Site CJ3 Land on the corner of Grant Road and Falcon Road, SW11

Site ID:	CJ3	**Area (ha):**	0.9
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

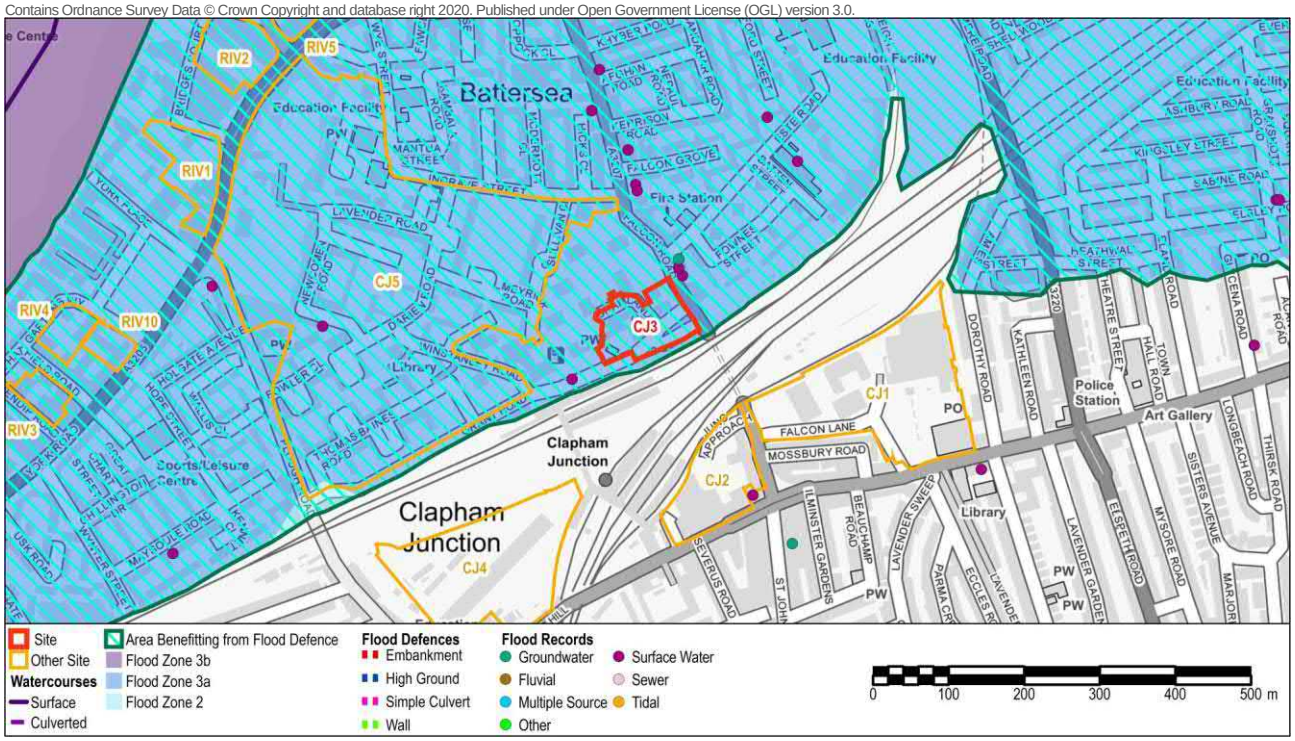

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 16; Groundwater 2; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

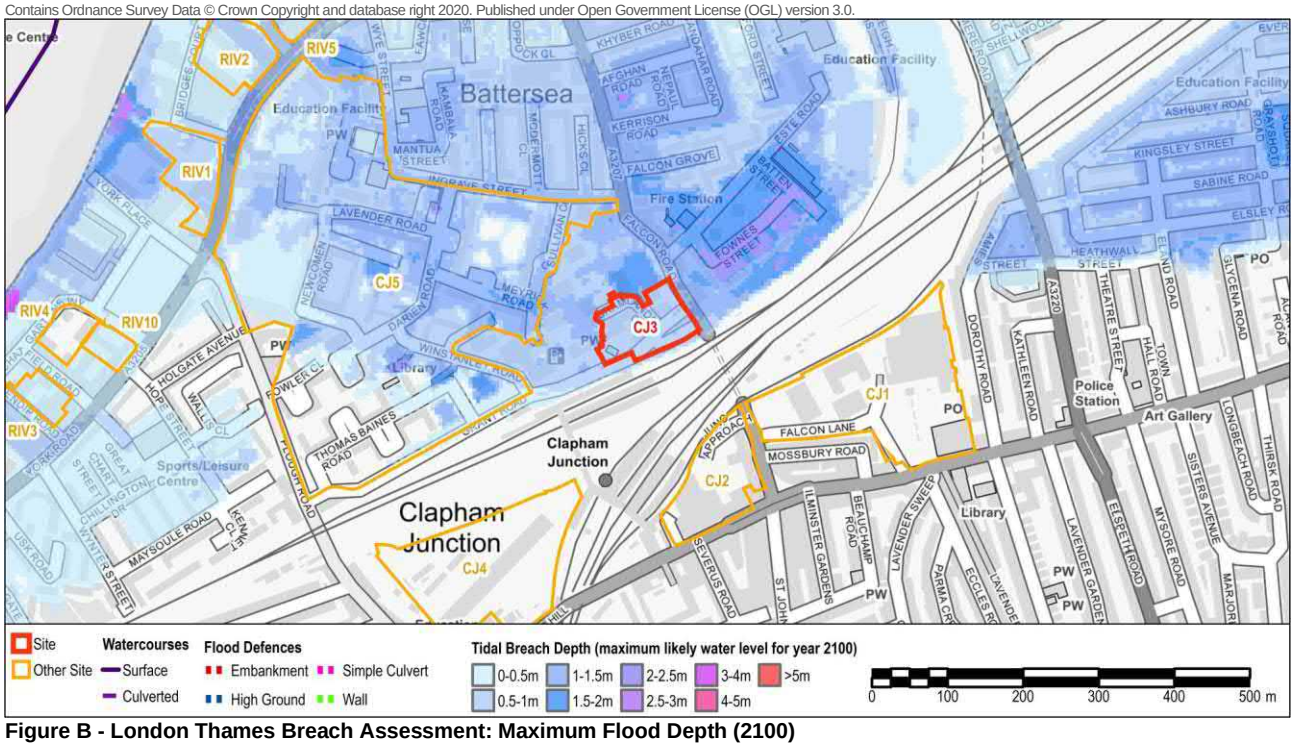

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site CJ3 Land on the corner of Grant Road and Falcon Road, SW11

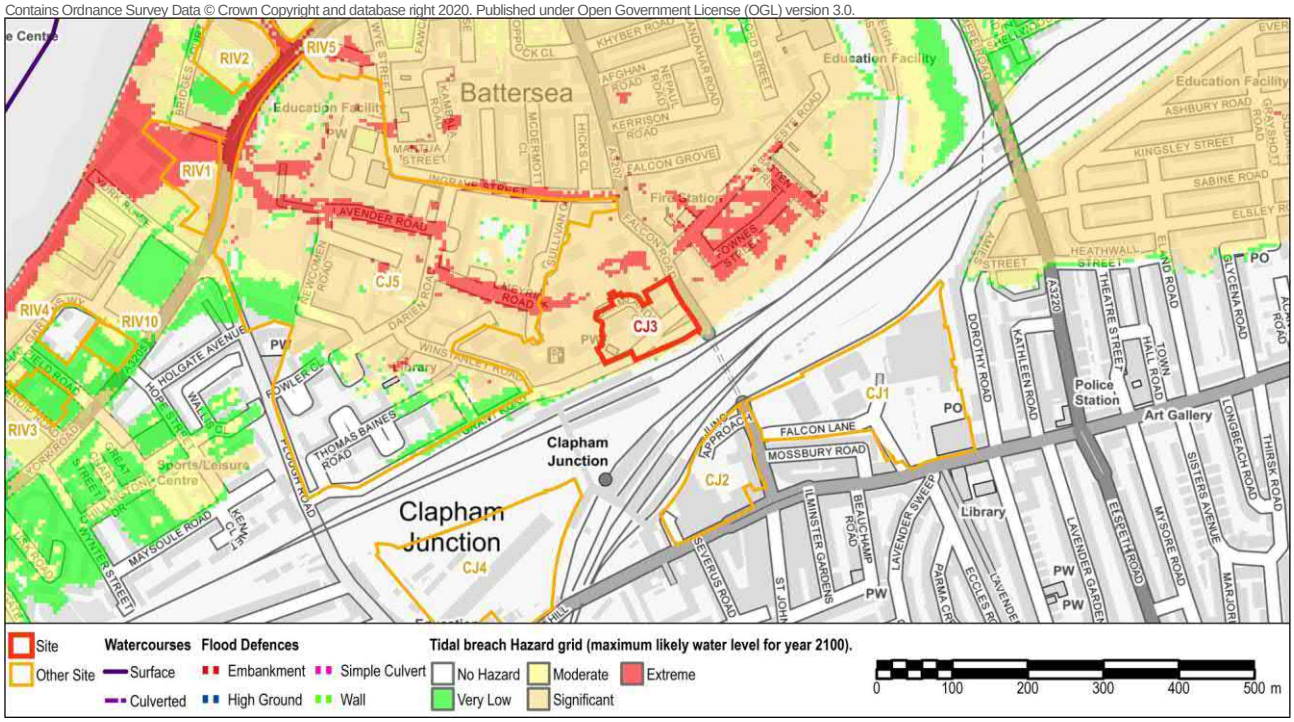

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

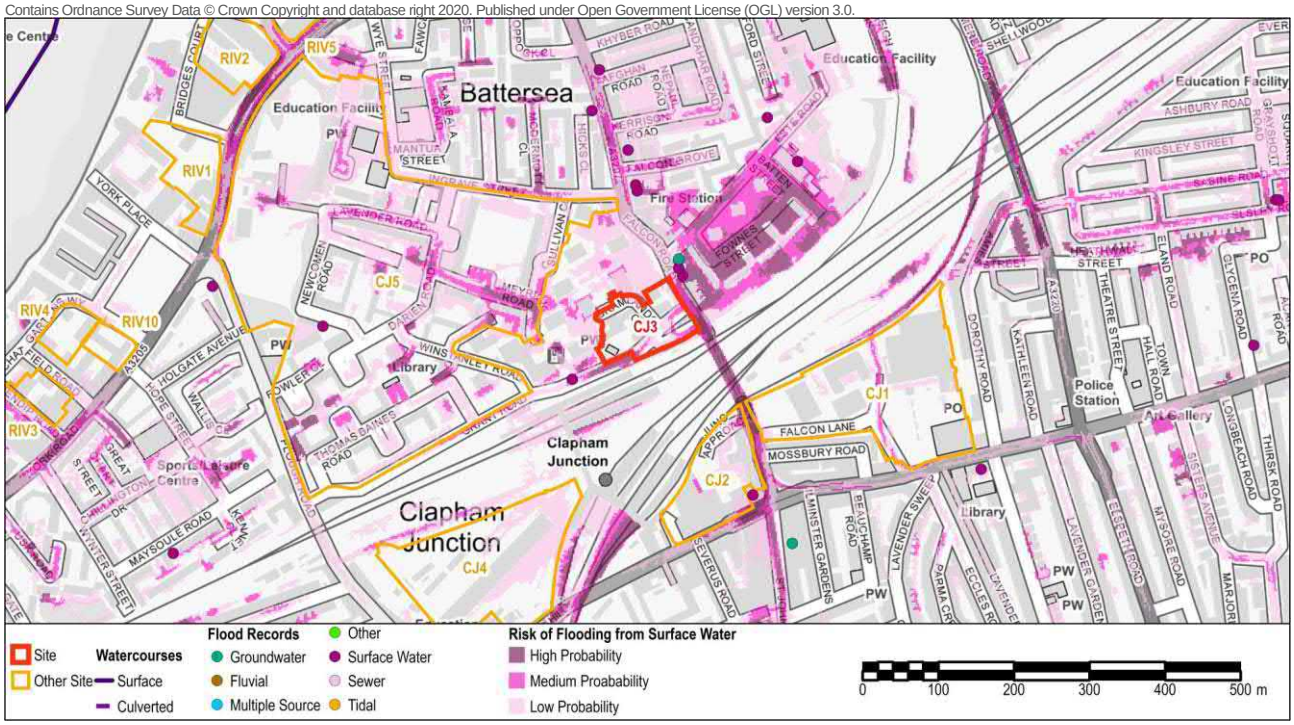

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_022 Clapham Junction [Wandsworth]
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site CJ3 Land on the corner of Grant Road and Falcon Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 780m to the northwest of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 1-1.5m depth, Significant hazard rating on Falcon Road ('danger for most') for the year 2100. Flood levels on the site are ~4.23m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Falcon Road located east to the site. 16 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 022, Clapham Junction).

2 incidents of groundwater flooding have been reported within 500m of the site and broadscale mapping indicates the potential for groundwater flooding to occur at surface in this area.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~4.23m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site CJ5 Winstanley / York Road Regeneration Area, SW11

Site ID:	CJ5	**Area (ha):**	15.87
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

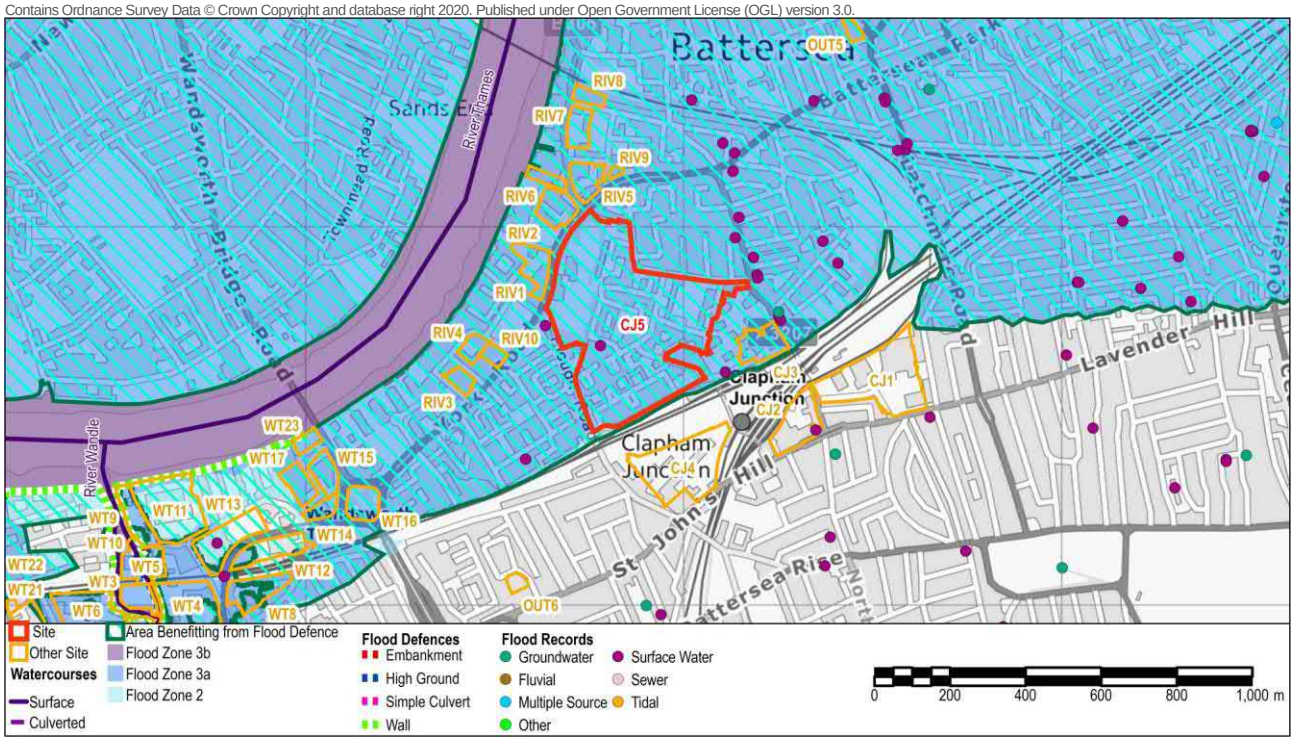

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 18; Groundwater 3; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

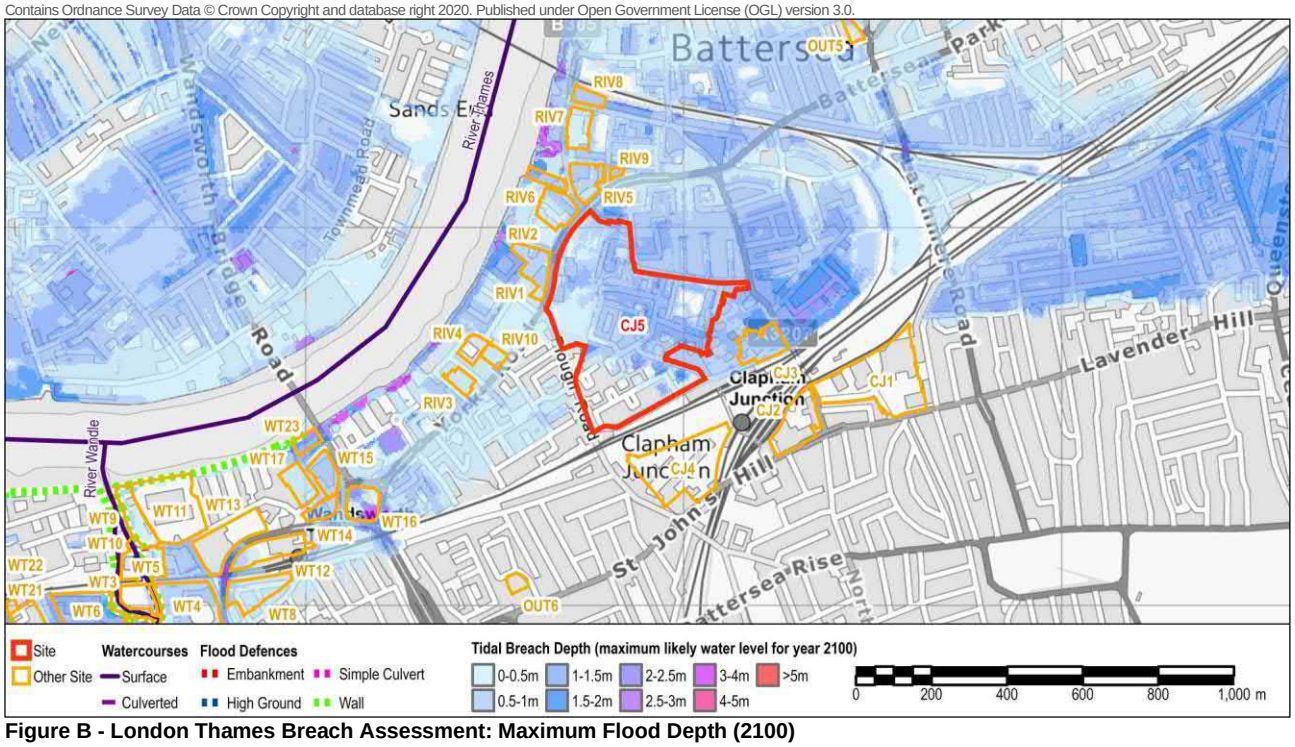

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site CJ5 Winstanley / York Road Regeneration Area, SW11

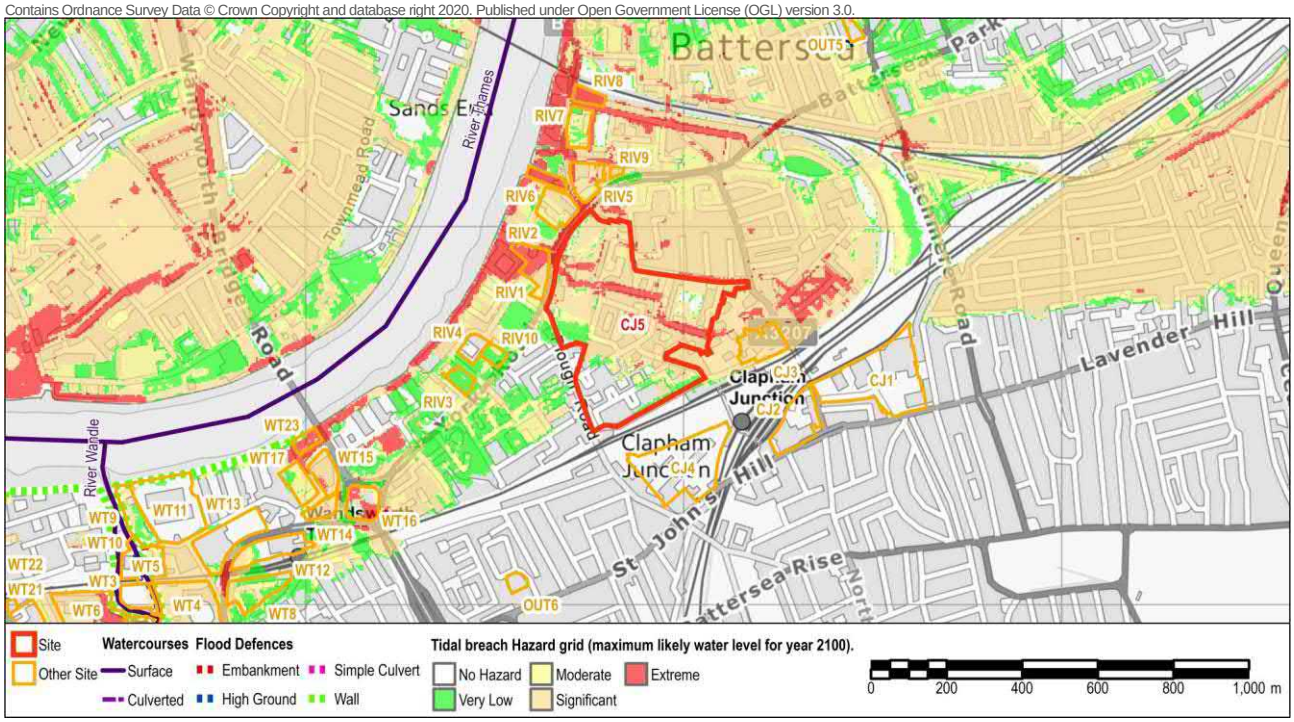

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

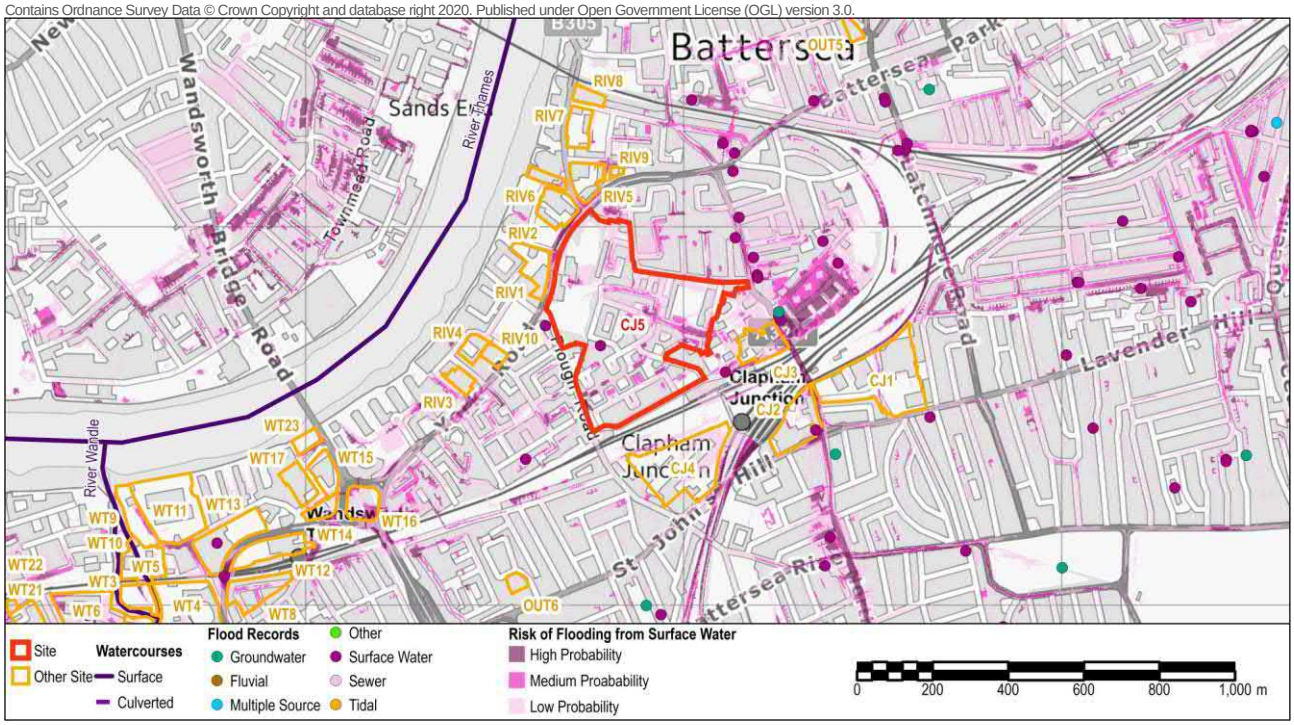

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_022 Clapham Junction [Wandsworth]
Drainage Catchment	DC2

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site CJ5 Winstanley / York Road Regeneration Area, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 170m from the northern part of the site boundary. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 2.5-3.0m at areas of the site, with a corresponding hazard rating of Extreme ('danger for all') predominantly on the Maverick Road, and a hazard ratting of Significant ('danger for most') across the remainder of the site for the year 2100. Flood levels across the majority of the site are ~4.3m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on hardstanding areas and roads across the site. 18 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 022 Clapham Junction).

