18 4TG	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the Wraysbury Reservoir or King George VI Reservoir.

Flood Risk Summary

The River Thames flows along the south of the site. The majority of the site (41%) is defined as Flood Zone 3 High probability of flooding from rivers. 48% of the site is defined as Flood Zone 3b Functional Floodplain. 74% of the site area is shown to be at reduced risk of flooding due to defences is during the 1% AEP event.
Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change, indicates flood depths on the site of 0-1.5m. The hazard rating is Moderate to Significant, meaning 'Danger for Most'.
The Risk of Flooding from Surface Water Map shows areas to the south and east to be at Low risk, with areas in the north Medium to High. The risk of flooding from surface water is likely to increase in the future due to the impacts of climate change.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, indicates that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

Bridge Close on the northern boundary of the site at Significant hazard. South on to Bridge Street and then the A308 Clarence Street not at risk of flooding. East along High Street 280m not at risk of flooding, 45m Low hazard, 40m Moderate hazard, 25m Low hazard, beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

The site lies within the urban area. It is occupied by Bridge Street Car Park and the former Staines and Egham Group Sea Cadets building which originates from the 1980s. The car park comprises two levels of parking, of which the first-floor deck is broadly level with the adjacent Staines Bridge approach Road. The Cadets building is two storeys, located to the west of the car park and faces the River Thames. These areas are located within Flood Zone 3b Functional Floodplain. Hanover House is an office building located further west. It is two storeys in height with a traditional pitched roof design, with an area of hardstanding for parking to the rear. This area is within Flood Zone 3a, and the car parking to the rear is partially within Flood Zone 3b Functional Floodplain.

Development is not permitted in areas of Flood Zone 3b Functional Floodplain. This part of the site (48%) should be retained as floodplain and steps taken to restore the land to provide a more natural edge of the River Thames.

Subject to the satisfaction of the Sequential Test, More Vulnerable (hotel) development is only permitted within Flood Zone 3 where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

The key requirement to deliver safe development on this site, is providing safe access (that is dry or at low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP) including an allowance for climate change. The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the route along the A308 are defined as Significant hazard ('Danger for Most').

Any More Vulnerable development (e.g. hotel) on the site will be subject to providing safe access (dry, or Low hazard) for occupants to an area outside the floodplain during the design flood event (1% AEP). Significant infrastructure would need to be in place to reduce the risk and ensure a safe access and egress can be provided and maintained during flood events. Any necessary infrastructure to be provided by the developer must be in place before any built development can commence on the site or in accordance with a timetable to be agreed with the Local Planning Authority, (and secured by a legal agreement to ensure the infrastructure to be provided on the site and be part of the allocation for its lifetime). An emergency evacuation plan will be developed in close consultation with Emergency Planning to ensure the safety of occupants before permission is granted.

In order to ensure that future development does not increase the risk of flooding to the surrounding areas, the built footprint of the new development within the design flood extent should not exceed that of the existing building and where possible should be reduced. As the current development comprises a mixture of car parking and buildings, this is likely to limit the number of units that can be delivered on the site.

Other requirements for the site are:

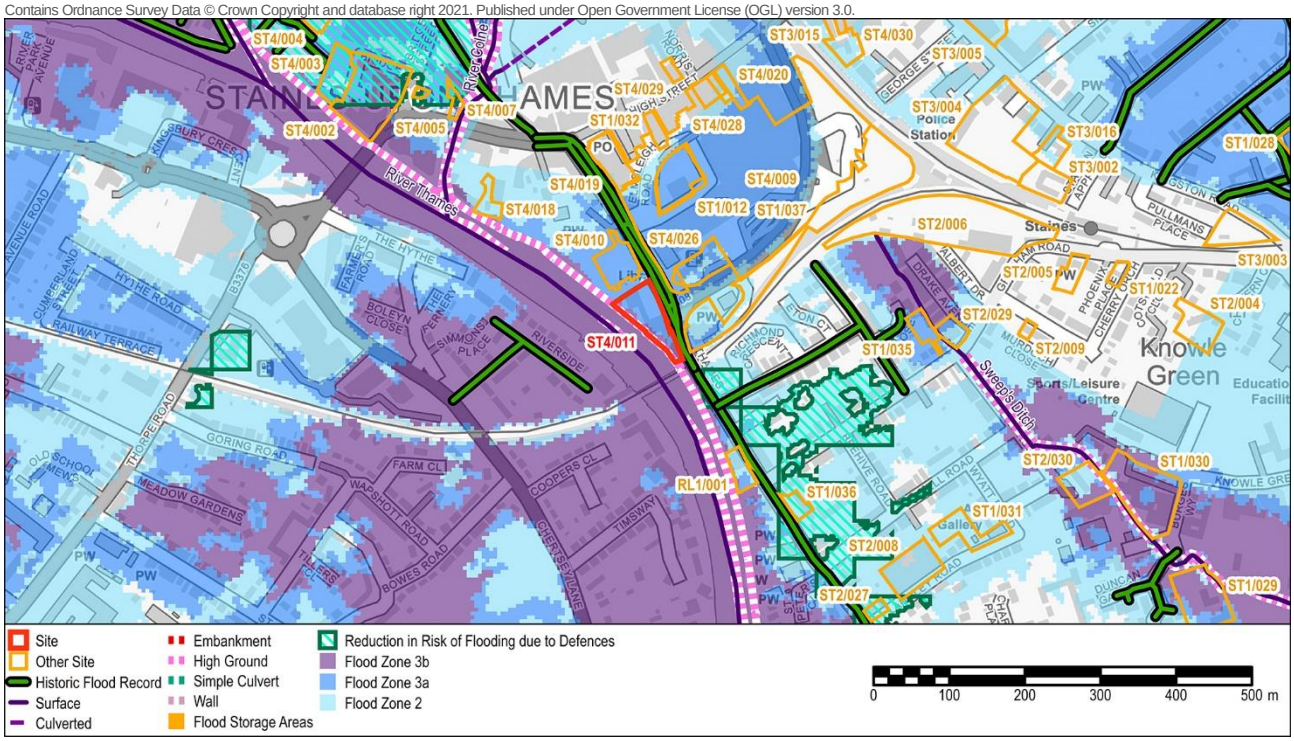
- Finished floor levels must be set 300mm above the design flood level (1% AEP including climate change).
- The site is located within several Flood Warning Areas for the Thames and River Colne. An Emergency Plan should be prepared for the site and places of safe refuge should also be identified outside the flood extent of the design event (1% AEP including climate change).
- Runoff from the site will need to be reduced to greenfield or less where possible. Development proposals for the site should demonstrate sustainable approaches to the management of surface water making use of SuDS including green roofs, rainwater harvesting and other innovative technologies; and incorporate soft landscaping, planting and permeable surfacing.
- Development proposals for the site should seek to implement flood resilience measures.
- A preliminary Hydrogeological Risk Assessment (HRA) should be undertaken to determine ground conditions and groundwater levels in proximity to the site, and to identify whether the proposed development will impact on groundwater, either from

ST4/002: Car Park, Hanover House and Sea Cadet Building, Bridge Street, TW18 4TG
subsurface construction or from changes to surface water drainage. Should the preliminary HRA identify potential for impact, a full HRA should be prepared to identify proposed mitigation measures. Refer to Section 5.7 in the Level 1 SFRA Report. • Site proposals need to consider emergency planning requirements relating to residual risk from Reservoirs. **Due to the constraints posed by the risk of flooding, Spelthorne BC have removed this site from the Local Plan.**

ST4/011 (Thames Lodge Hotel, Thames Street, Staines)