3 incidents of groundwater flooding have been reported within 500m of the site and broadscale mapping indicates the potential for groundwater flooding to occur at surface in this area.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~4.3m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE1 Cable and Wireless, Ballymore Site 6, Unit 2a, Battersea Park Road, SW8

Site ID:	NE1	**Area (ha):**	0.34
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

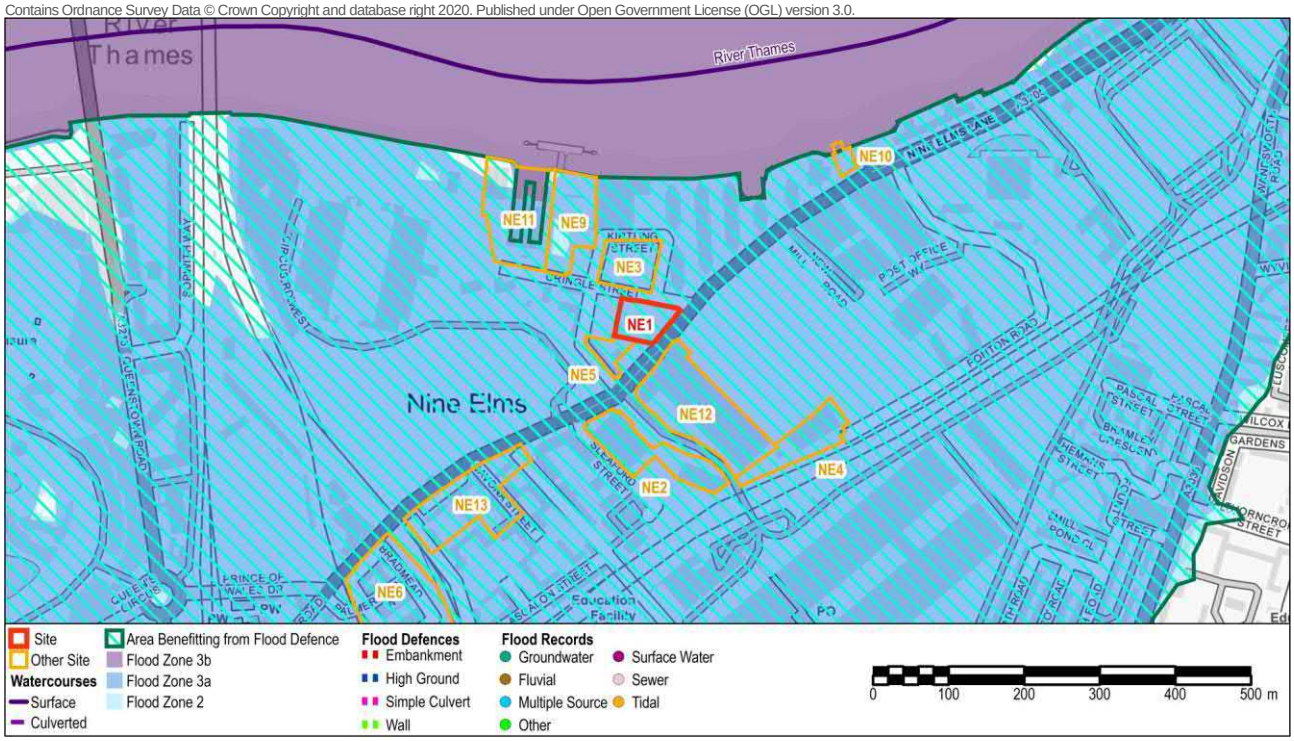

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

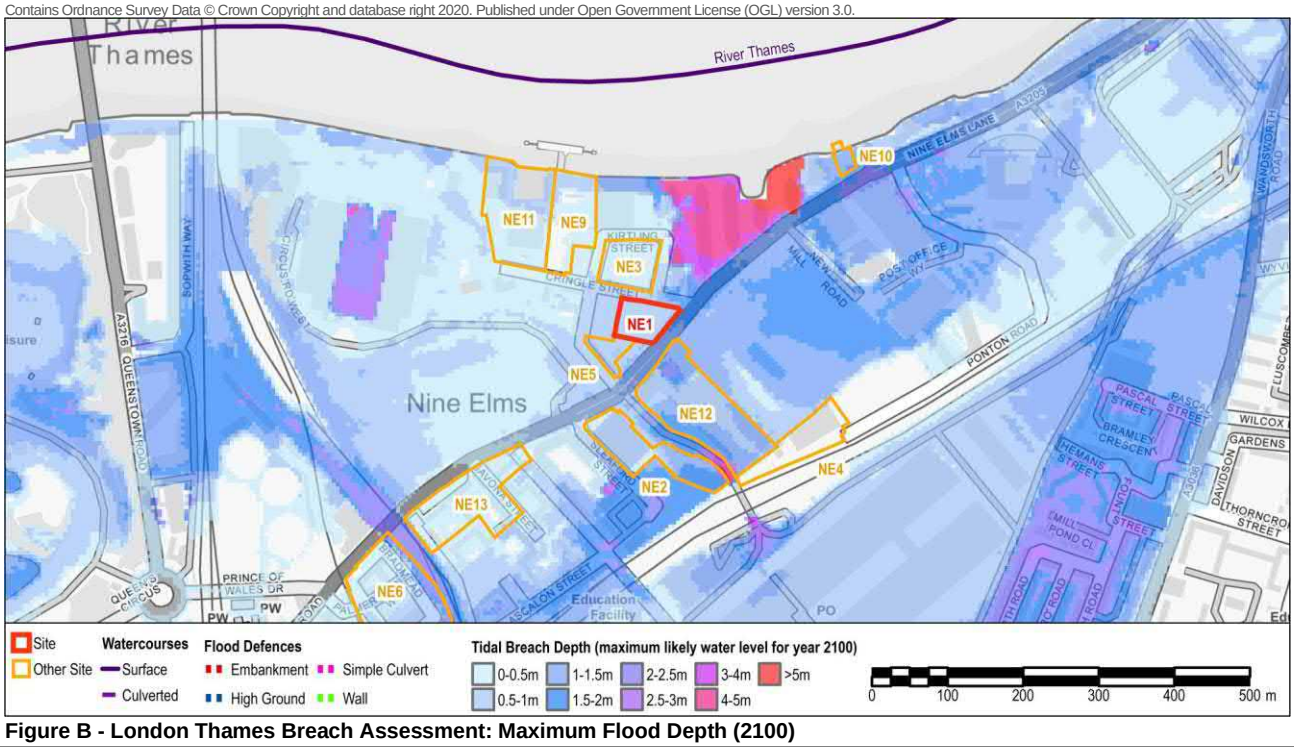

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE1 Cable and Wireless, Ballymore Site 6, Unit 2a, Battersea Park Road, SW8

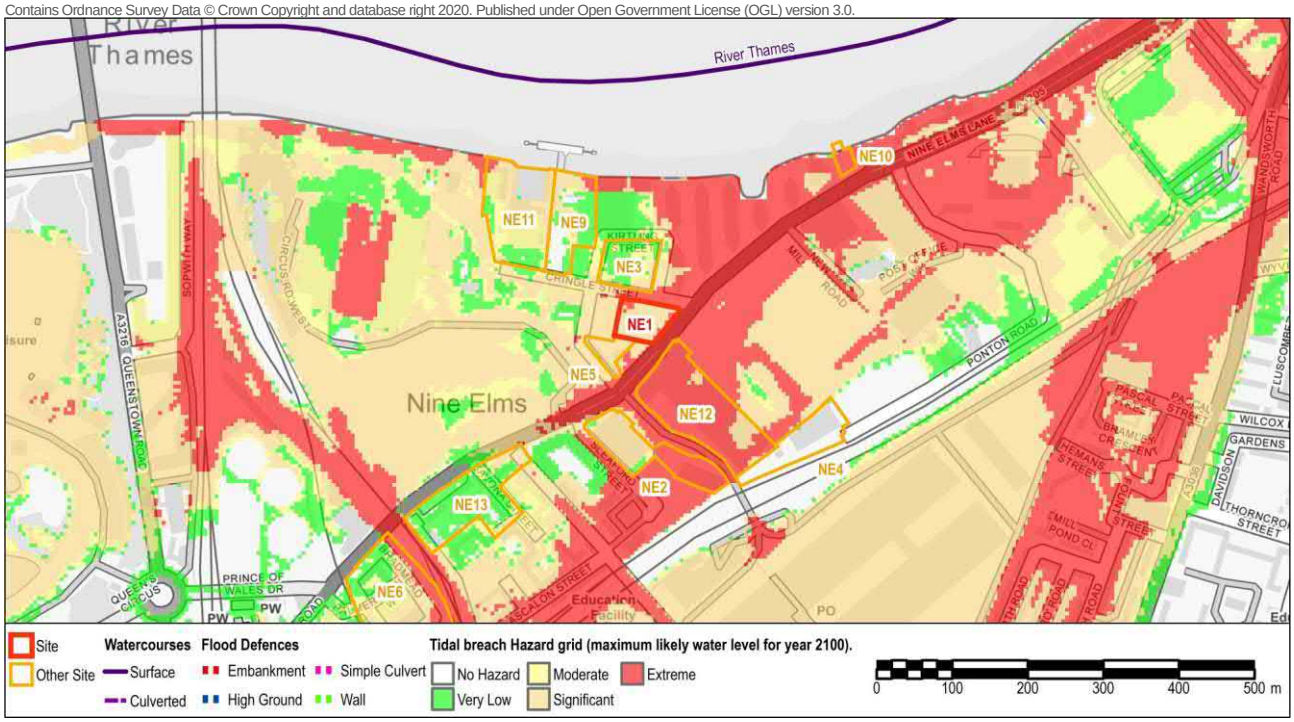

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

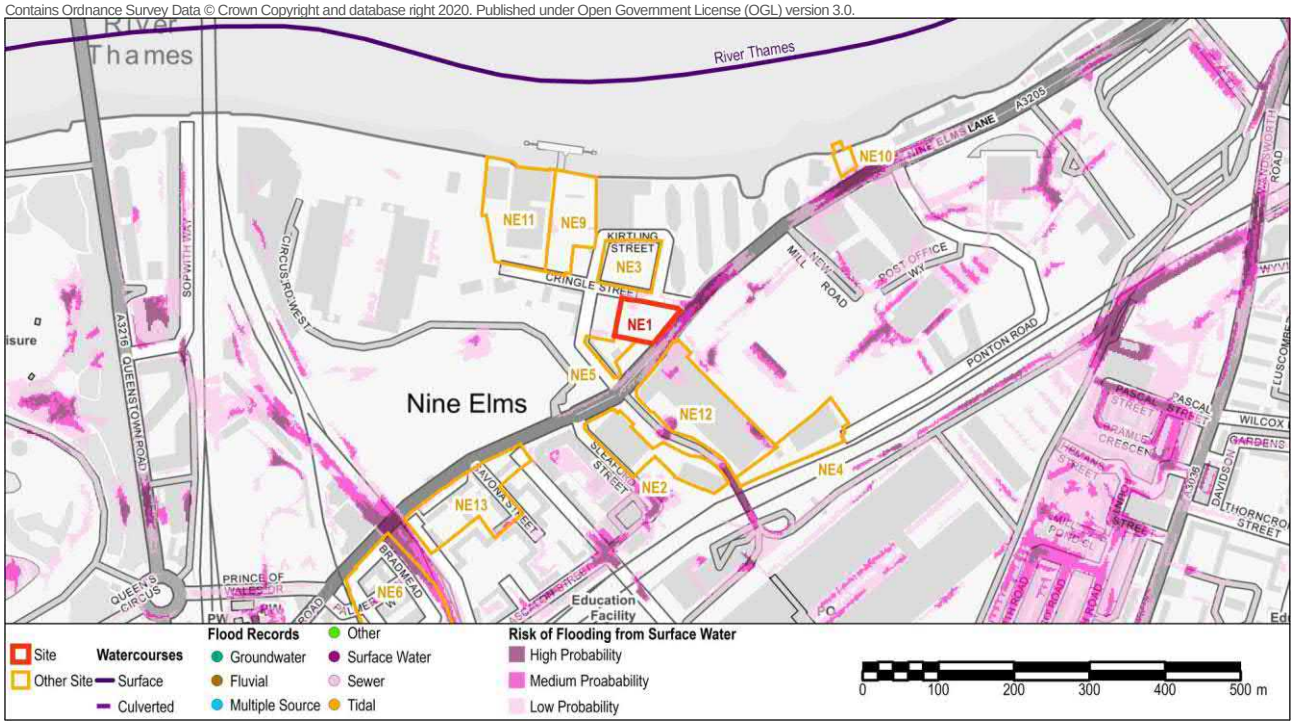

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site NE1 Cable and Wireless, Ballymore Site 6, Unit 2a, Battersea Park Road, SW8

Summary

The site is located 190m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. In the event of a breach, flood water could inundate the site to a depth of 0.5-1m, with a water level of ~5.0m AOD1 on the site and corresponding hazard rating of Significant ('danger for most') on the site, for the year 2100. Along Nine Elms Road, depths could be up to 2m, with an Extreme hazard rating ('danger for all') for the year 2100. Cringe Street which is adjacent to the site has a flood depth of 1-1.5m and an Extreme hazard rating ('danger for all').

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond on Cringe Street and flow onto the northern part of the site, and also to flow and pond on Nine Elms Road to the east of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests there may be potential for groundwater flooding of property situated below ground level in this area.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.0m AOD[1] (for the year 2100).
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge To Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE2 41-49, Nine Elms Lane, and 49-59 Battersea Park Road, SW8

Site ID:	NE2	**Area (ha):**	0.74
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

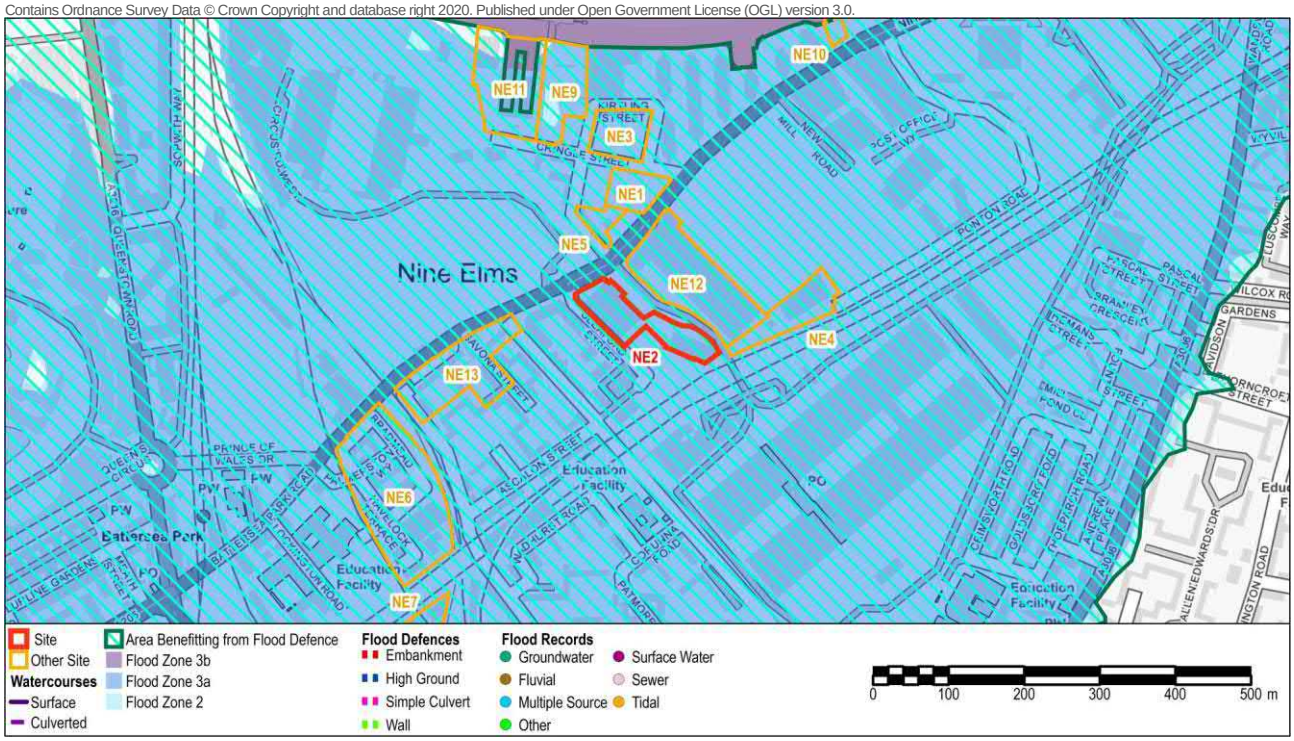

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Power Station To Battersea Bridge, Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

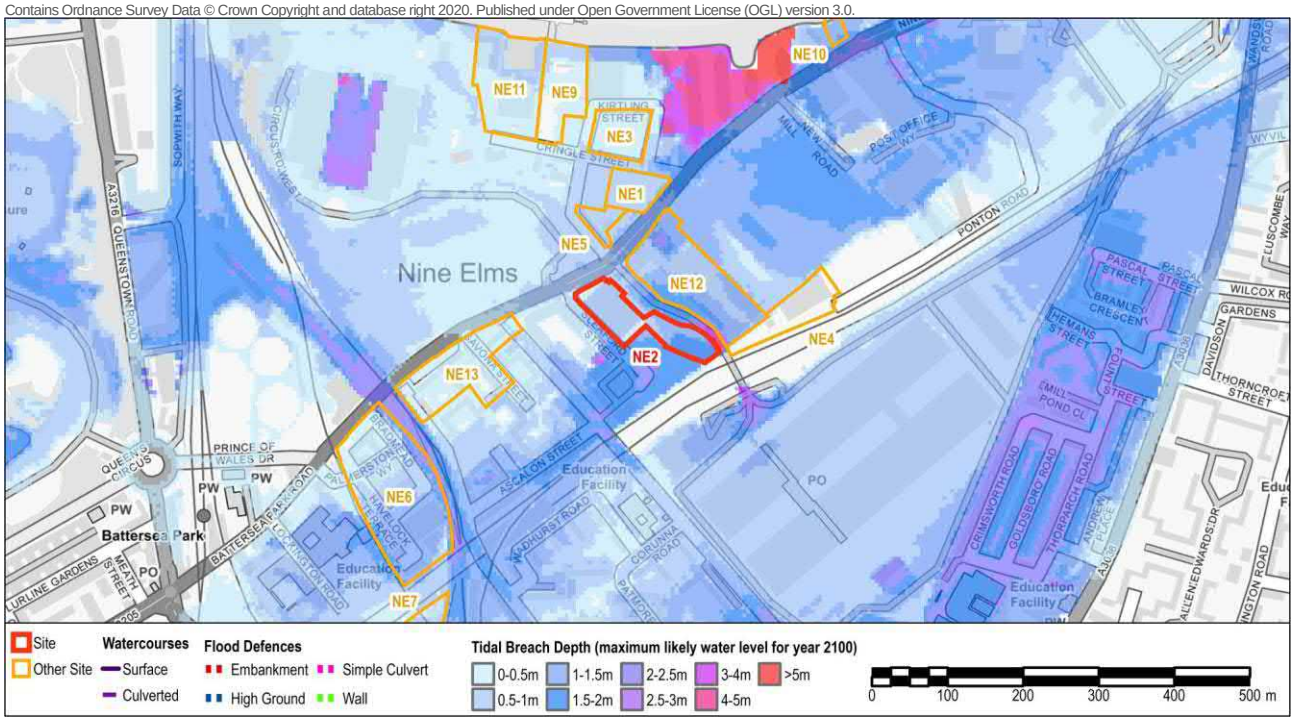

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE2 41-49, Nine Elms Lane, and 49-59 Battersea Park Road, SW8

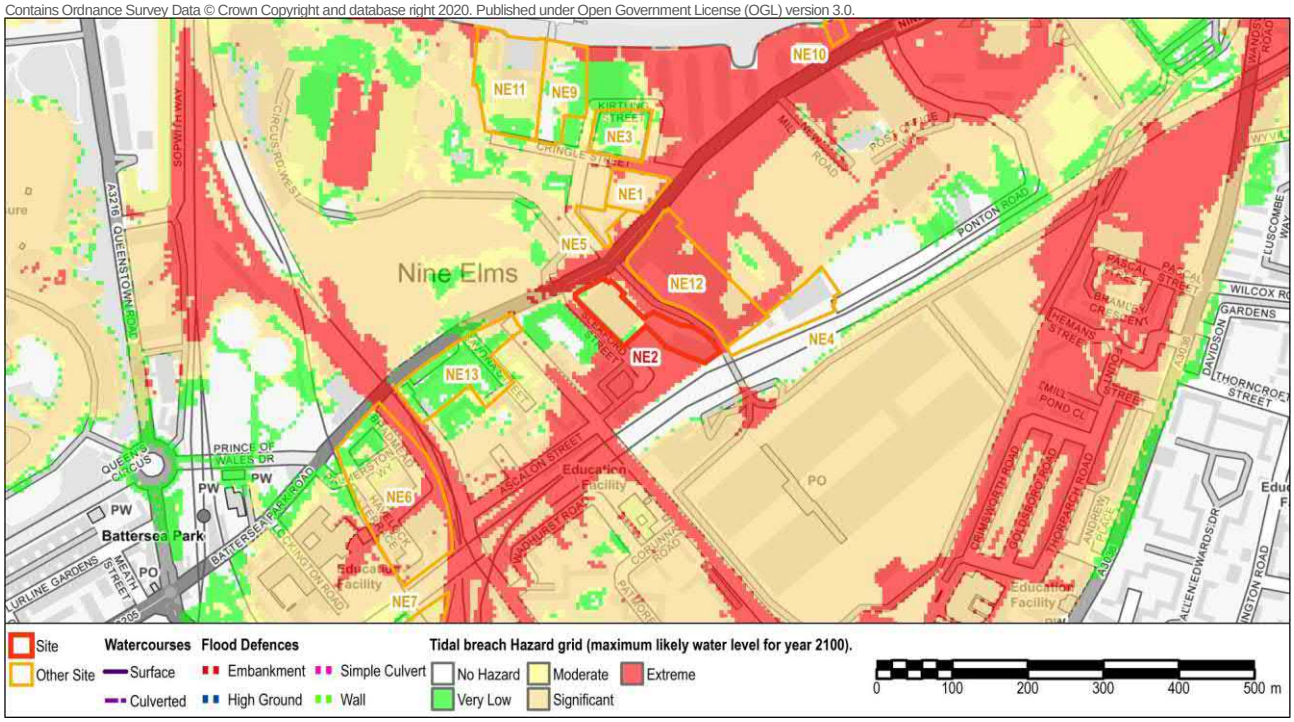

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

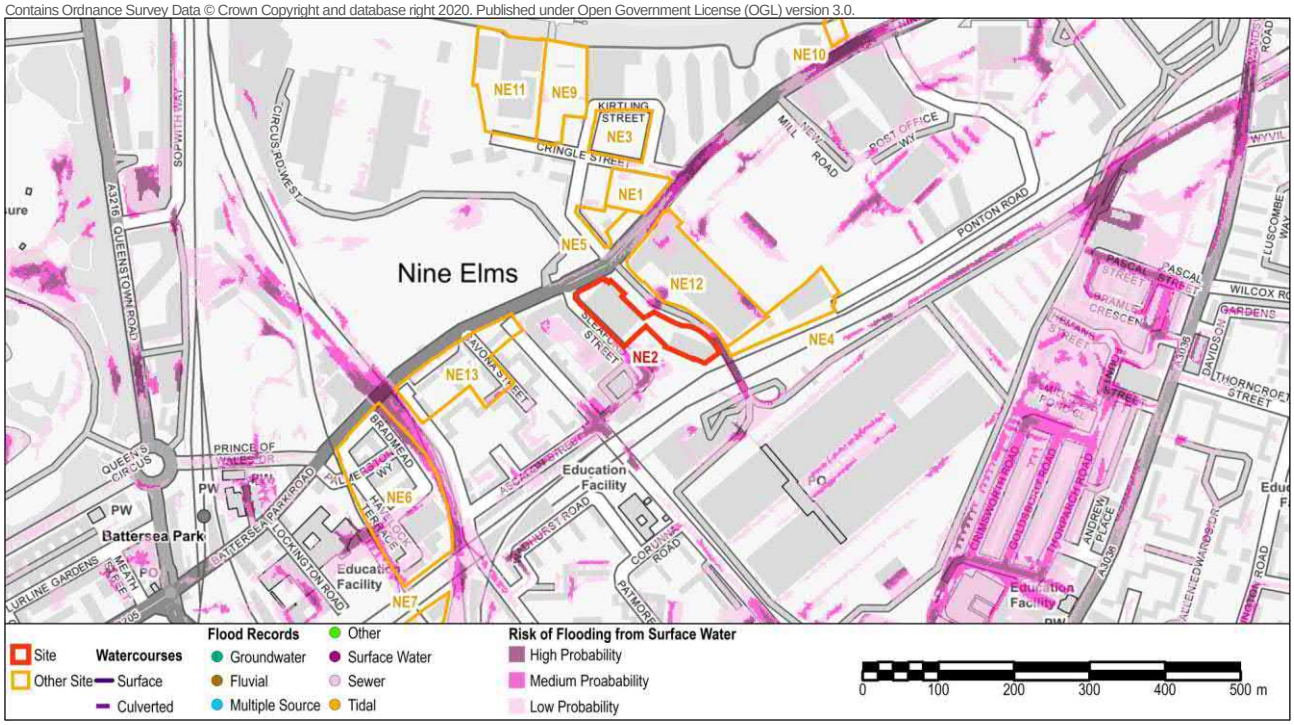

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site NE2 41-49, Nine Elms Lane, and 49-59 Battersea Park Road, SW8