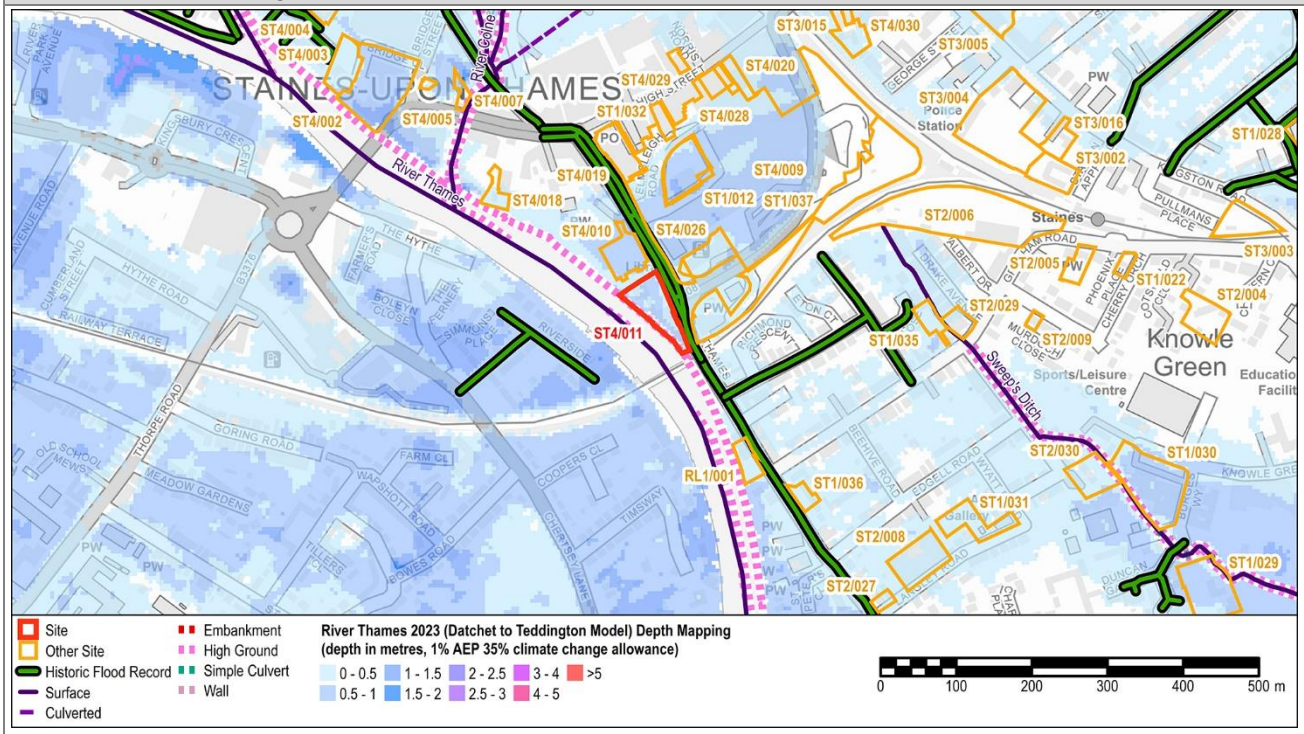
Updated Status: Removed from Local Plan.

ST4/011: Thames Lodge, Thames Street, TW18 4SJ				
Site ID:	ST4/011	**Area (ha):**		0.36
Proposed Use: Residential (C3): 40 units (approx.) (net) Café/ Commercial (Class E): 150 sqm (approx.)			**Vulnerability Classification:** More Vulnerable, Less Vulnerable	
Flood Zones and Historic Flooding				
Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 70%	**Flood Zone 3b:** 30%	**Area with reduced risk of flooding due to defences:** 0%

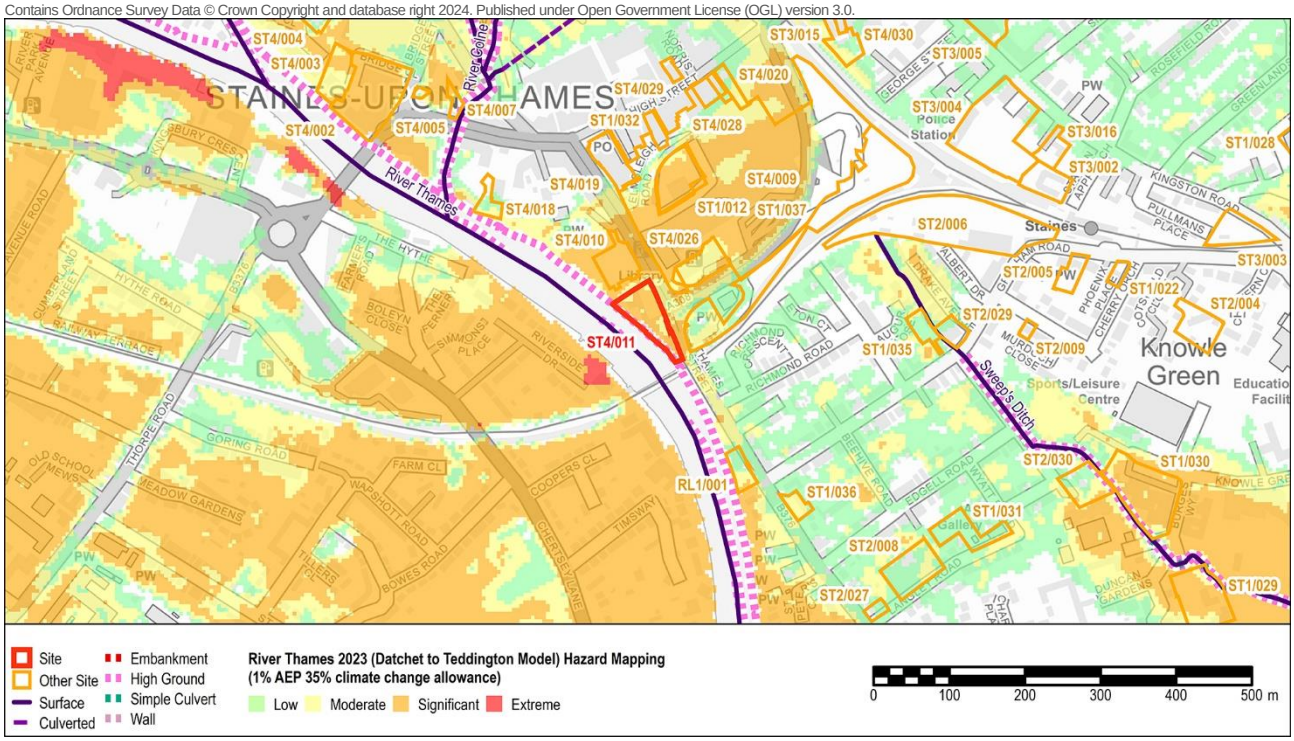


Flood Zones and Flood Records	
Flood Warning Area	Properties closest to the River Thames between Runnymede Pleasure Grounds, Staines and Penton Hook, River Thames at Staines and Egham
Recorded River Flooding Outlines in which the site is located:	06DecemberWinter2000, 06JanuaryNewYear2003, 06MarchSpring1947, EA06Winter13-14
Road locations within 500m of the site, along which there have been reported incidents of flooding from surface water, groundwater or ordinary watercourses:	Internal property flooding 32; External property flooding 2; Section 19 Flood Investigation incident 30; Surrey County Council Wetspots 1
Sewer flooding records within the post code area in which the site is located:	Internal N/A; External N/A
River Flooding	