Summary

The site is located 330m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 2.5-3m depth, Extreme hazard rating on Battersea Park Road and Nine Elms Road ('danger for all') for the year 2100. Flood levels on the site are ~4.38-4.91m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Sleaford Street and the A Road located adjacent to the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that there may be potential for groundwater flooding below ground and at surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.38-4.91m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE3 Securicor site, 80 Kirtling Street, SW8

Site ID:	NE3	**Area (ha):**	0.46
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

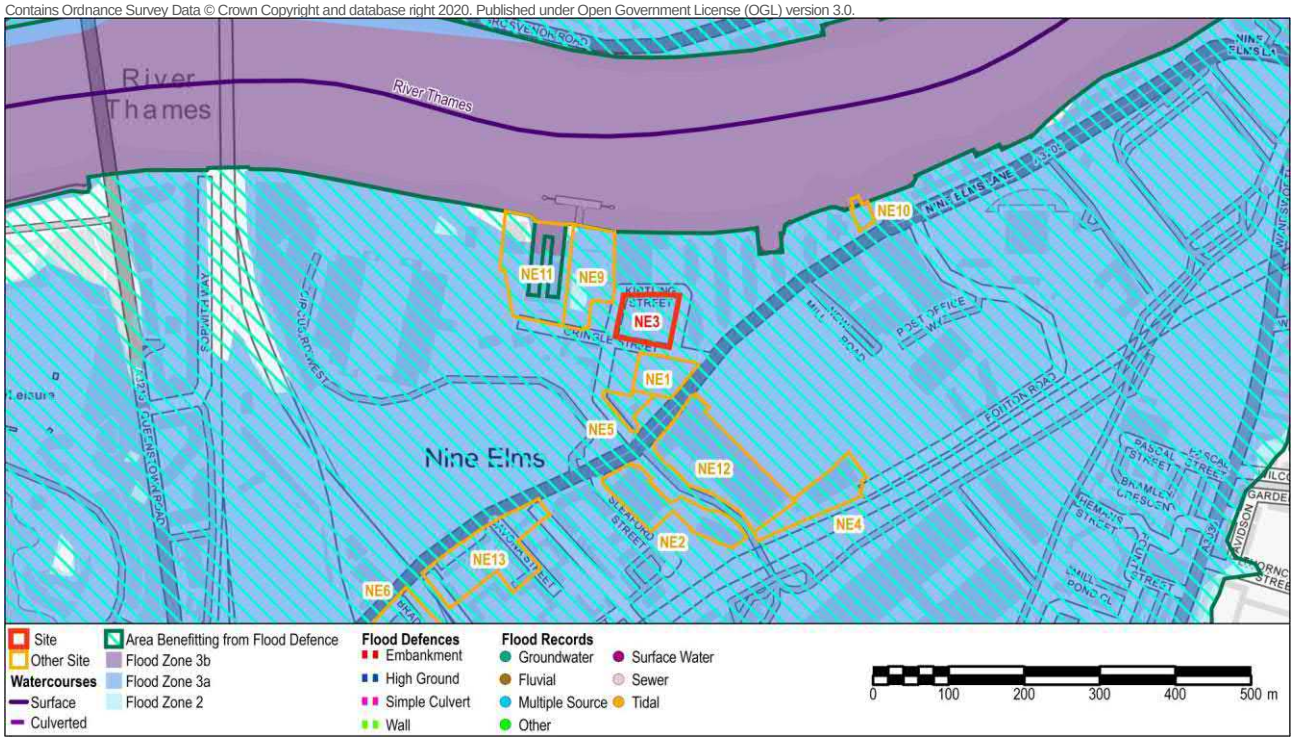

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

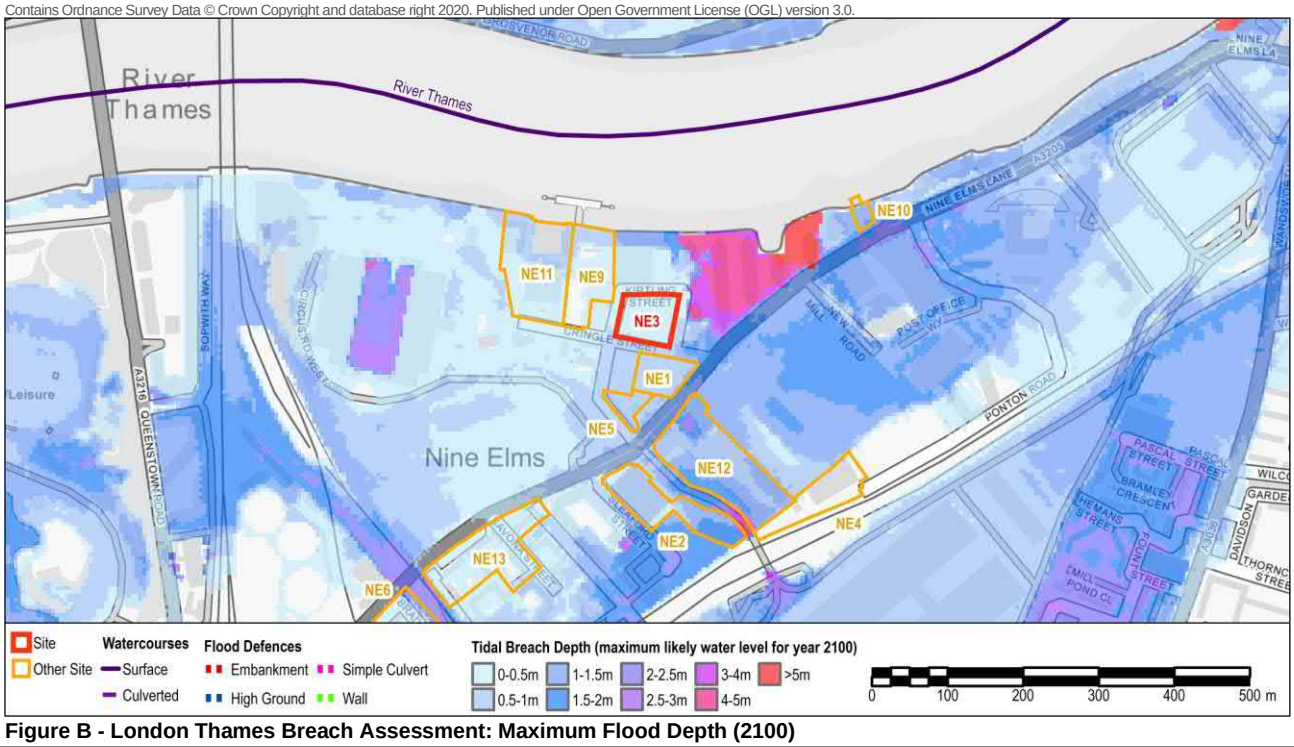

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE3 Securicor site, 80 Kirtling Street, SW8

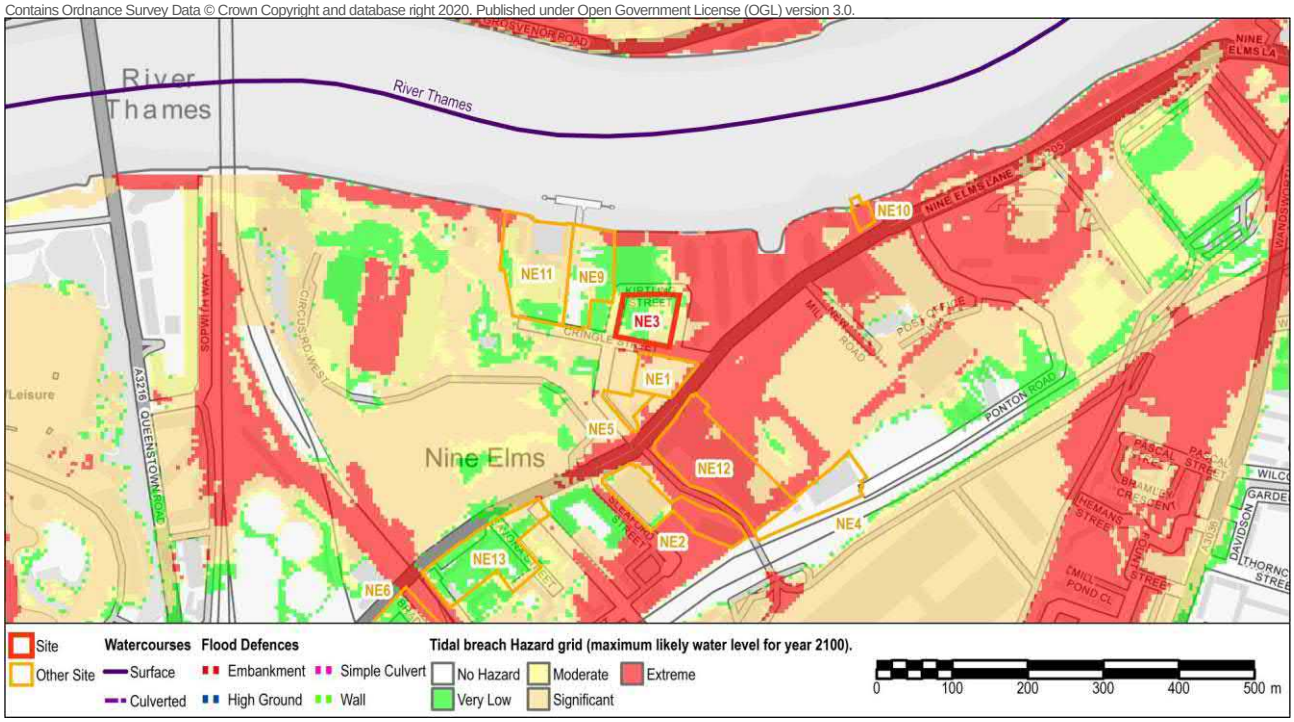

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

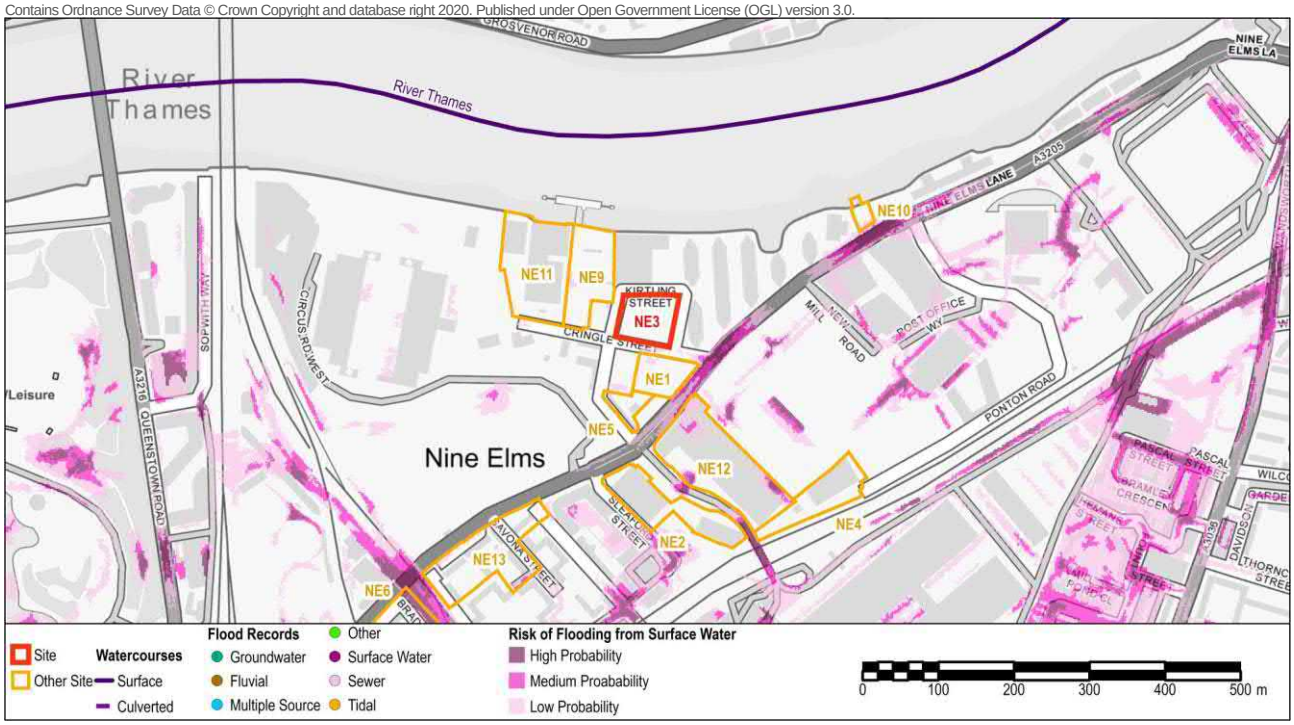

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC1		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the area to the south of the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site NE3 Securicor site, 80 Kirtling Street, SW8

Summary

The site is located 120m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. In the event of a breach, flood water could inundate the site to depths of 0.5m, with flood levels of ~5.0m AOD[1] and a corresponding hazard rating of Significant ('danger for most') on the site, and 1.5-2m depth, Extreme hazard rating on Nine Elms Road ('danger for all') for the year 2100. Cringe Street which is adjacent to the site has a flood depth corresponding to 1-1.5m and an Extreme hazard rating ('danger for all').

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Cringle Street to the south of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may have limited potential for groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.0m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge To Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE4 Metropolitan Police Warehouse Garage, Ponton Road, SW8

Site ID:	NE4	**Area (ha):**	0.55
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

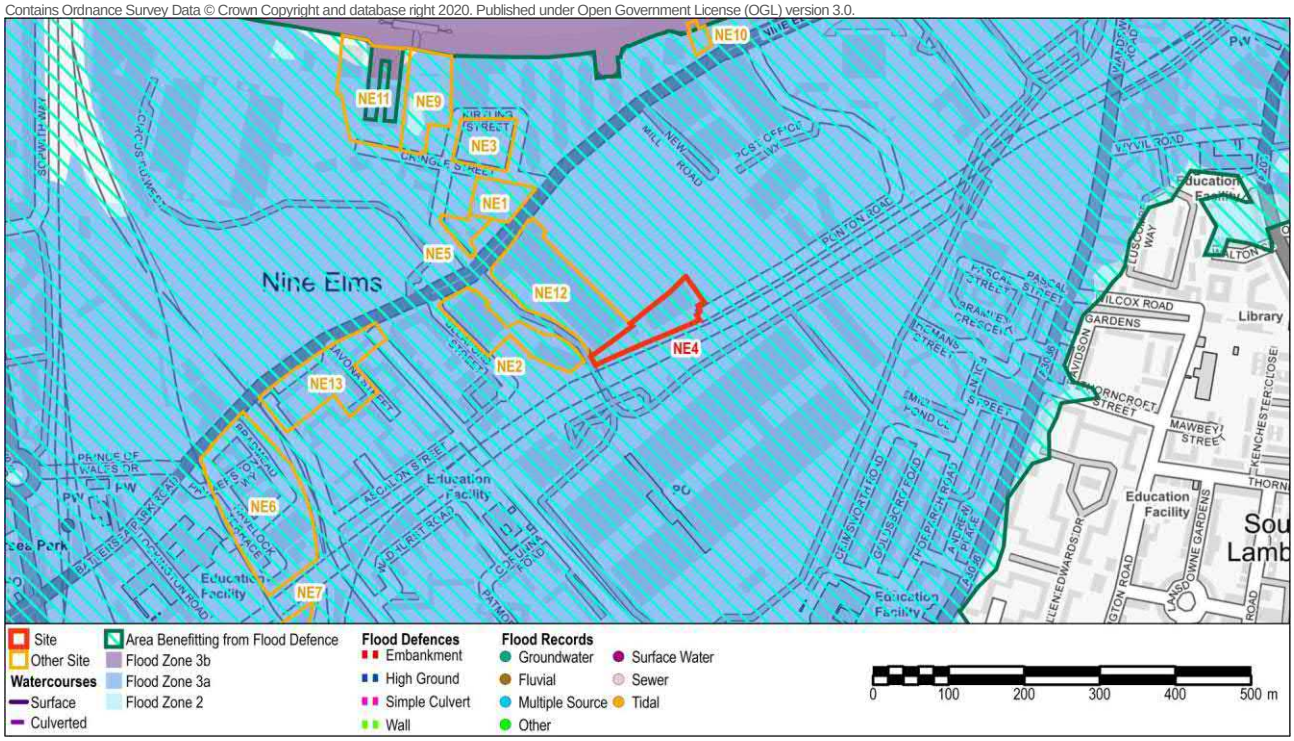

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

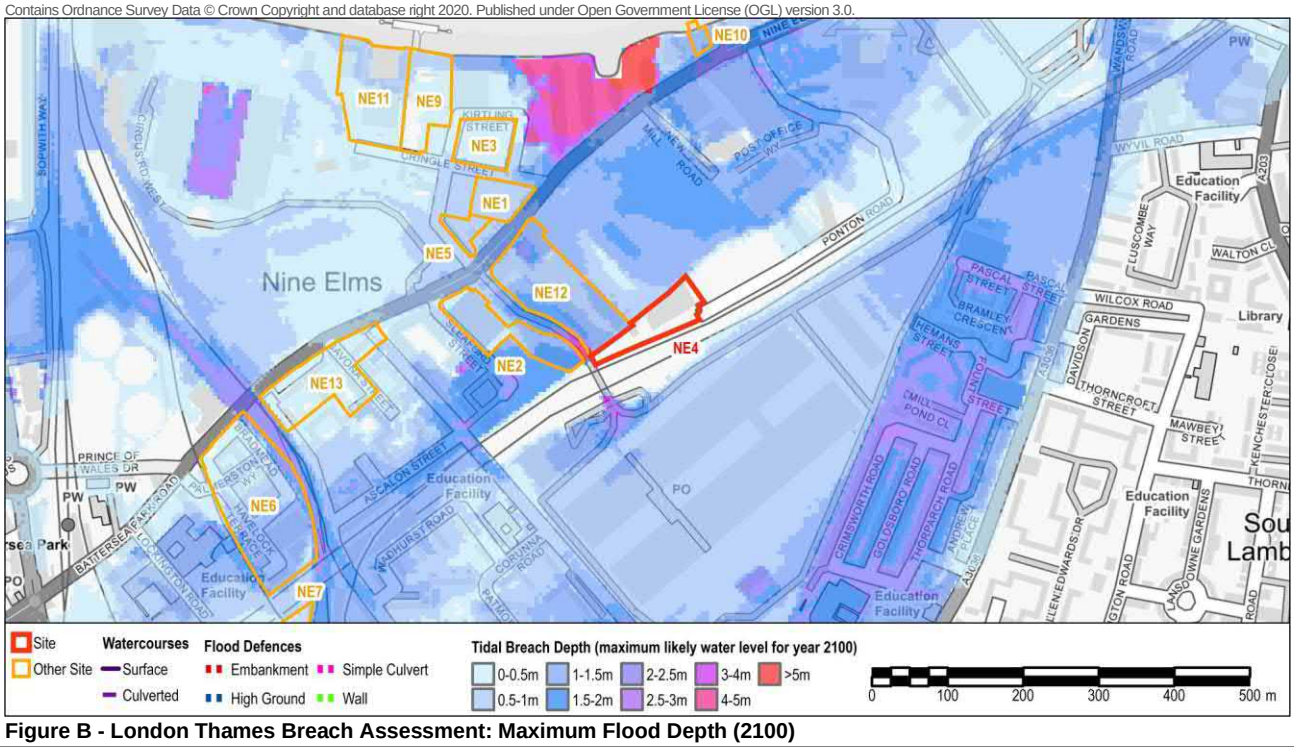

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE4 Metropolitan Police Warehouse Garage, Ponton Road, SW8

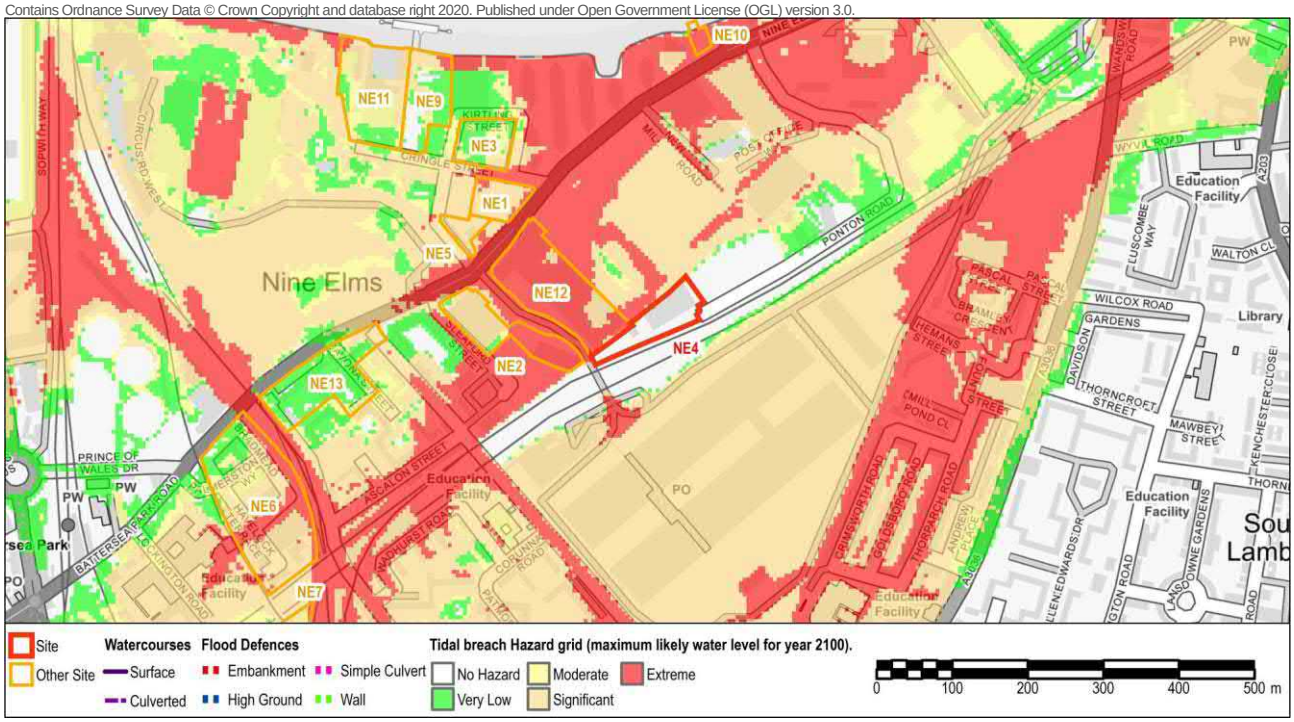

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

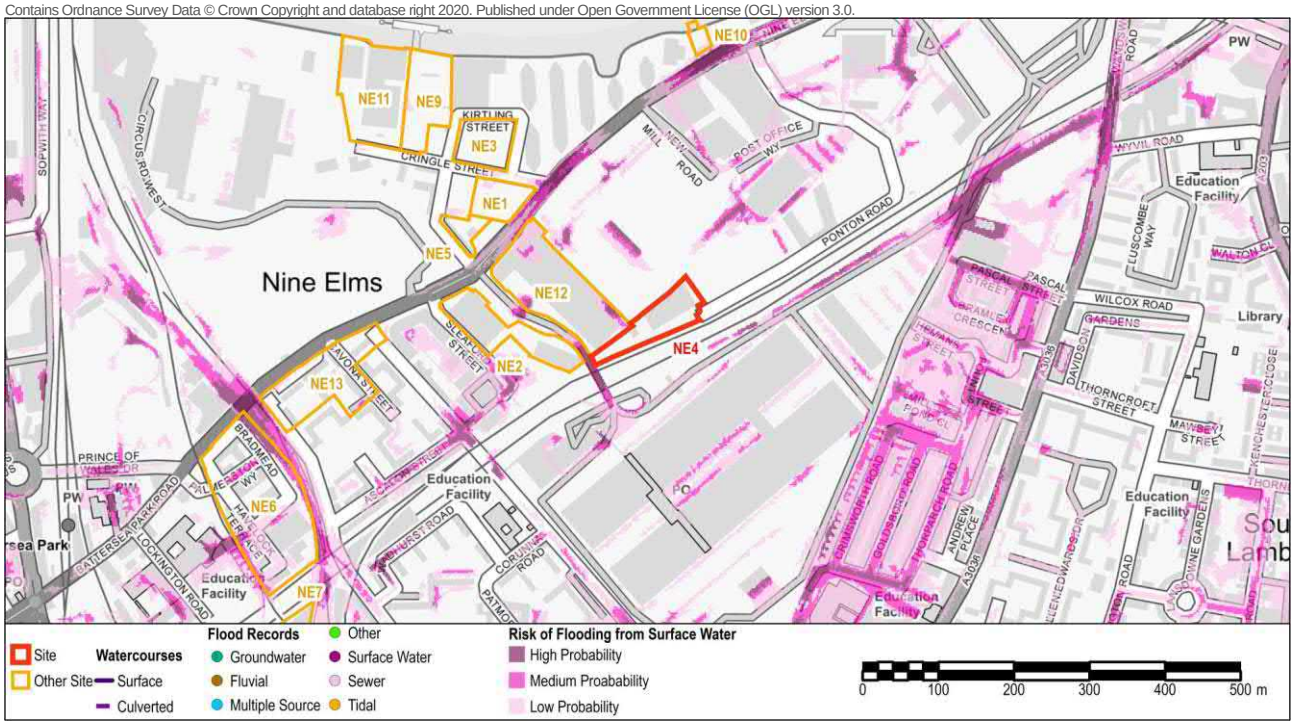

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the area surrounding the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site NE4 Metropolitan Police Warehouse Garage, Ponton Road, SW8