ST4/011: Thames Lodge, Thames Street, TW18 4SJ

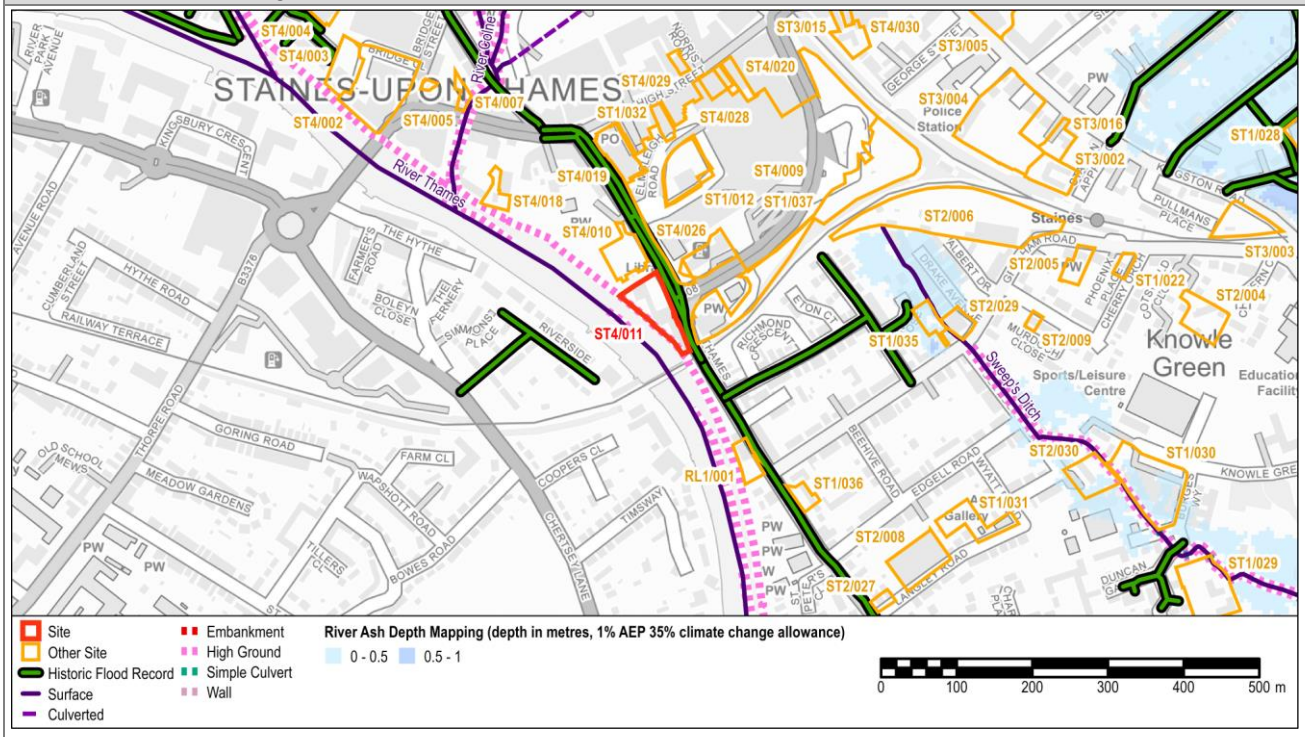


River Thames (Thames Dominated) Maximum Flood Depth 1% AEP plus 35% climate change

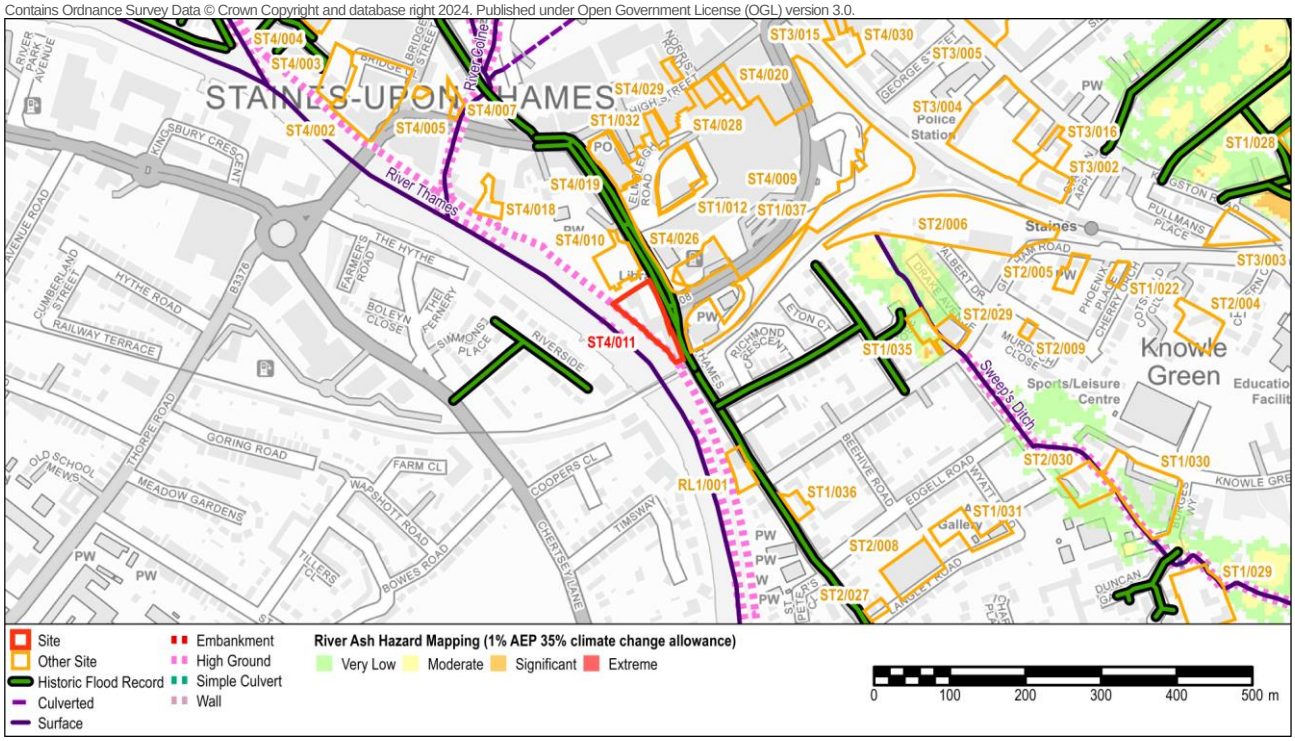


River Thames (Thames Dominated) Maximum Flood Hazard 1% AEP plus 35% climate change

ST4/011: Thames Lodge, Thames Street, TW18 4SJ



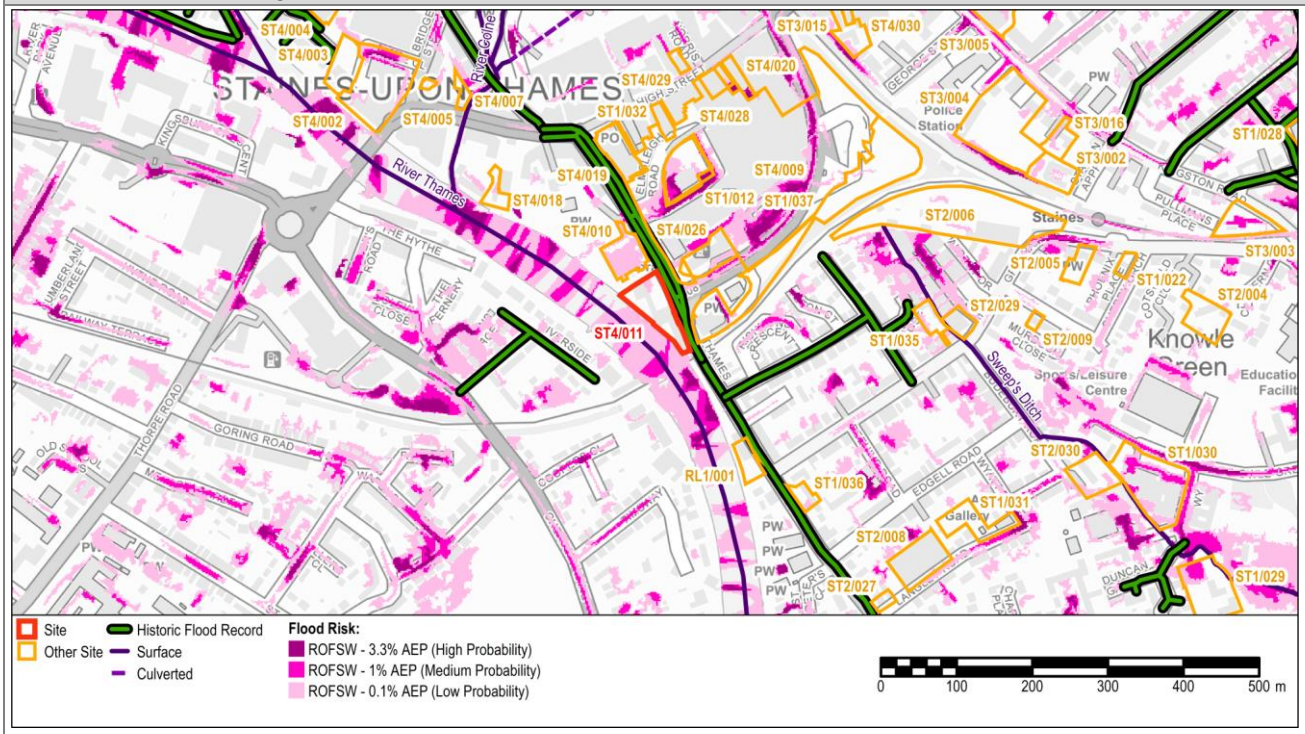
River Ash Maximum Flood Depth 1% AEP plus 35% climate change