Summary

The site is located 350m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the northern part of the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0-0.5m, with flood levels ~5.0m AOD[1] and a corresponding hazard rating of Moderate ('danger for some') on the site, and 2.0-2.5m depth, Extreme hazard rating on Ponton Road and Nine Elms Road ('danger for all') for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on the western edge of the site, on Ponton Road to the east of the site, and Nine Elms Road to the north of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.0m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge To Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE5 Brooks Court, Kirtling Street, SW8

Site ID:	NE5	**Area (ha):**	0.18
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

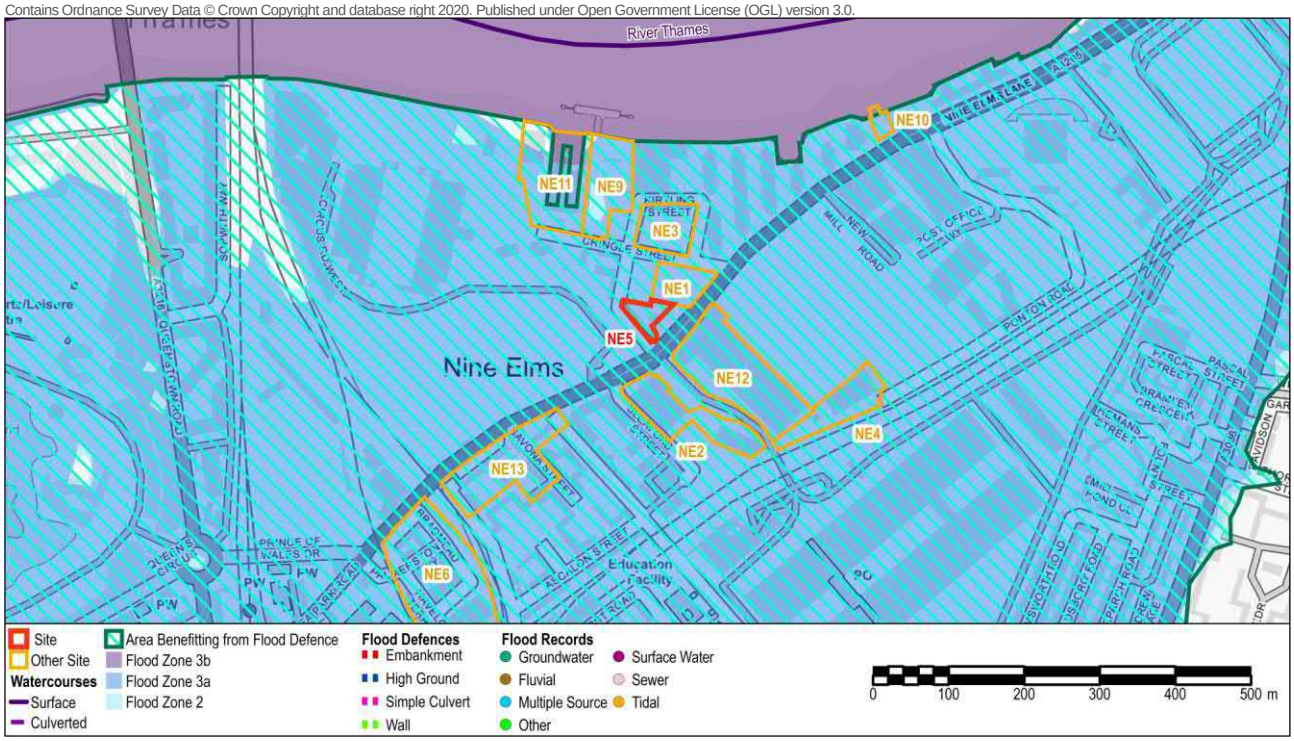

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

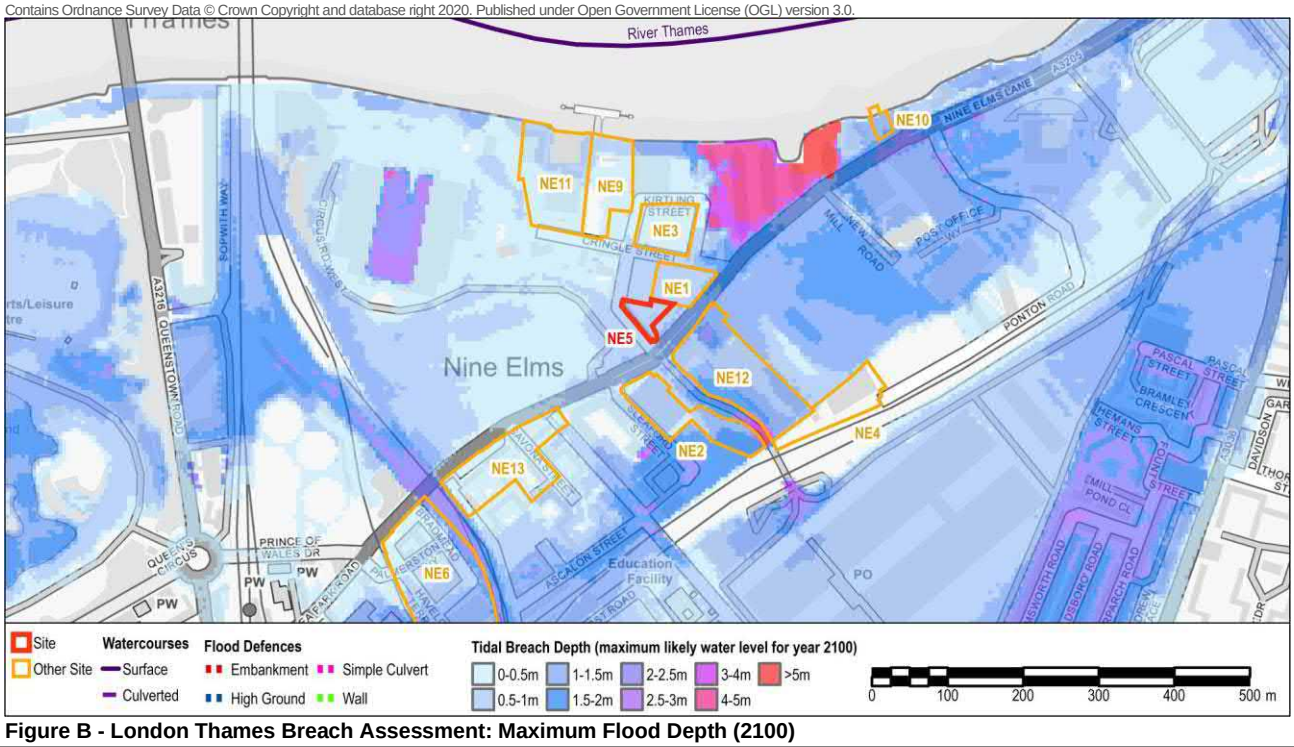

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE5 Brooks Court, Kirtling Street, SW8

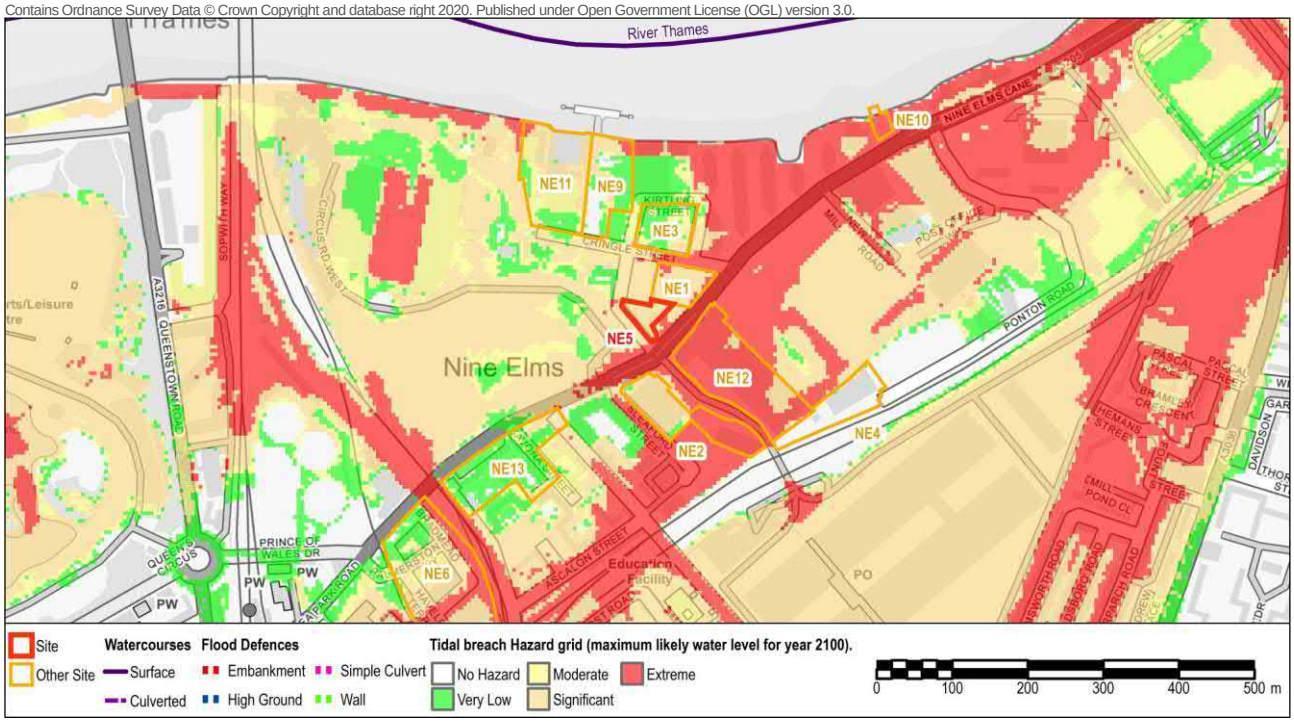

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

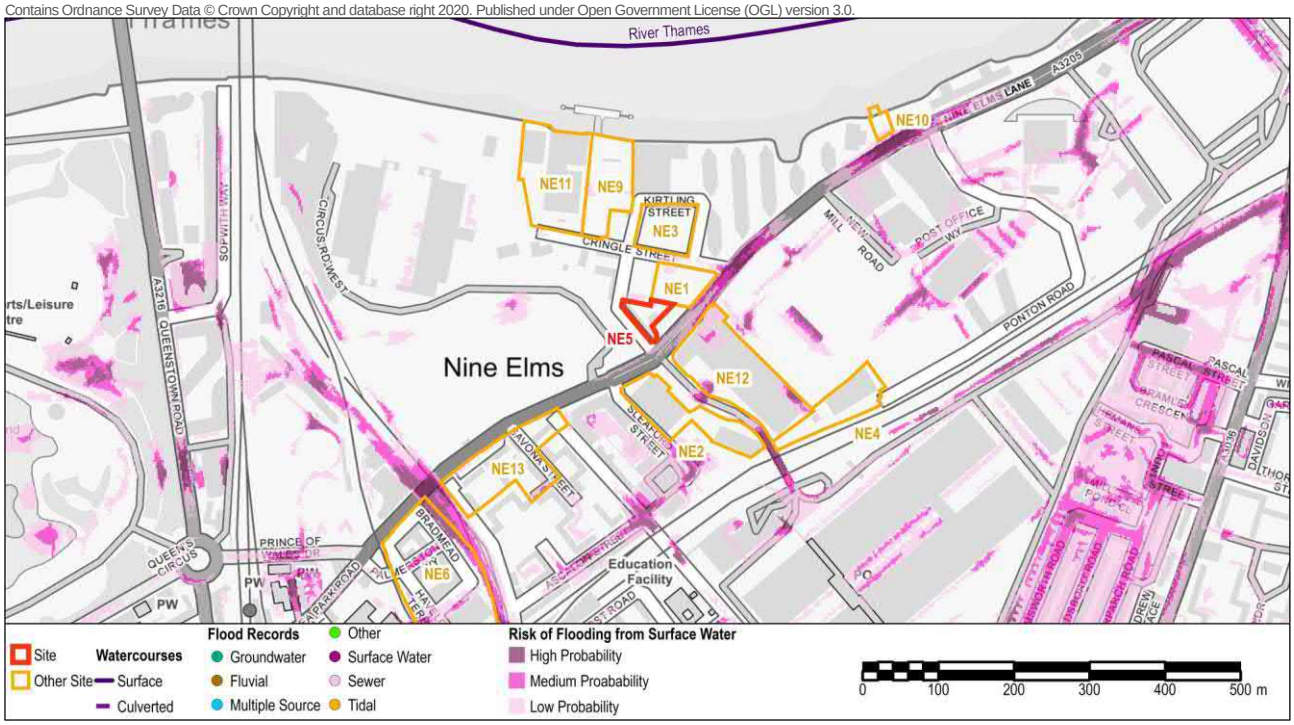

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site NE5 Brooks Court, Kirtling Street, SW8

Summary

The site is located 220m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-0.1m[1], with a corresponding hazard rating of Significant ('danger for most') on the site, and 1.5-2m depth, Extreme hazard rating on Nine Elms Road ('danger for all') for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Nine Elms Road to the south of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~4.9m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge To Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE6 Havelock Terrace, SW8

Site ID:	NE6	**Area (ha):**	2.09
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

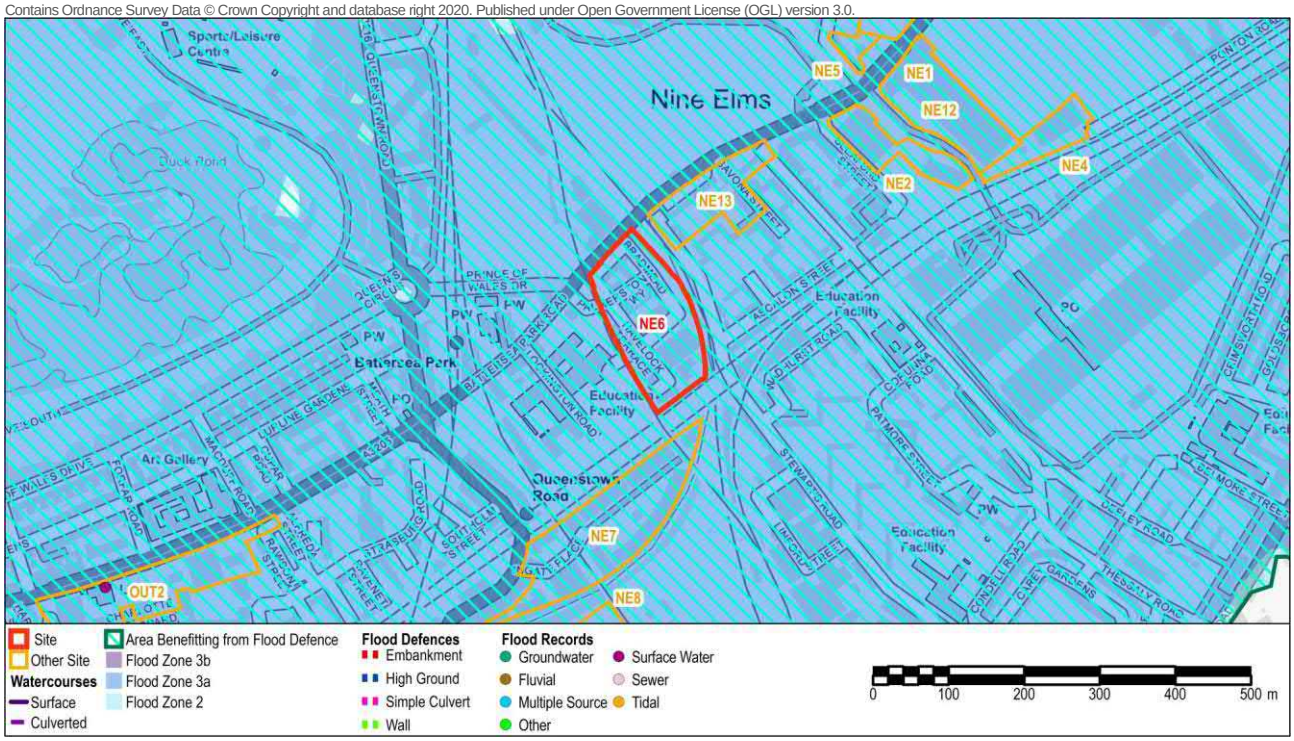

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Power Station To Battersea Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

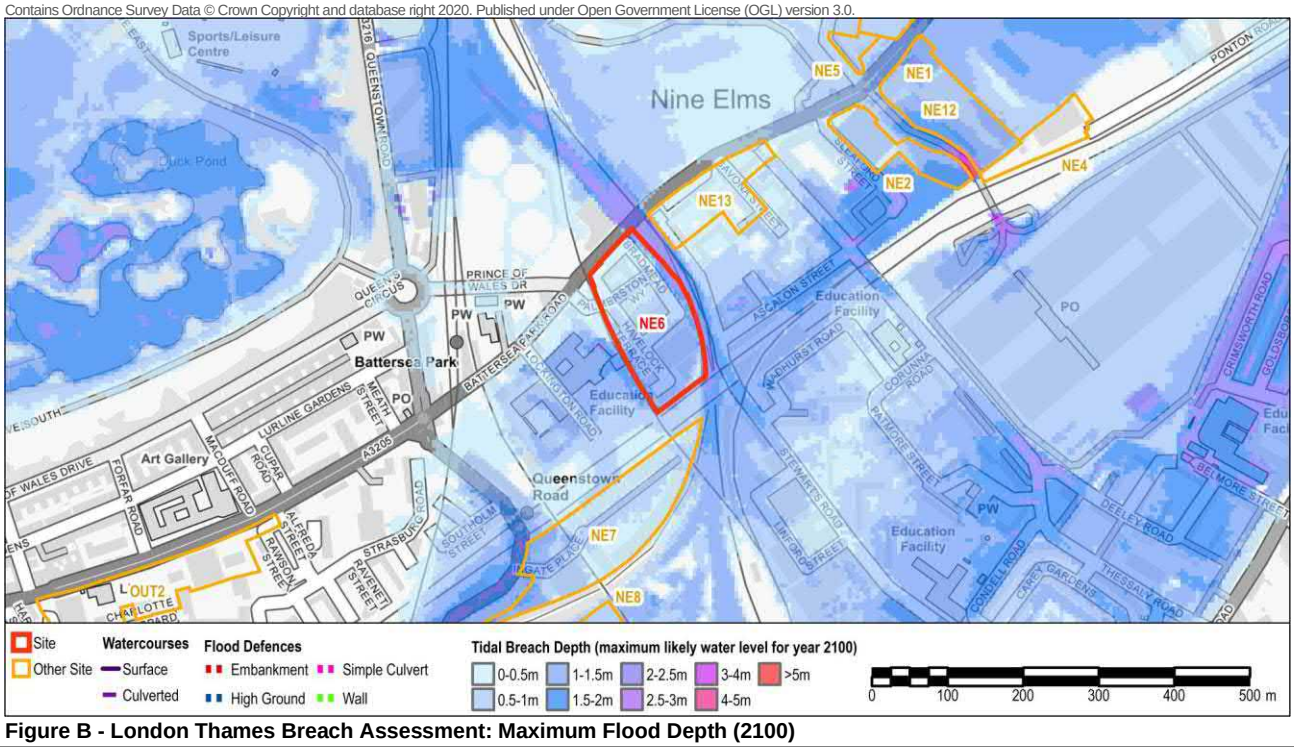

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE6 Havelock Terrace, SW8

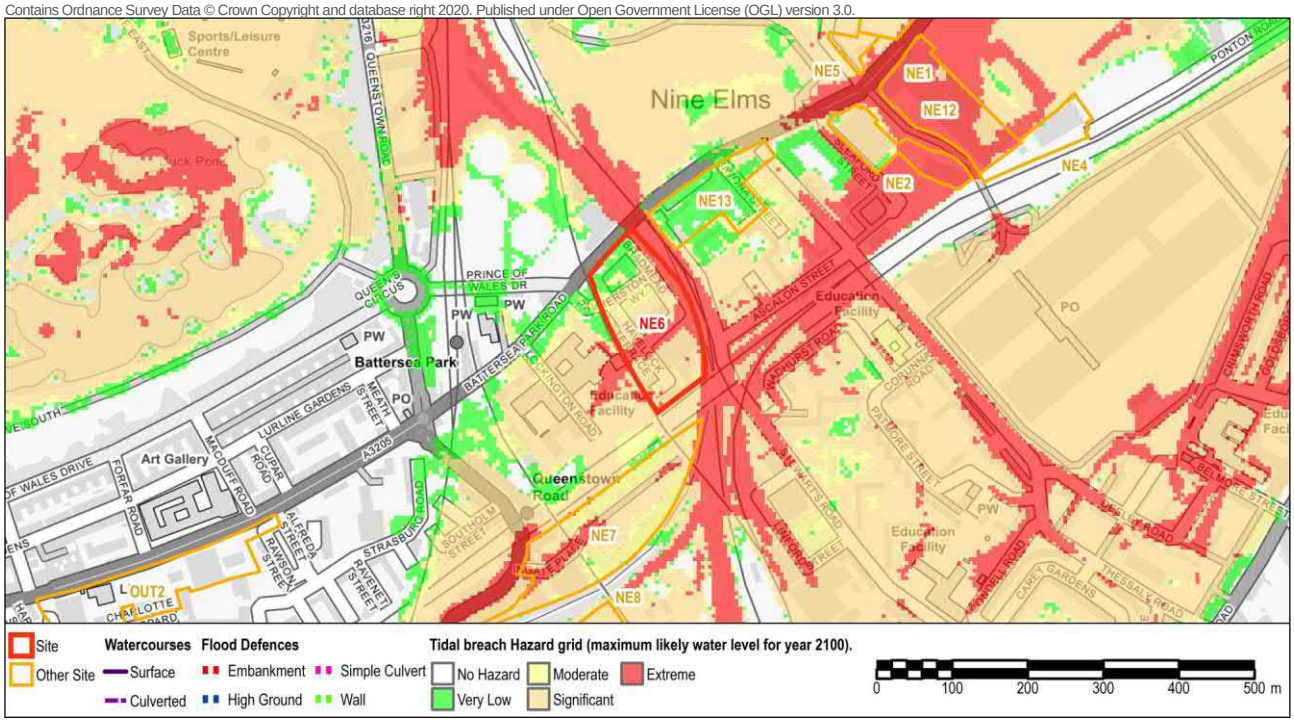

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

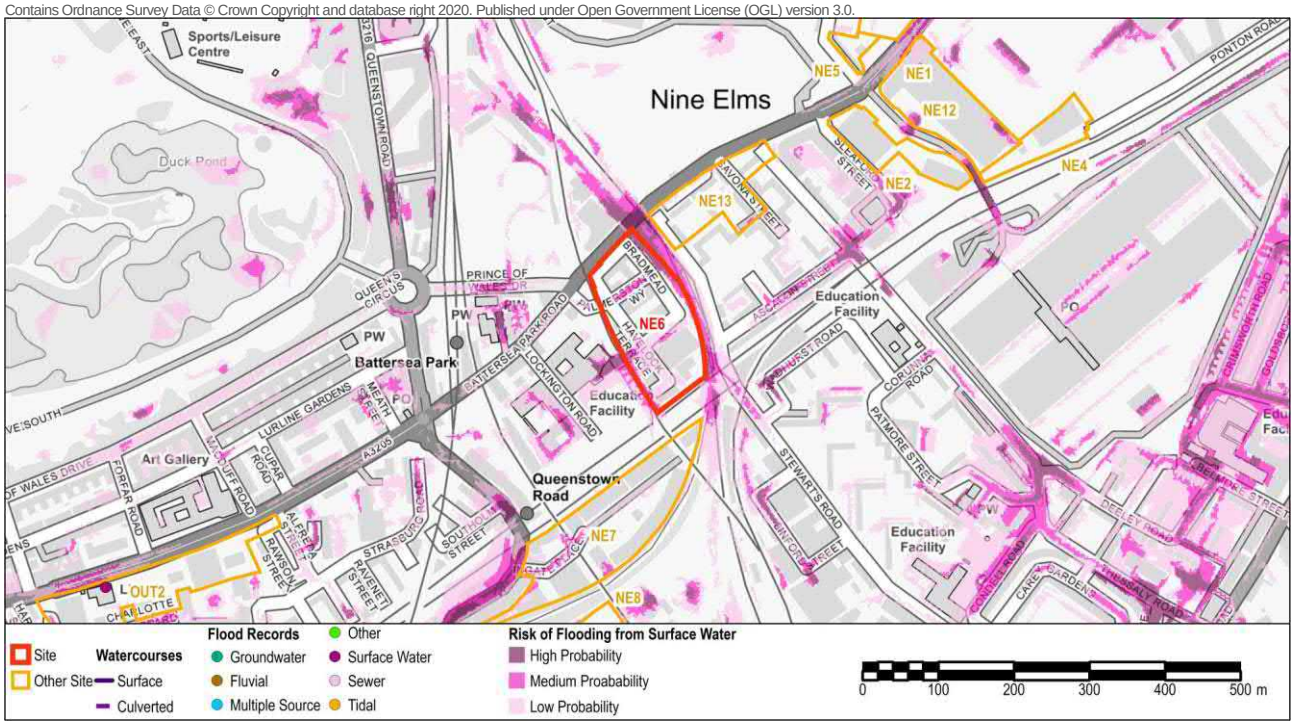

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand, Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	

Site NE6 Havelock Terrace, SW8

Summary

The site is located 570m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 2-2.5m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 2.5-3m depth, Extreme hazard rating on Battersea Park Road ('danger for all') for the year 2100. Flood levels on the site vary from ~4.10-4.29m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond on Palmerston Way and Havelock Terrace within the site and also flow on Battersea Park Road adjacent to the site. The Risk of Flooding from Surface Water mapping also identifies surface water flow pathways on the rail lines.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.10-4.29m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE7 Ingate Place, SW8

Site ID:	NE7	**Area (ha):**	2.39
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

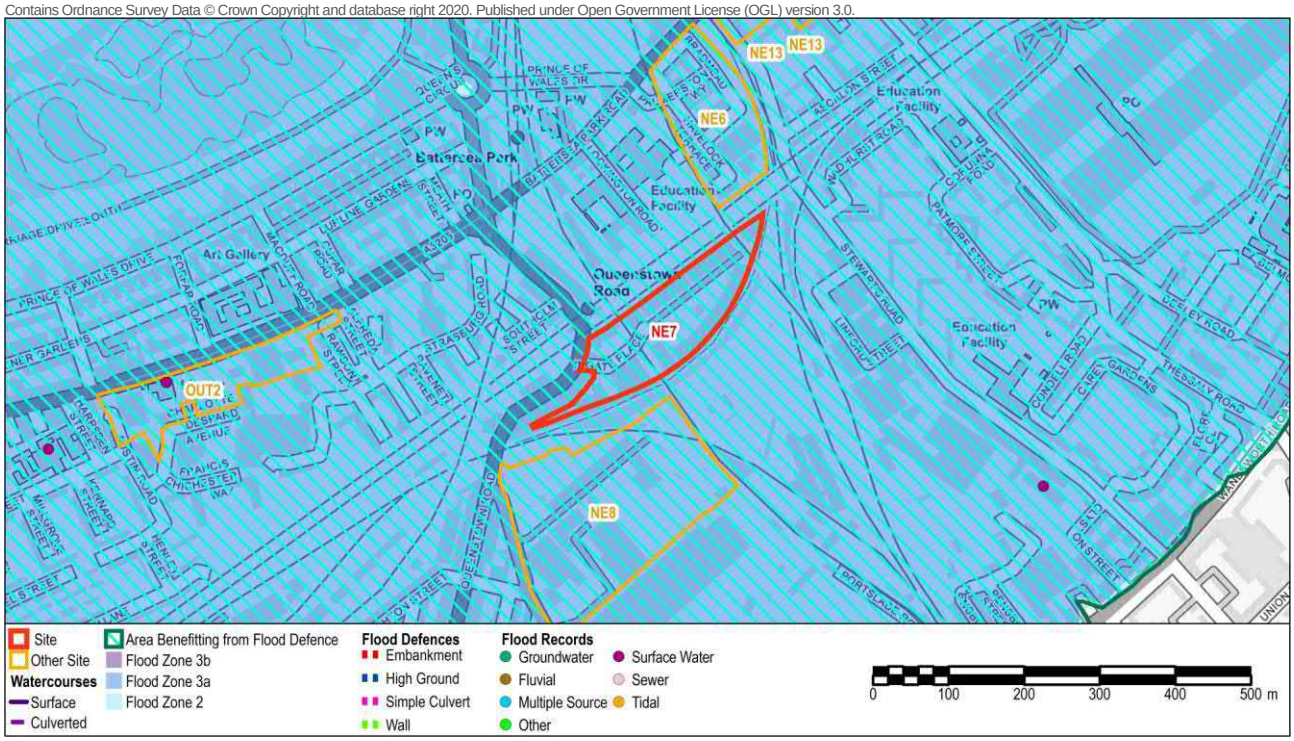

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Power Station To Battersea Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 6; Groundwater 0; Sewer 0; Multiple source 2; Other source 0		

Tidal Flooding

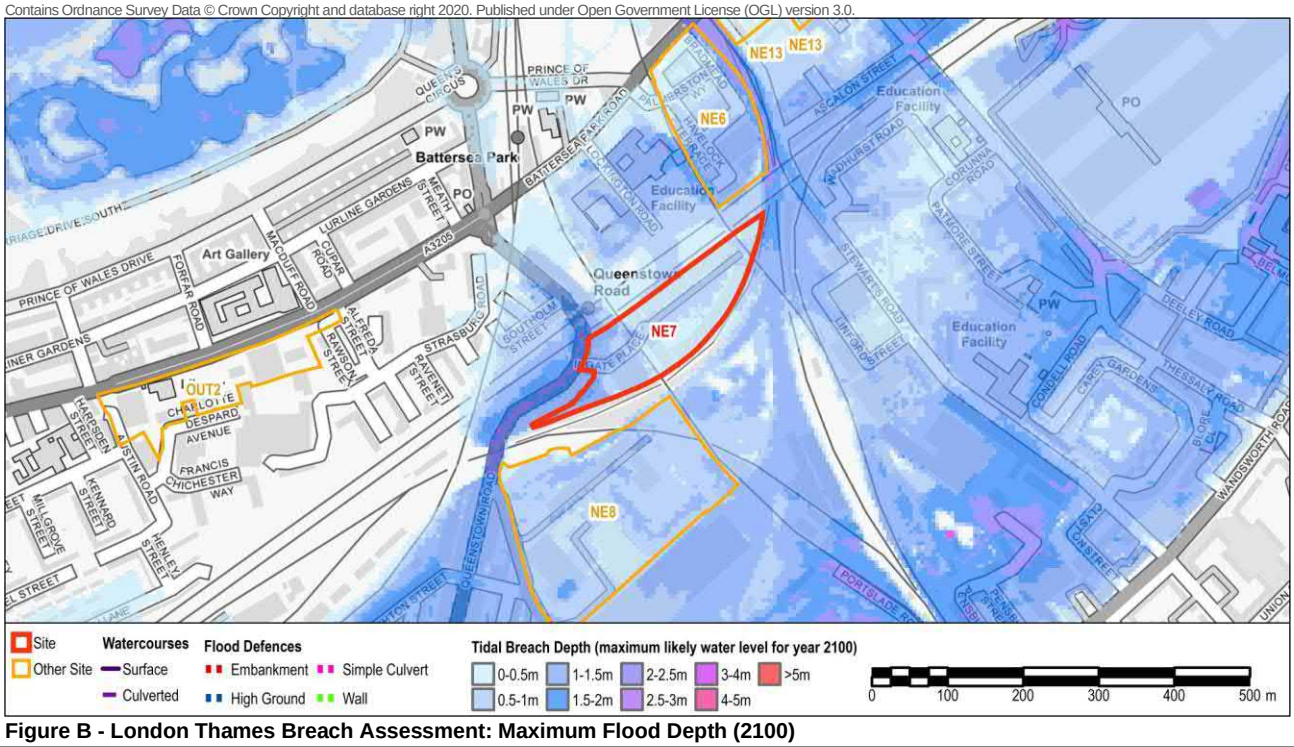

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE7 Ingate Place, SW8

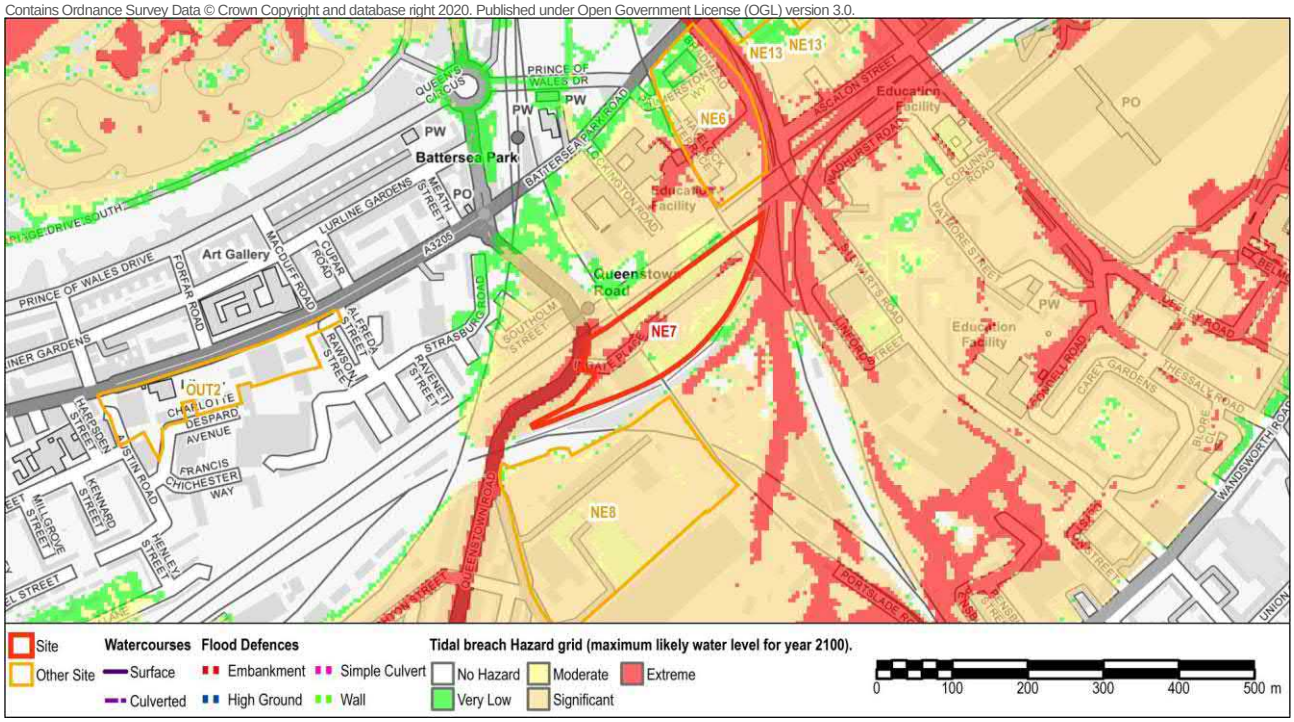

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

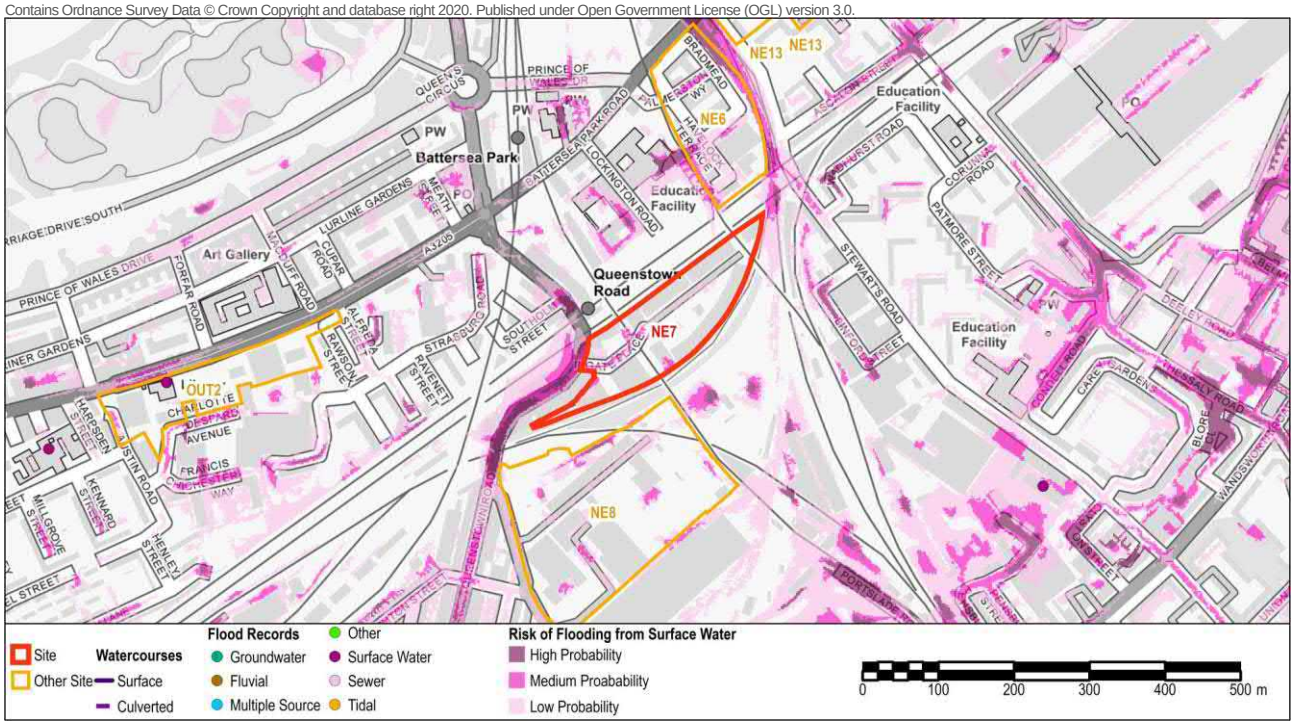

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC11

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site NE7 Ingate Place, SW8

Summary

The site is located 1km south of the tidal River Thames. The site is defined as Flood Zone 3a High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1.5-2m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 2.5-3m depth, Extreme hazard rating ('danger for all') on Queenstown for the year 2100. The flood levels are generally ~3.74mAOD, increasing to ~4.07m AOD to the eastern extent[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site on Ingate Place. There are 6 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from ~3.74 - 4.07mAOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE8 Silverthorne Road, SW8

Site ID:	NE8	**Area (ha):**	5.41
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

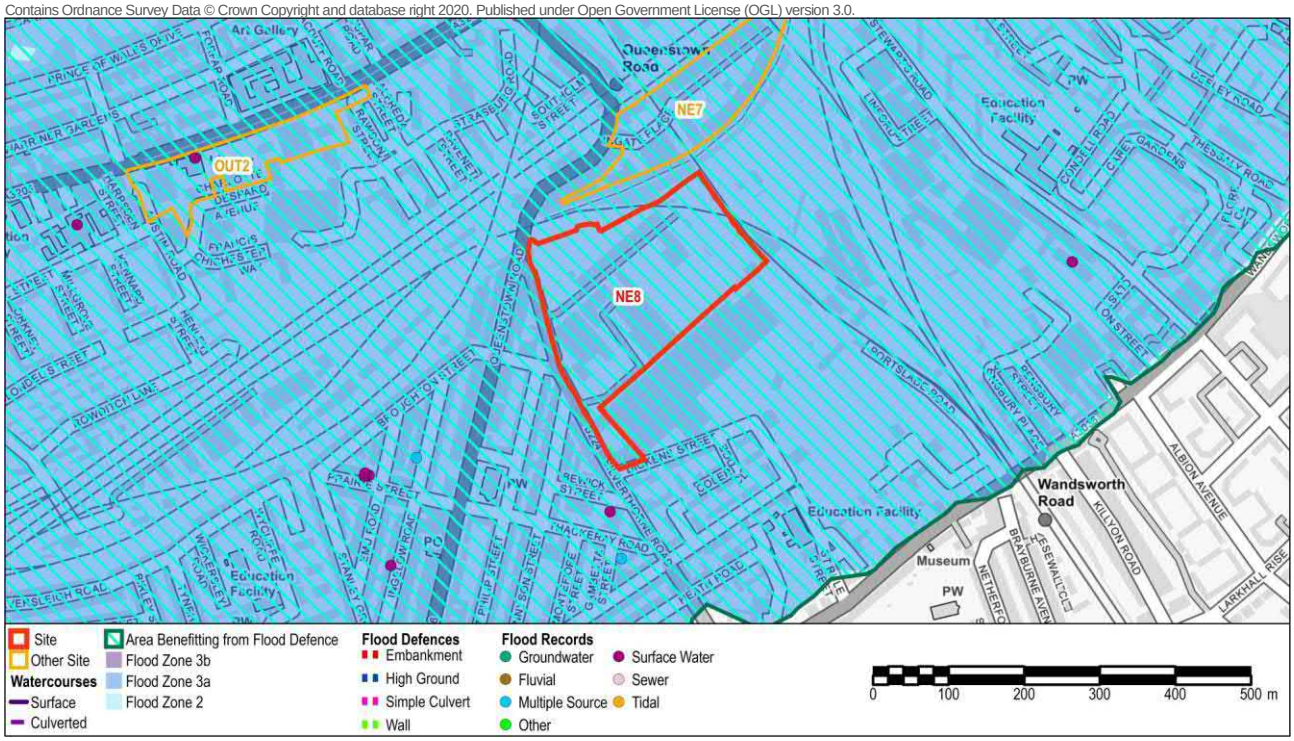

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Power Station To Battersea Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 7; Groundwater 0; Sewer 0; Multiple source 2; Other source 0		

Tidal Flooding

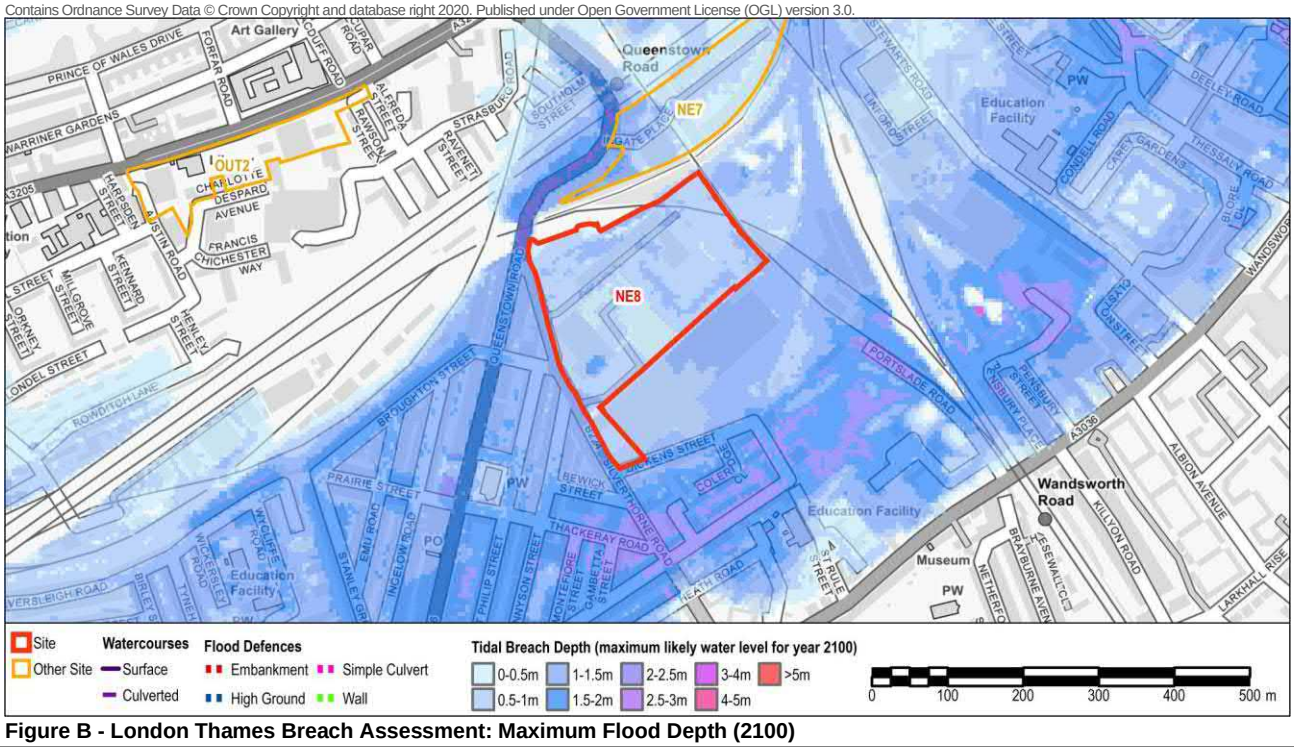

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE8 Silverthorne Road, SW8

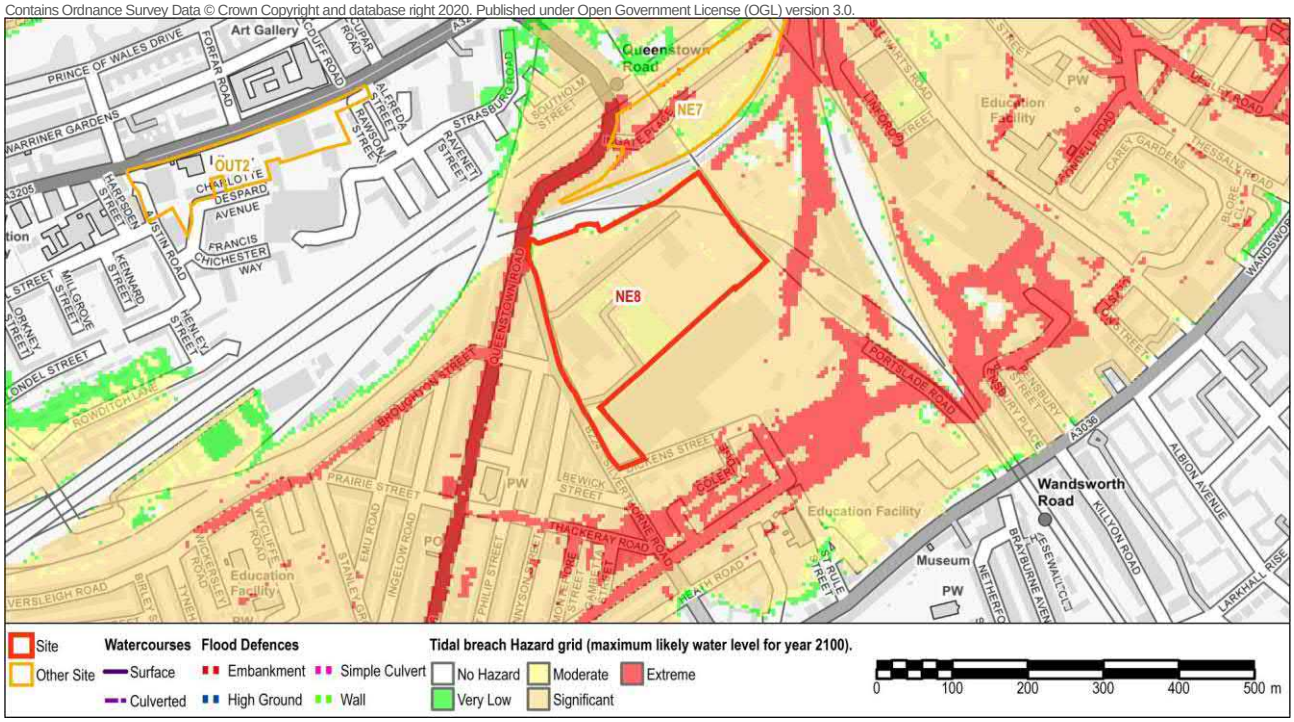

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

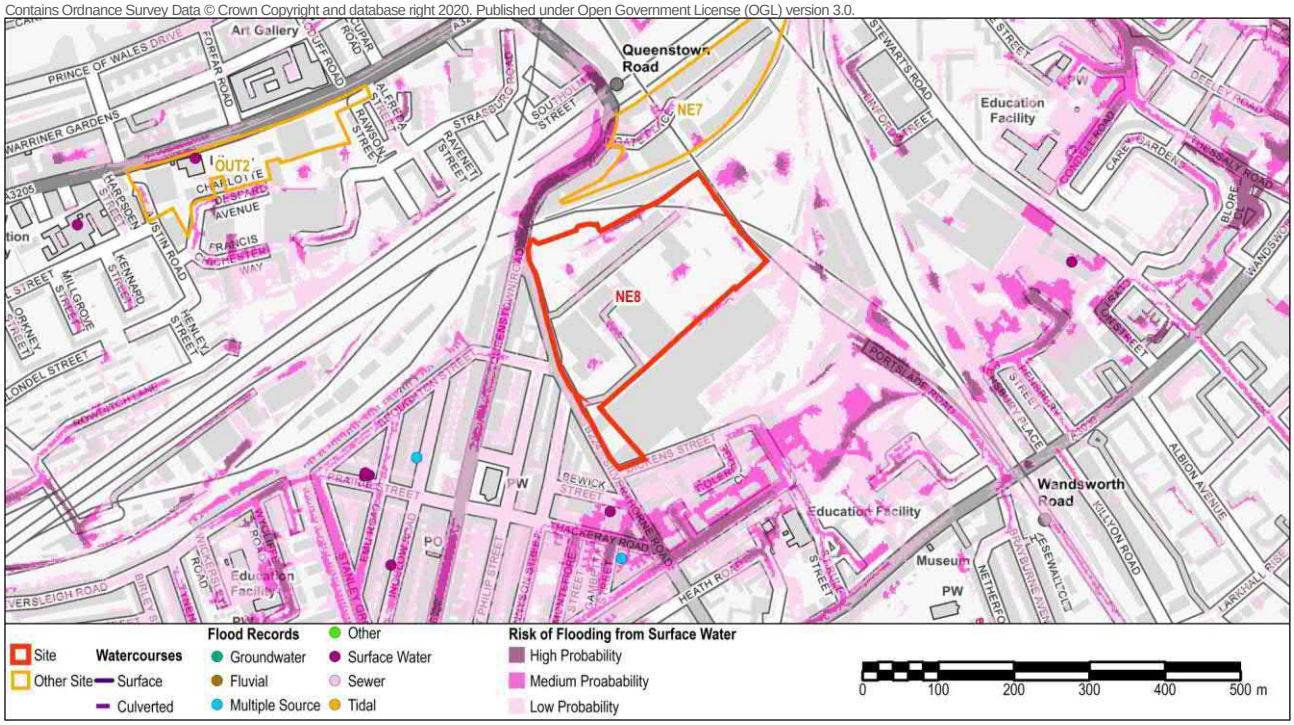

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_028 Nine Elms [Lambeth]
Drainage Catchment	DC11