River Ash Maximum Flood Hazard 1% AEP plus 35% climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Medium

ST4/011: Thames Lodge, Thames Street, TW18 4SJ



Risk of Flooding from Surface Water (RoFSW)

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand And Gravel	**Superficial Geology**	Clay, Silt And Sand
Areas Susceptible to Groundwater Flooding	>75%		
BGS Susceptibility to Groundwater Flooding	Potential for groundwater flooding to occur at surface.		
Aquifer Designation	Secondary A, Secondary A		

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that this site could be at risk of flooding, in the event of a breach of the King George VI Reservoir or Staines Reservoir.

Flood Risk Summary

The River Thames flows south along the western edge of the site. The majority of the site (70%) is defined as Flood Zone 3 High probability of flooding. 30% lies within Flood Zone 3b Functional Floodplain.
Modelling outputs for the River Thames for the 1% AEP event including a 35% increase in peak river flows as a result of climate change indicate that the whole site is affected, with flood depths on the site of 0-1m. The hazard rating is Moderate to Significant meaning 'Danger for Some' and Danger for Most'.
There are numerous records of flooding from surface water in proximity to the site and the site has been affected by flooding from the Thames in 2000, 2003, 2013-2014. This is likely to increase in the future due to the impacts of climate change.
The BGS Susceptibility to Groundwater Flooding dataset, mapped in the Surrey CC LFRMS, suggests that there may be potential for groundwater flooding to occur at surface in this area.

Access/Egress Route Summary

East from the site, along A308 (South Street) 320m Moderate hazard, 140m Significant hazard, 25m Moderate hazard, 25m at Low hazard), beneath the railway line and then on to London Road, with 10m Significant hazard, 60m Moderate hazard and 200m Low hazard.

Site Specific Recommendations

Development is not permitted in areas of Flood Zone 3b Functional Floodplain. This part of the site should be retained as floodplain and steps taken to restore the land to provide a more natural edge of the River Thames.

Subject to the satisfaction of the Sequential Test, More Vulnerable development is only permitted in the areas of Flood Zone 3 on this site where it can be demonstrated that the Exception Test is satisfied i.e. (1) that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk, and (2) that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. This site is located in the Maidenhead and Sunbury Management Catchment. The climate change allowances for peak river flow are 35% (central) and 47% (higher central).

ST4/011: Thames Lodge, Thames Street, TW18 4SJ

The modelling for the River Thames indicates there is currently no dry, or low hazard, access route available during the 1% AEP including 35% climate change allowance. In order to cross the railway line and leave the floodplain, parts of the route are defined as Significant hazard (‘Danger for Most’).

Spelthorne BC have removed this site from the Local Plan.