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site NE8 Silverthorne Road, SW8

Summary

The site is located 1.1km south of the tidal River Thames. The site is defined as Flood Zone 3a High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1.5-2m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 2.5-3m depth, Extreme hazard rating ('danger for all') on Queenstown Road and Silverthorne Road for the year 2100. Flood levels on the site are ~3.60-3.64m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site. There are 7 reported incidents of surface water flooding within 500m of the site and it is located within a Critical Drainage Area (CDA 28 Nine Elms).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from ~3.60-3.64m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE9 Kirtling Wharf, Nine Elms, SW8

Site ID:	NE9	**Area (ha):**	0.69
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 1%	**Flood Zone 2 (0.1% AEP):** 12%	**Flood Zone 3 (1% AEP):** 87%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

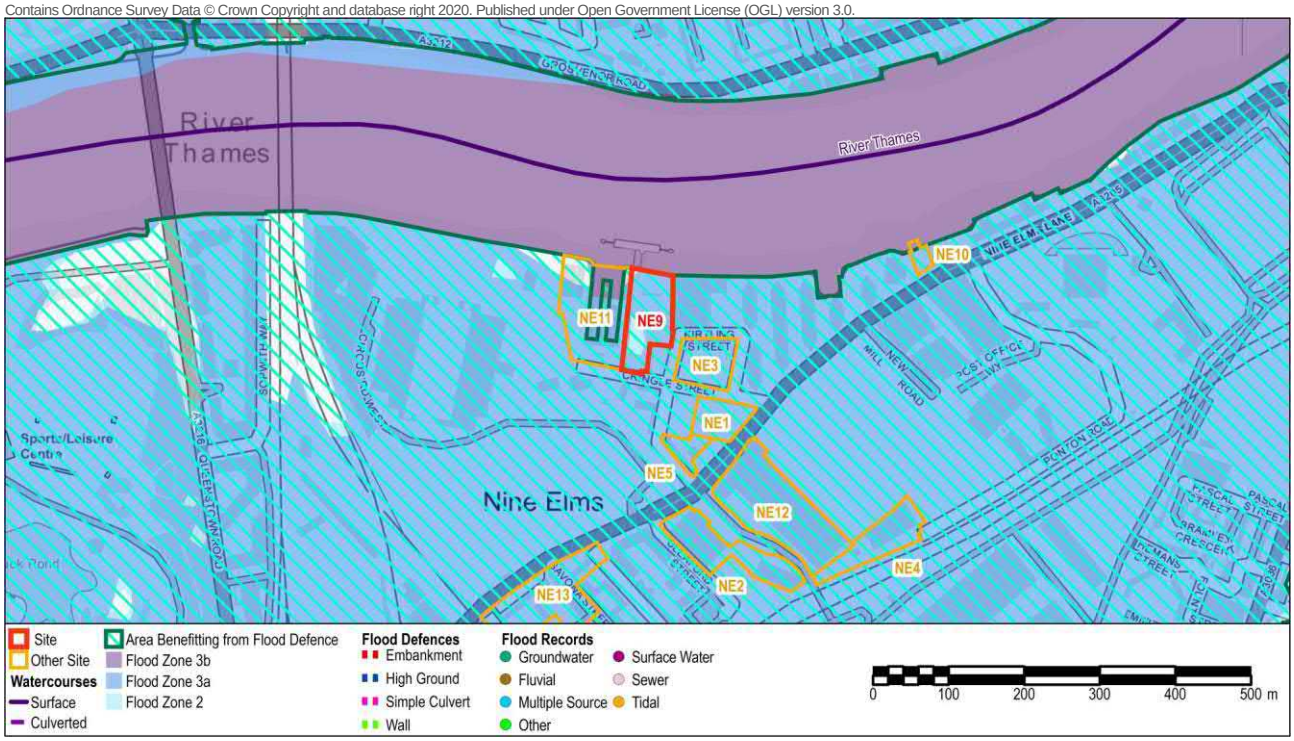

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

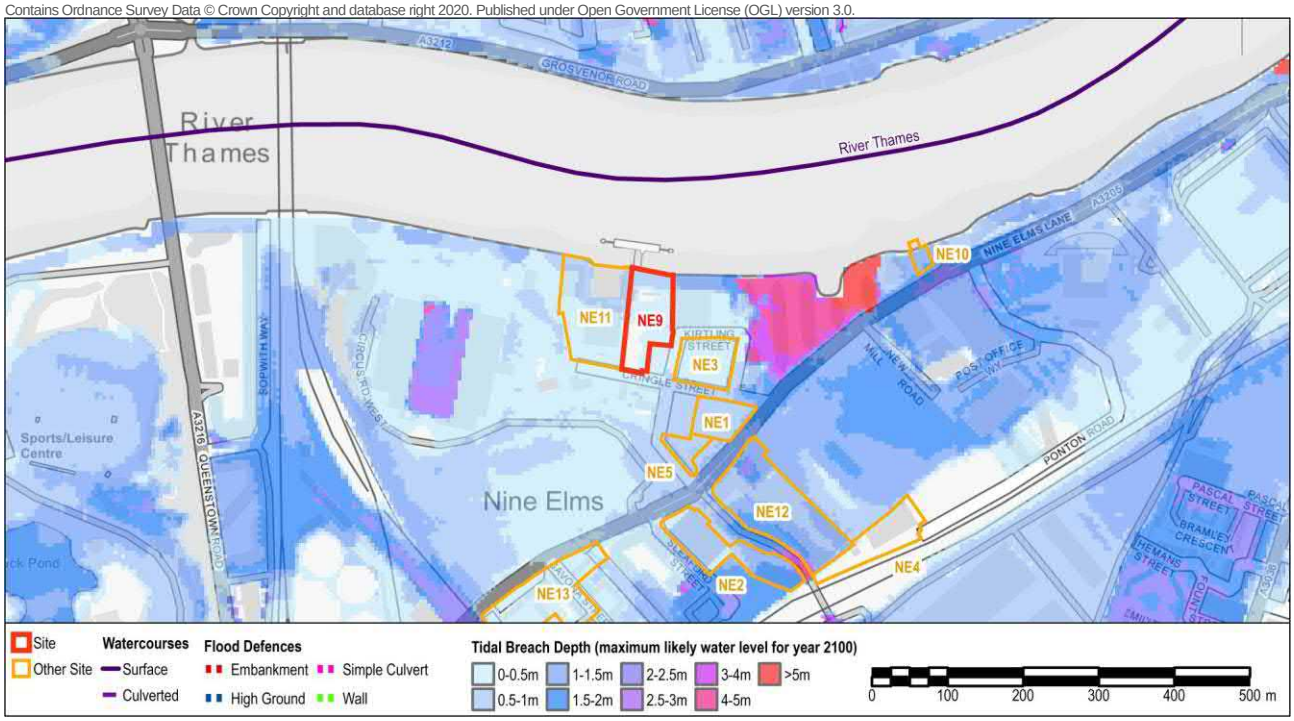

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE9 Kirtling Wharf, Nine Elms, SW8

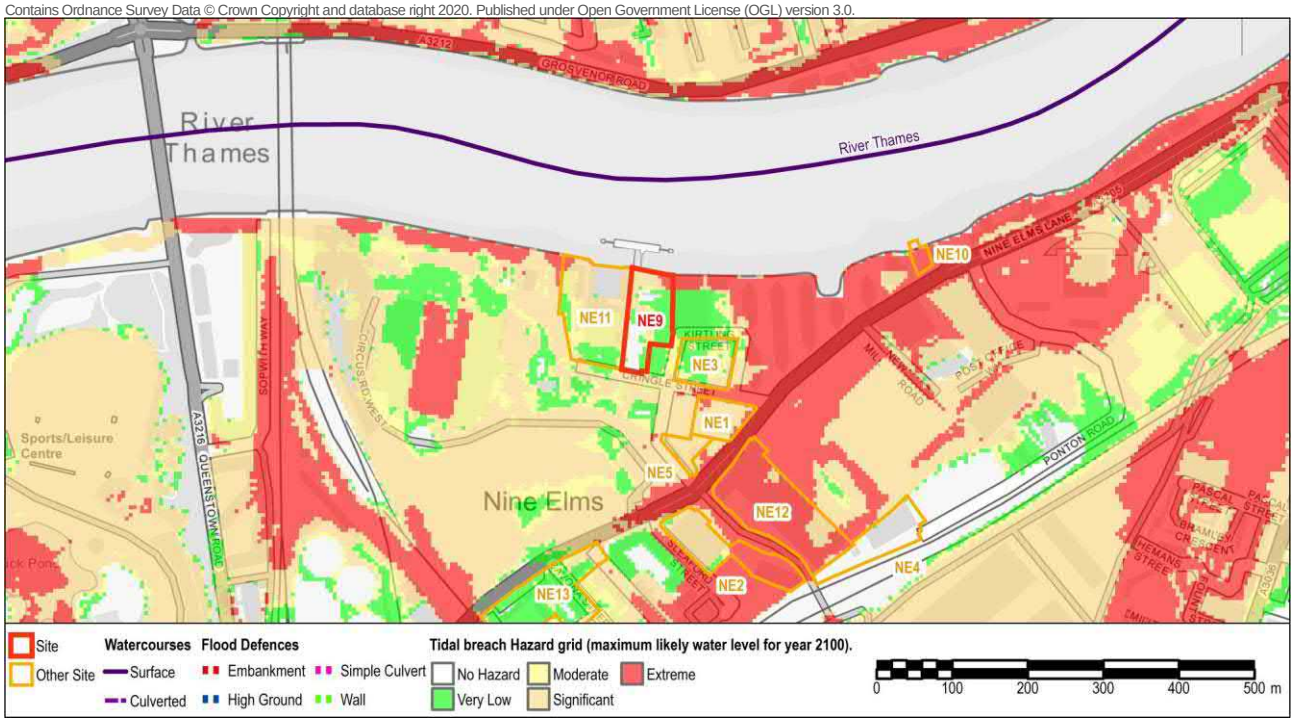

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

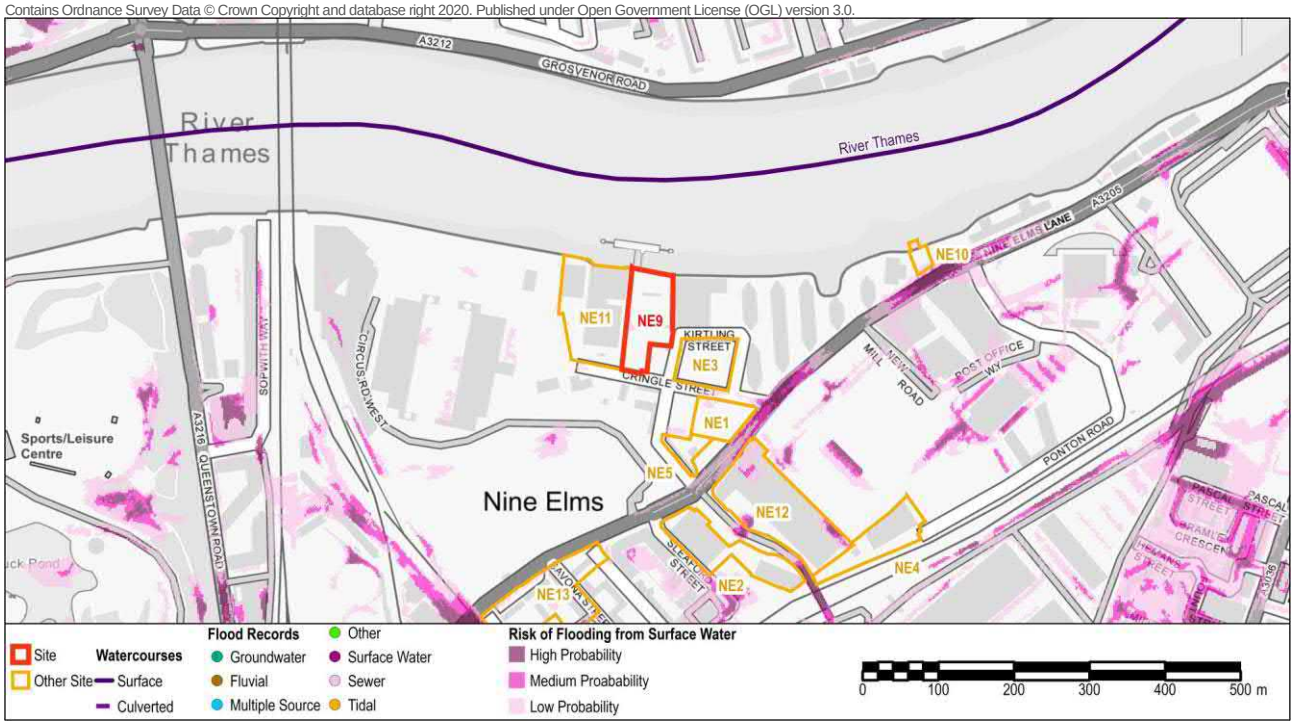

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site NE9 Kirtling Wharf, Nine Elms, SW8

Summary

The site is located next to the tidal River Thames. The majority of the site is defined as Flood Zone 3 High probability of flooding and the remainder of the site is in Flood Zone 1 and Flood Zone 2 Low and Medium probability flooding respectively. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 1.5-2m depth, Extreme hazard rating on Nine Elms Road ('danger for all') for the year 2100. Cringe Street which is adjacent to the site have a flood depth corresponding to 1-1.5m and an Extreme hazard rating ('danger for all'). Flood levels on the site vary from ~5.5-5.82m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond within the site and also on Cringe Street, and also to flow and pond on Nine Elms Road to the east of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 5.5-5.82m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge to Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE10 Middle Wharf, Nine Elms, SW8

Site ID:	NE10	**Area (ha):**	0.08
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 84%

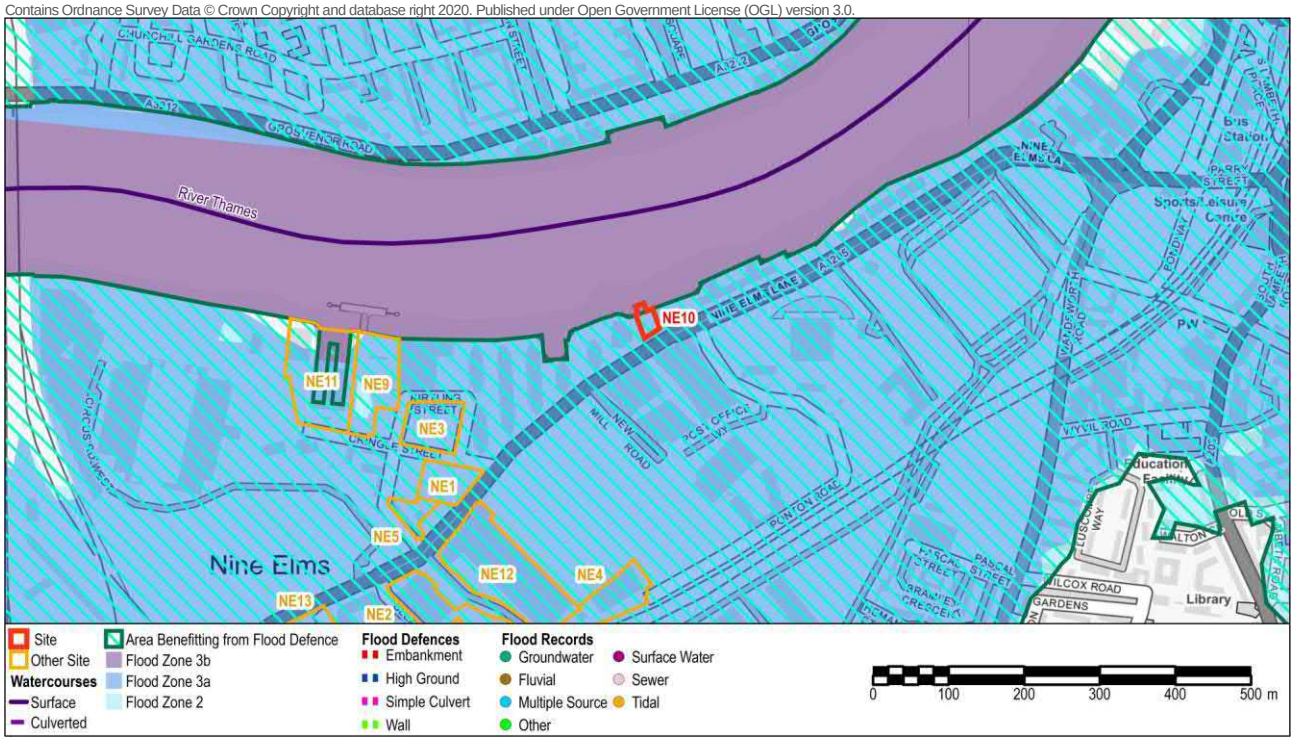

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

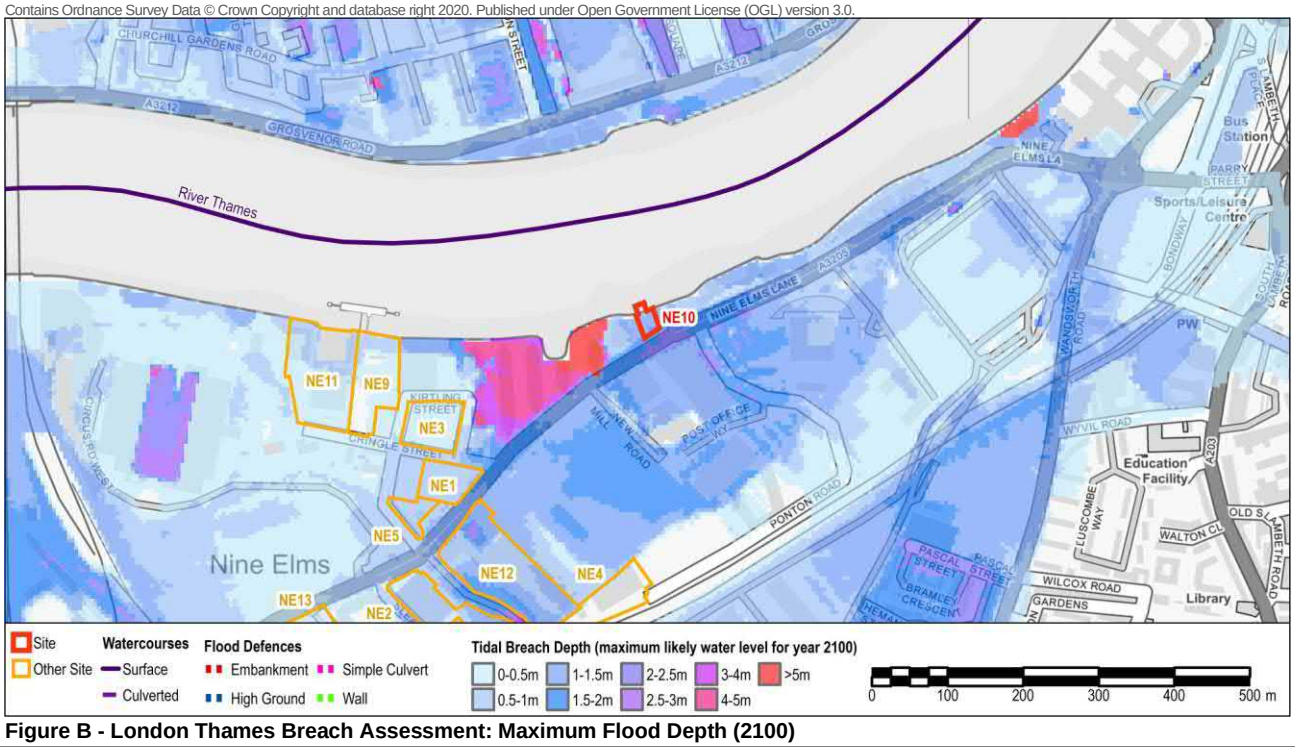

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE10 Middle Wharf, Nine Elms, SW8

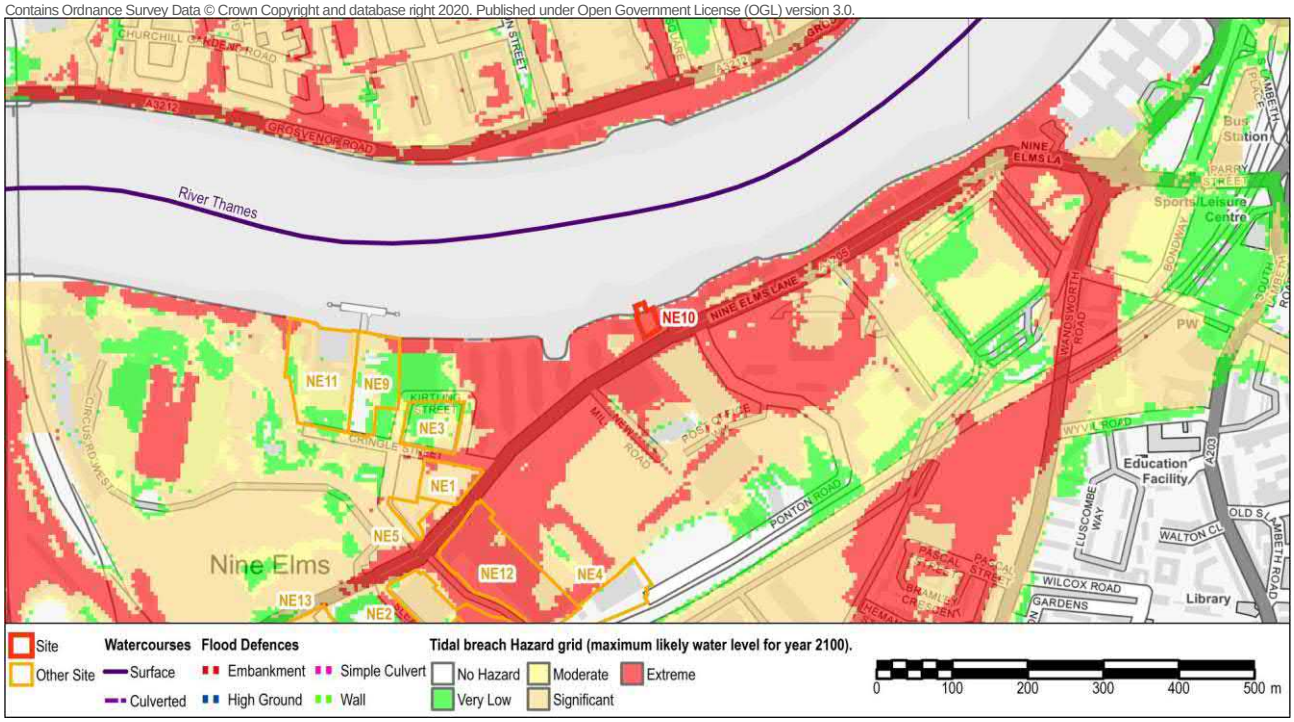

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

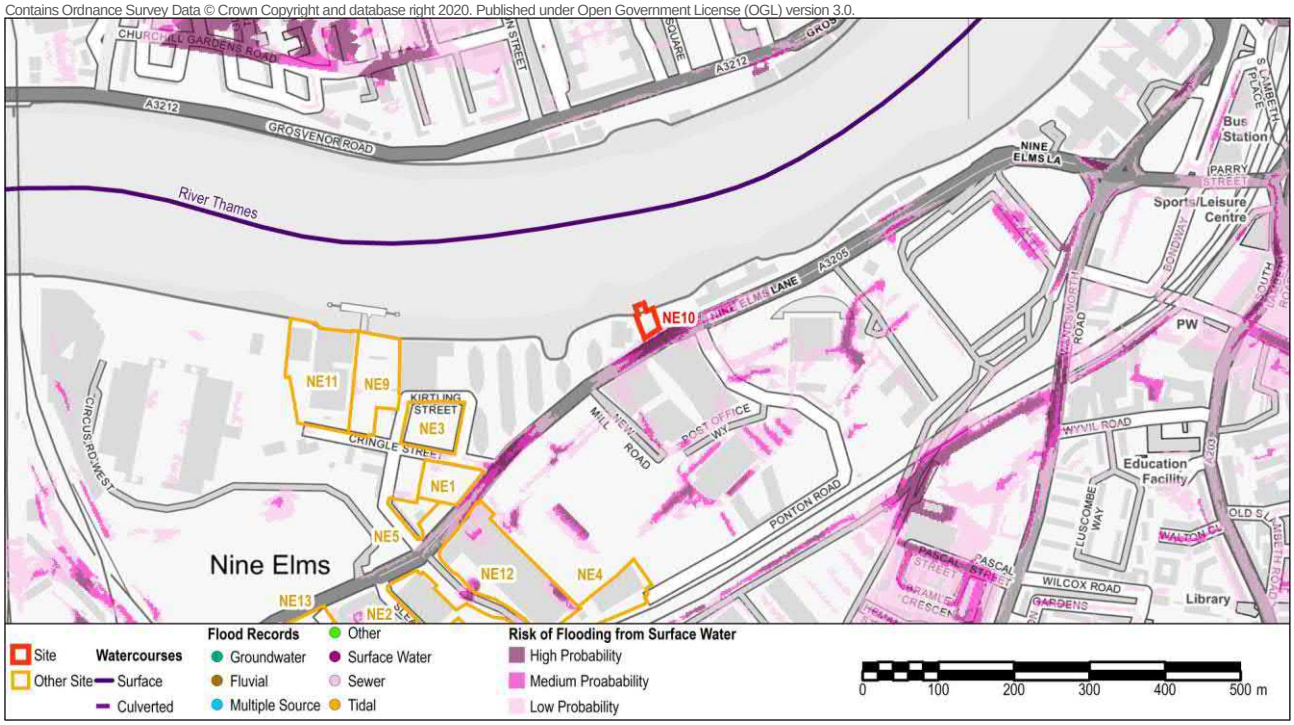

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	

Site NE10 Middle Wharf, Nine Elms, SW8

Summary

The site is located next to the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1.5-2m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 2-2.5m depth, Extreme hazard rating on Nine Elms Road ('danger for all') for the year 2100. Flood levels on the site vary from ~4.58-5.19m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond at the south of the site, and also to flow and pond on Nine Elms Road to the south of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may not be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from ~4.58-5.19m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge to Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE11 Cringle Dock, Nine Elms, SW8

Site ID:	NE11	**Area (ha):**	1.13
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 14%	**Flood Zone 2 (0.1% AEP):** 0%	**Flood Zone 3 (1% AEP):** 86%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 73%

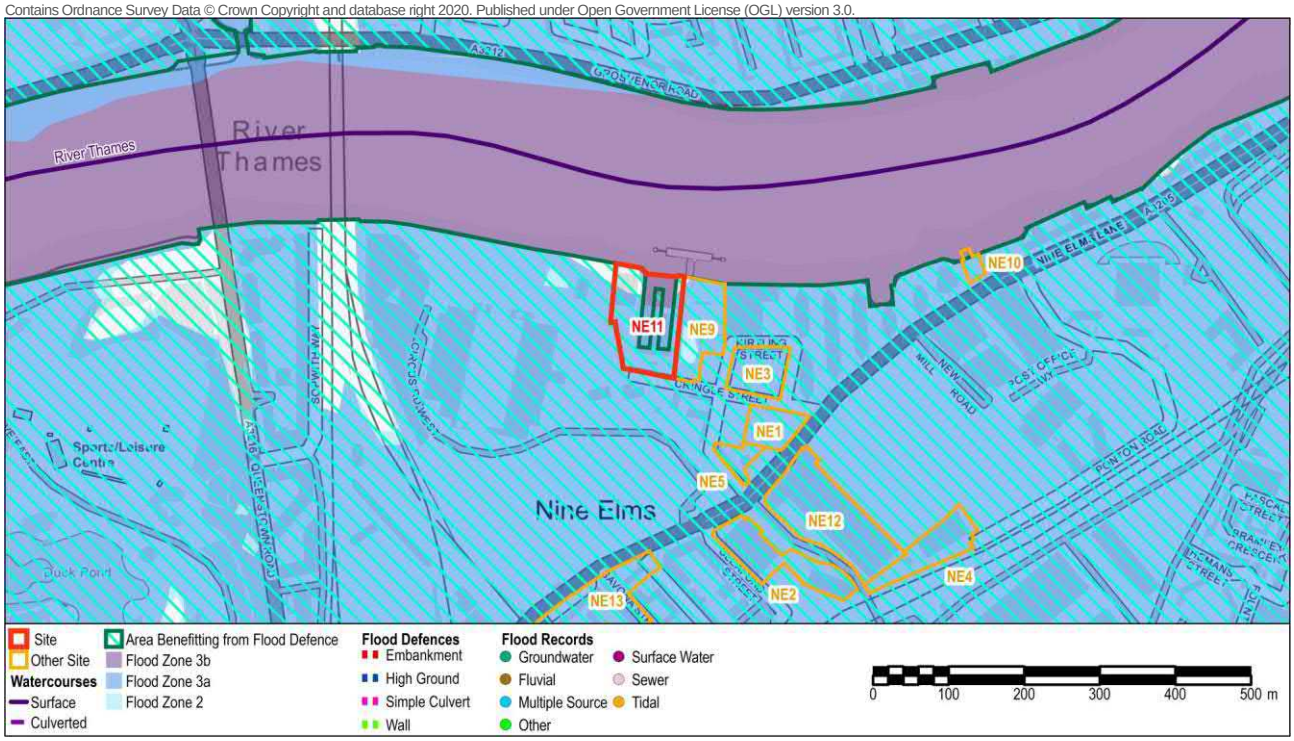

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

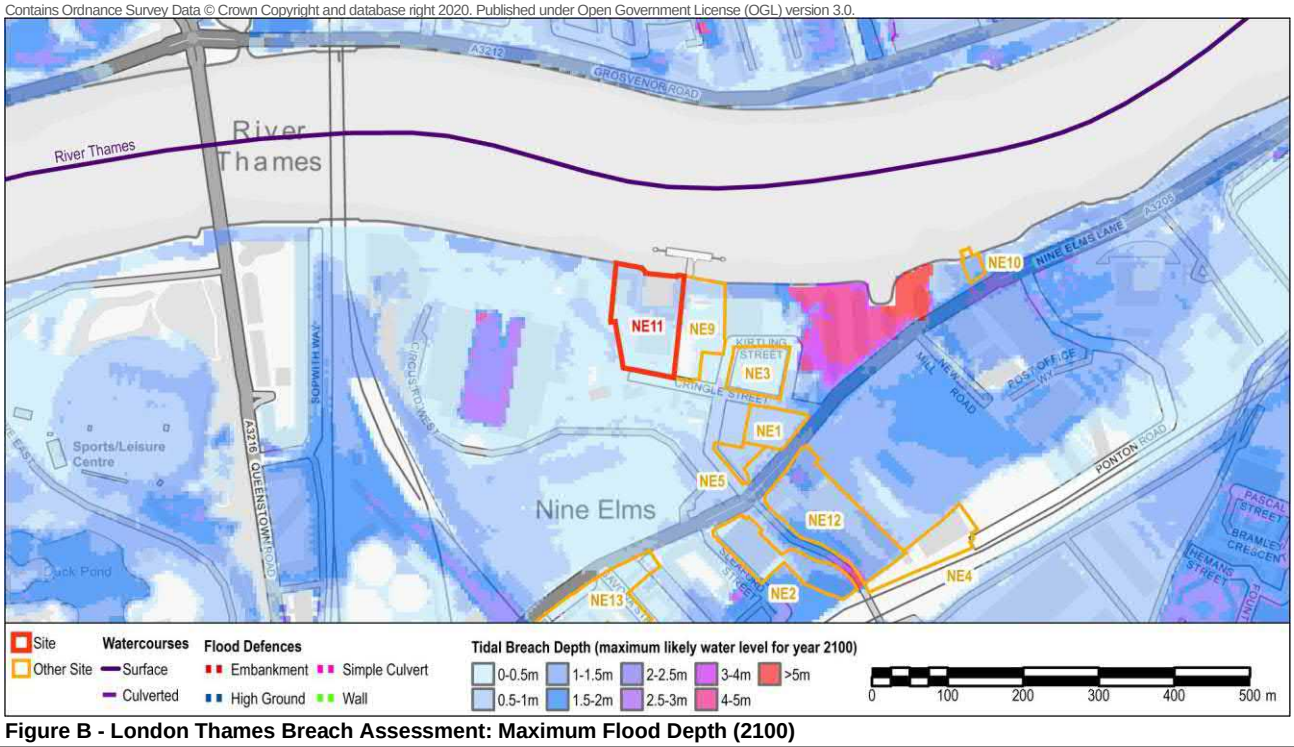

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE11 Cringle Dock, Nine Elms, SW8

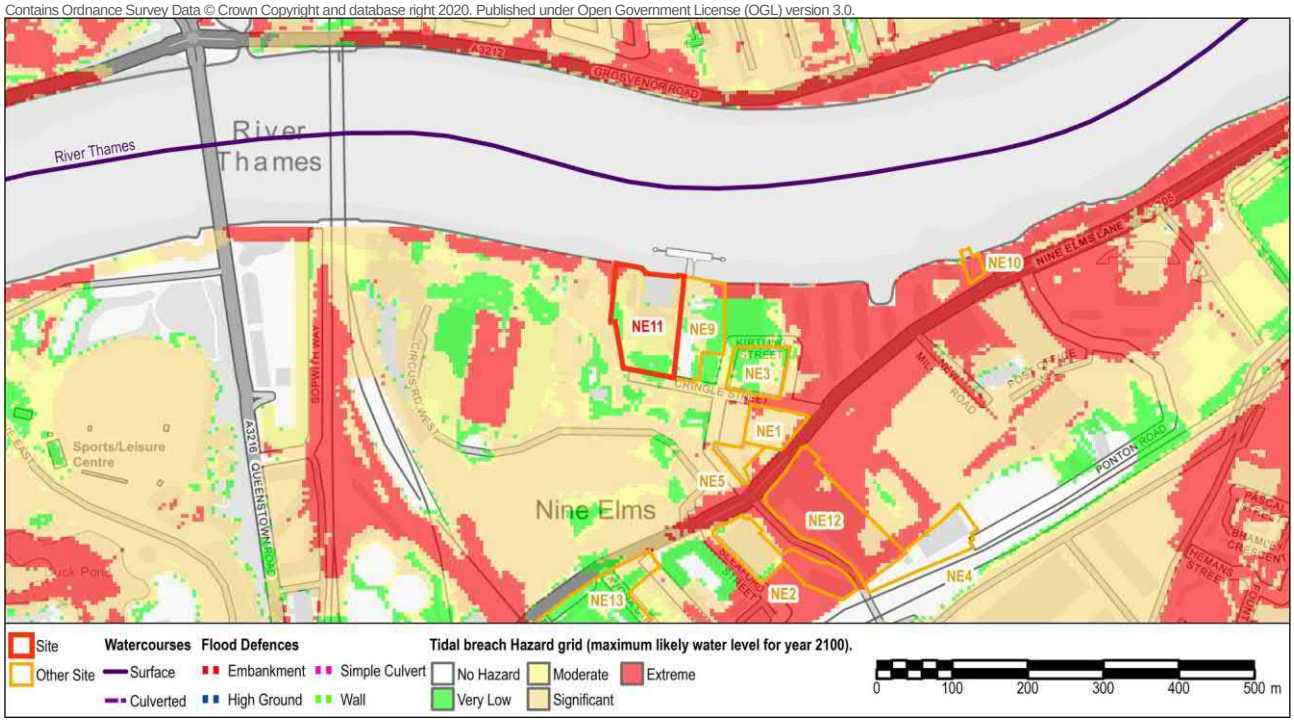

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

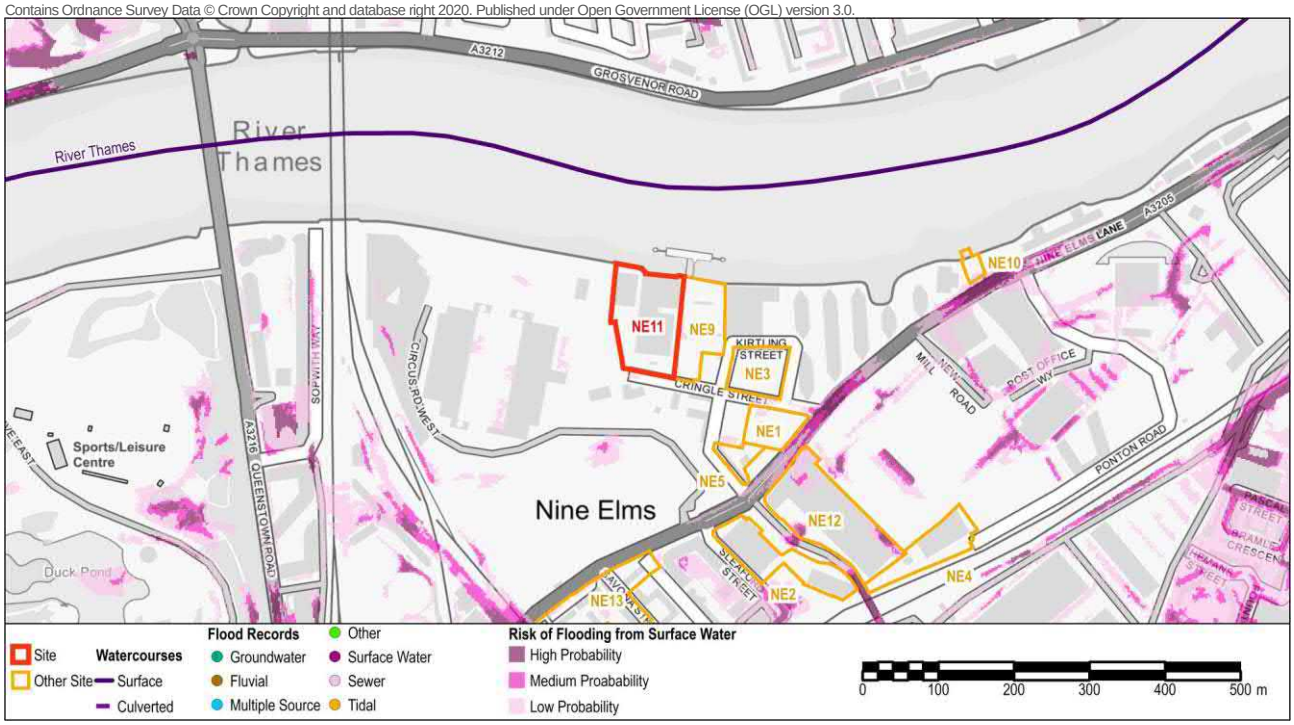

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	

Site NE11 Cringle Dock, Nine Elms, SW8

Summary

The site is located next to the tidal River Thames. The majority of the site is defined as Flood Zone 3 High probability of flooding and the remainder of the site is in Flood Zone 1 and Flood Zone 2 Low and Medium probability flooding respectively. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 1.5-2m depth, Extreme hazard rating on Nine Elms Road ('danger for all') for the year 2100. Cringe Street which is adjacent to the site have a flood depth corresponding to 1-1.5m and an Extreme hazard rating ('danger for all'). Flood levels on the site vary from ~5.55-5.82m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond on Cringe Street, and also to flow and pond on Nine Elms Road to the east of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from ~5.55-5.82m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Hungerford Bridge to Battersea Power Station. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE12 New Covent Garden Market - Entrance Site, SW8

Site ID:	NE12	**Area (ha):**	1.39
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

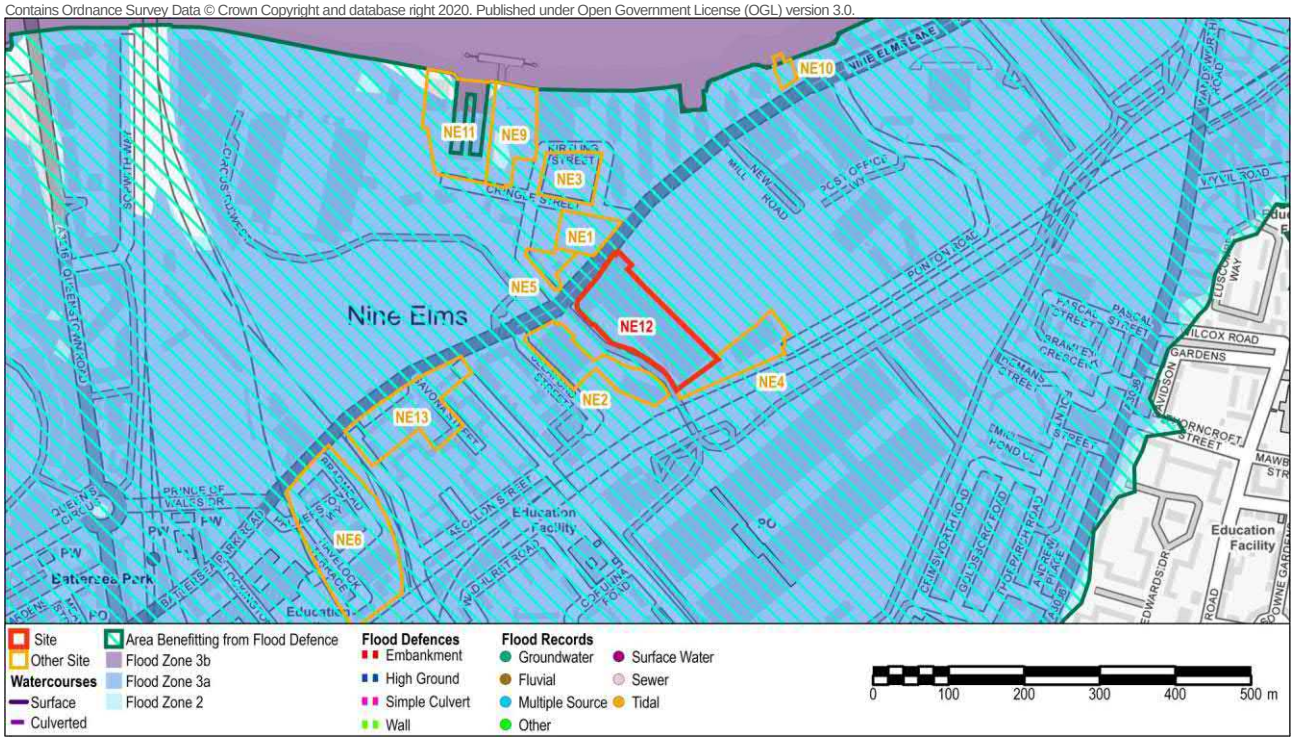

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Hungerford Bridge To Battersea Power Station	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

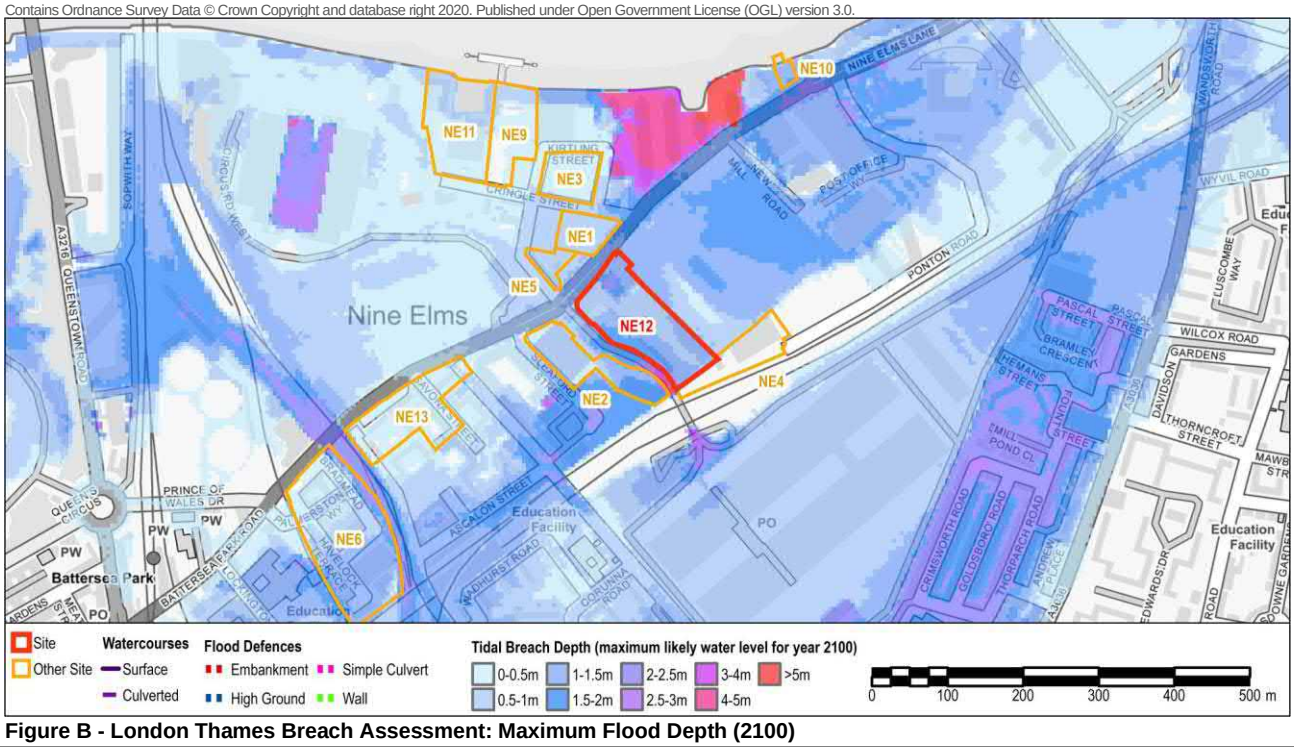

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE12 New Covent Garden Market - Entrance Site, SW8

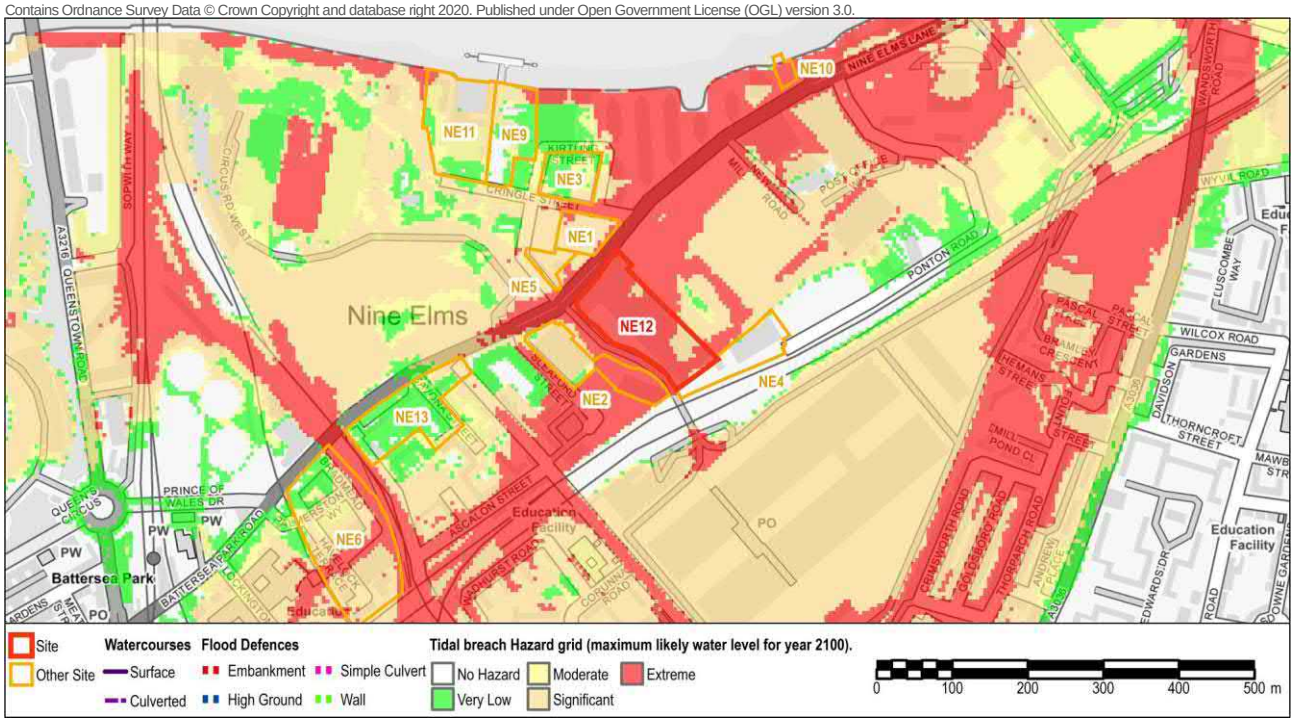

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

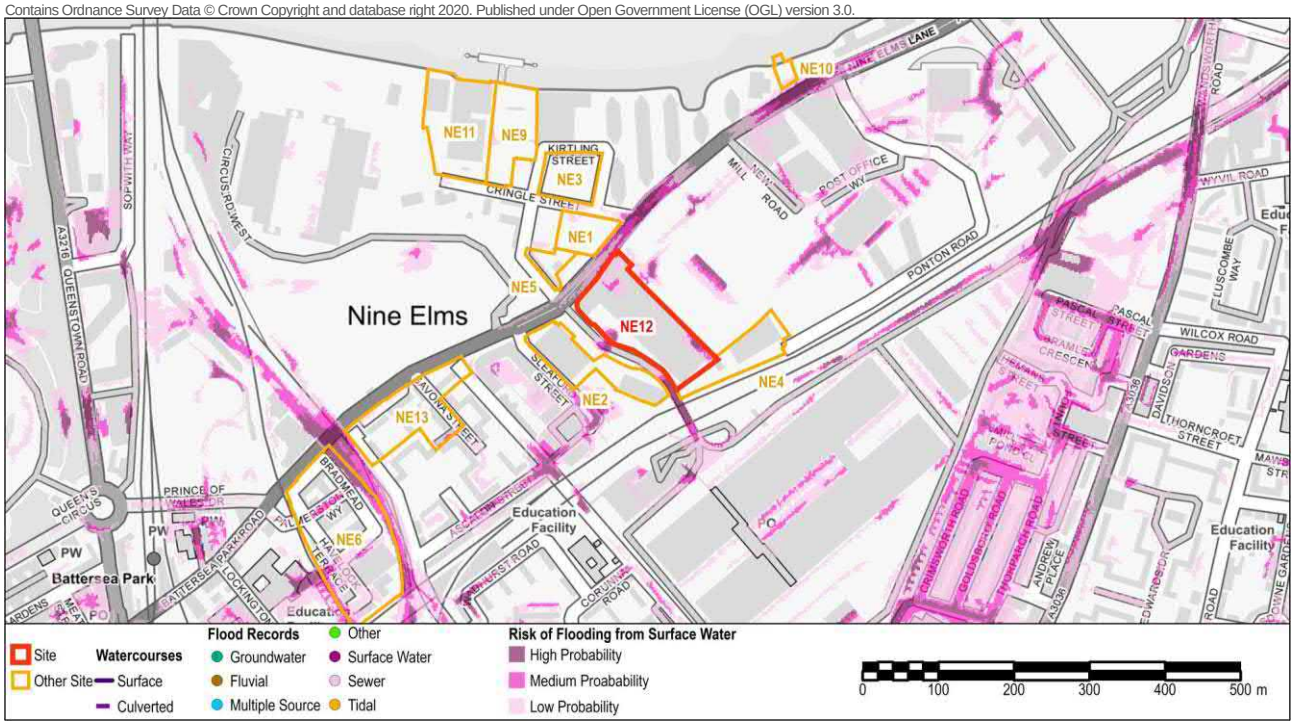

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site NE12 New Covent Garden Market - Entrance Site, SW8

Summary

The site is located 330m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 2.5-3m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 2.5-3m depth, Extreme hazard rating on Battersea Park Road and Nine Elms Road ('danger for all') for the year 2100. Flood levels on the site are ~4.21-4.97m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site and also flow on Nine Elms Road adjacent to the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.21-4.97m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site NE13 Battersea Park Road (between Stewarts Road and Thessally Road), SW8

Site ID:	NE13	**Area (ha):**	1.06
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Power Station To Battersea Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 0; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

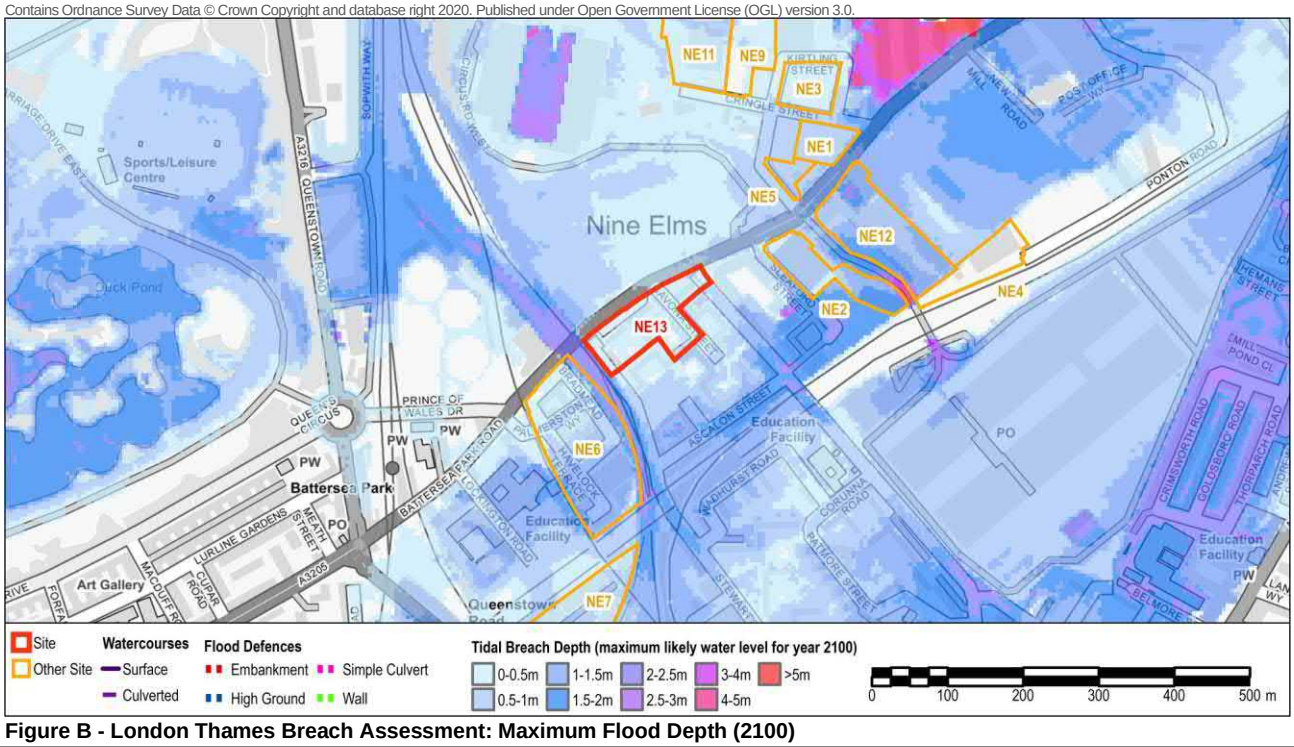

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site NE13 Battersea Park Road (between Stewarts Road and Thessally Road), SW8

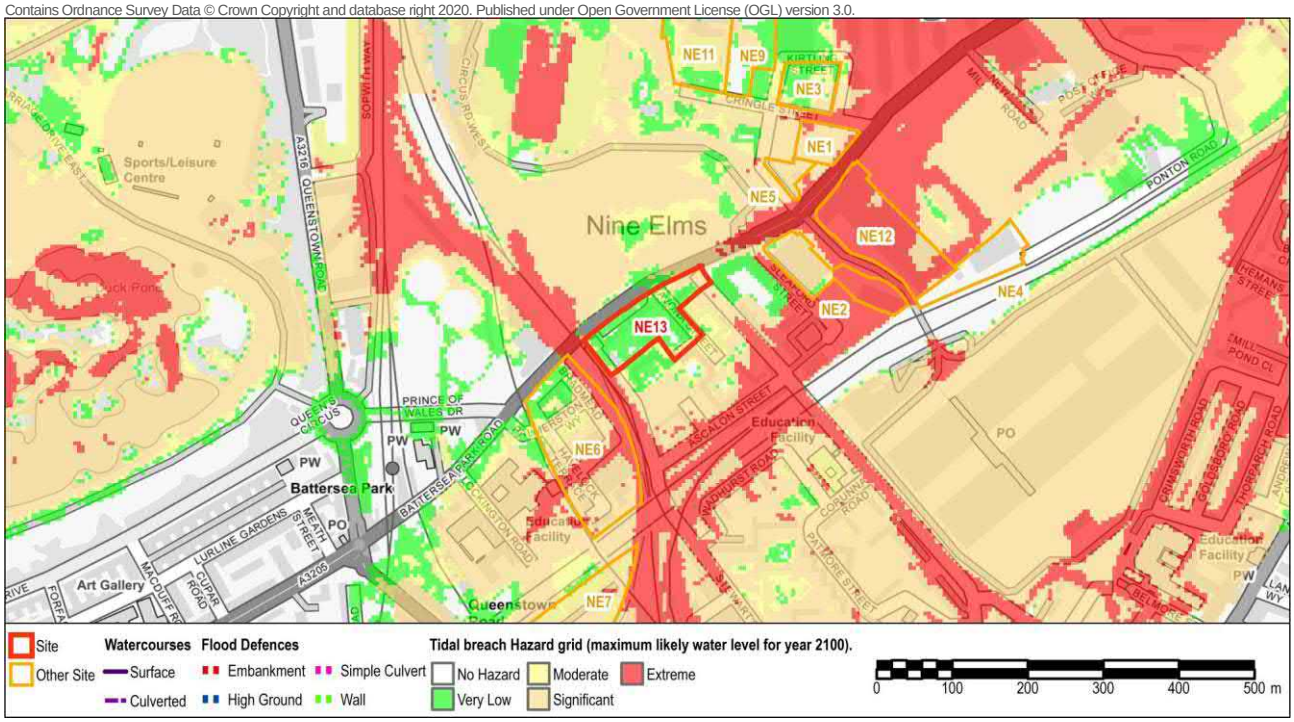

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

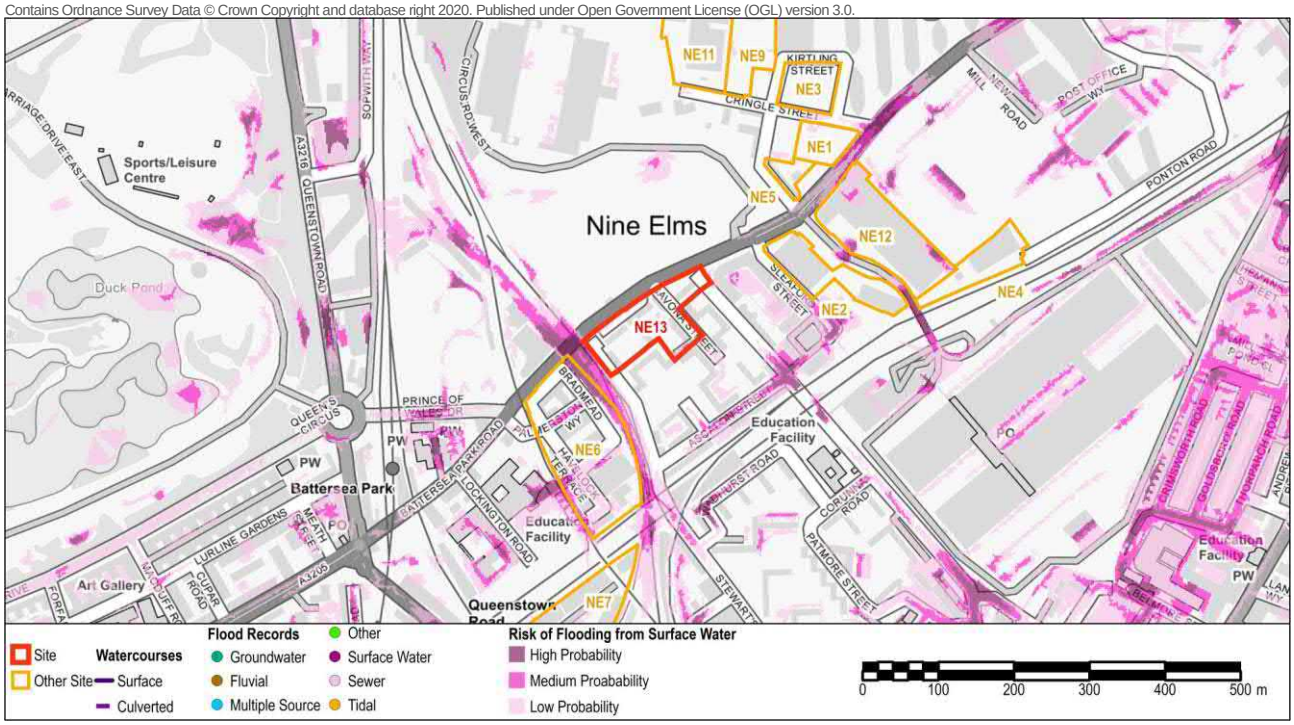

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site NE13 Battersea Park Road (between Stewarts Road and Thessally Road), SW8

Summary

The site is located 430m south of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Significant ('danger for some') on the site, and 2.5-3m depth, Extreme hazard rating on Battersea Park Road ('danger for all') for the year 2100. Flood levels on the site are ~4.09-4.61m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond and flow on Savona Street and Stewart's Road adjacent to the site. The Risk of Flooding from Surface Water mapping also identifies surface water flow pathways on the rail lines.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.09-4.61m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site OUT2 259-311 Battersea Park Road, SW 11 (Doddington Estate part)

Site ID:	OUT2	**Area (ha):**	1.79
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

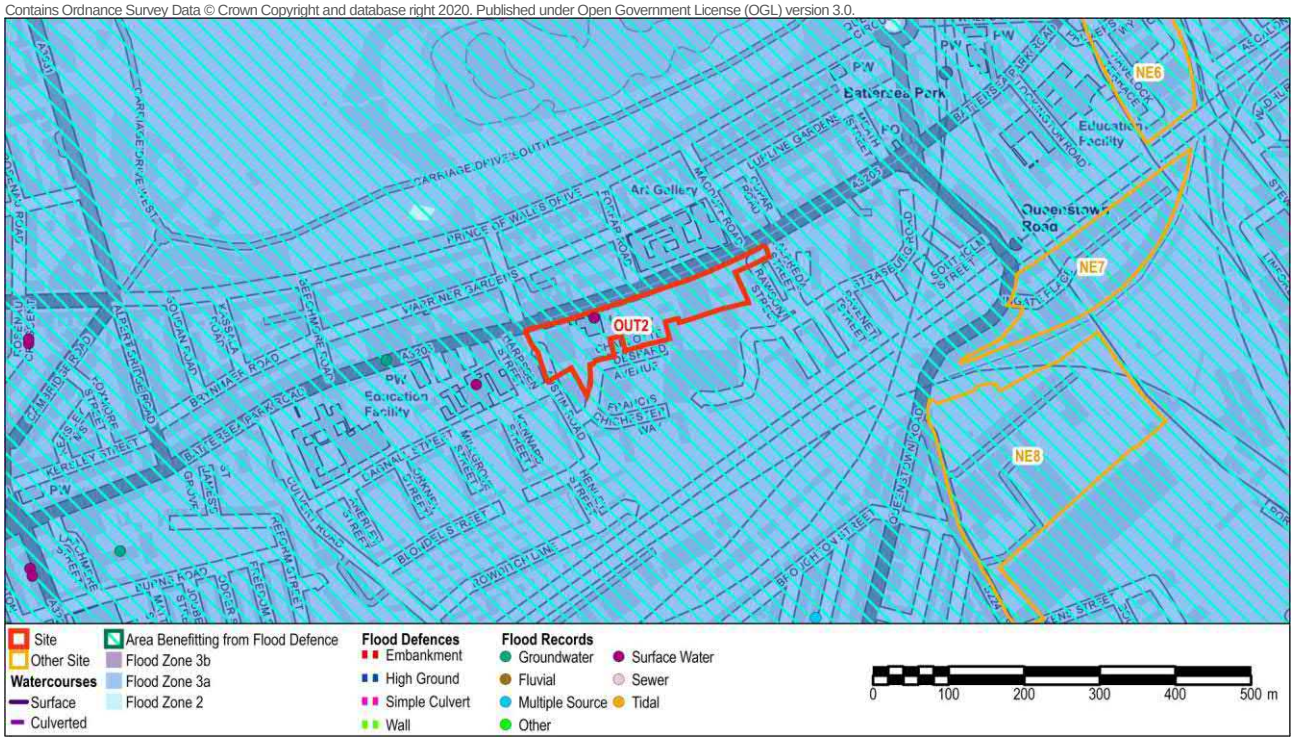

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Power Station To Battersea Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 5; Groundwater 1; Sewer 0; Multiple source 1; Other source 0		

Tidal Flooding

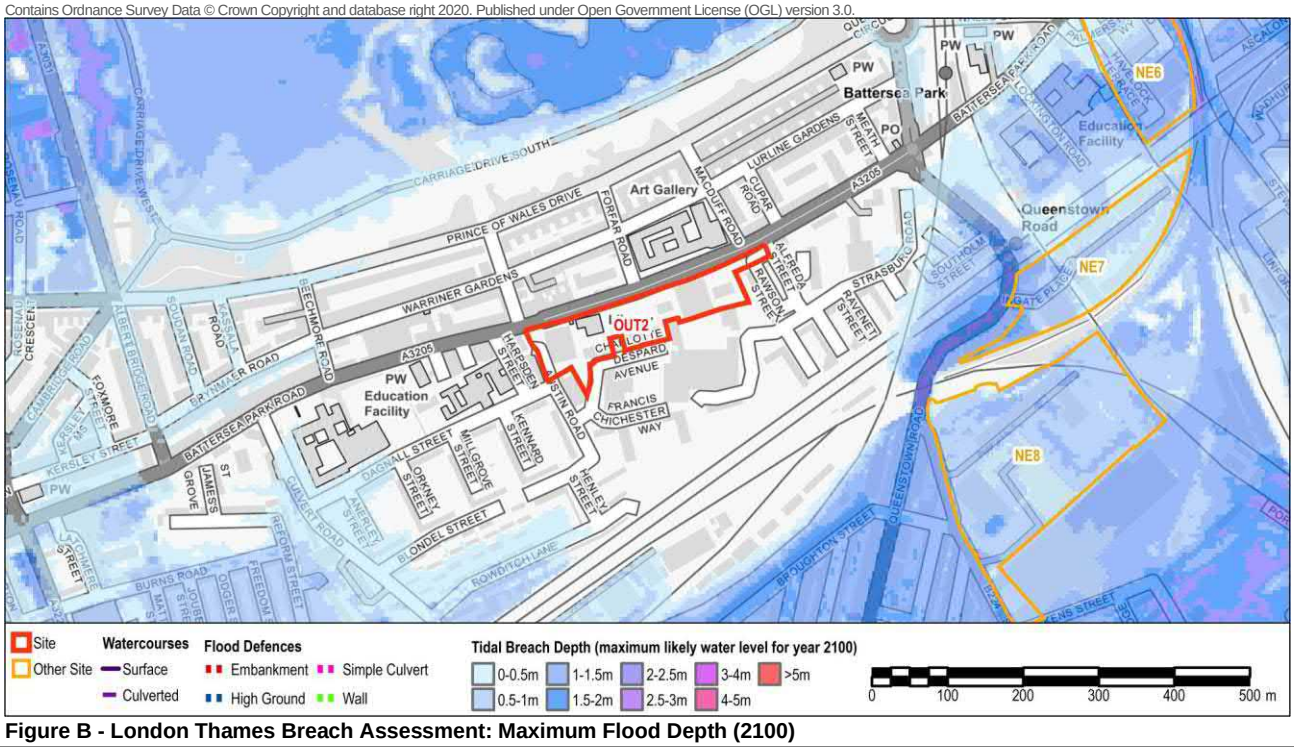

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site OUT2 259-311 Battersea Park Road, SW 11 (Doddington Estate part)

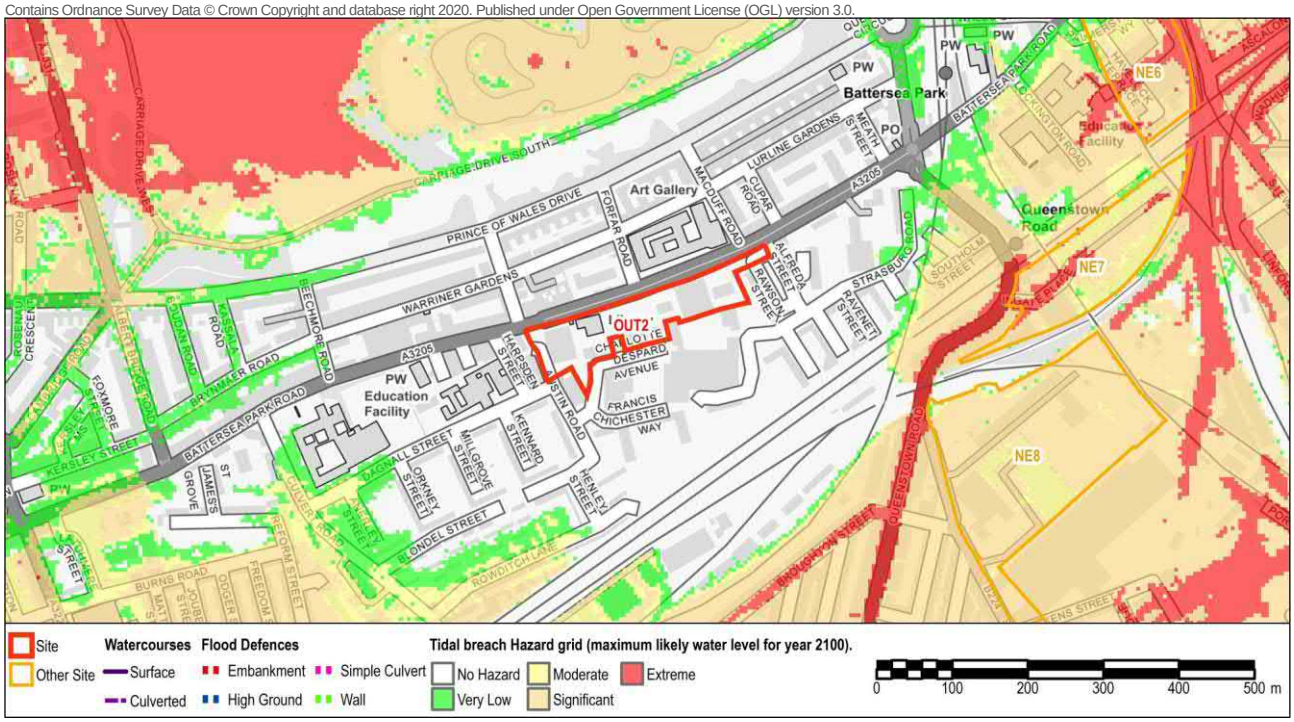

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

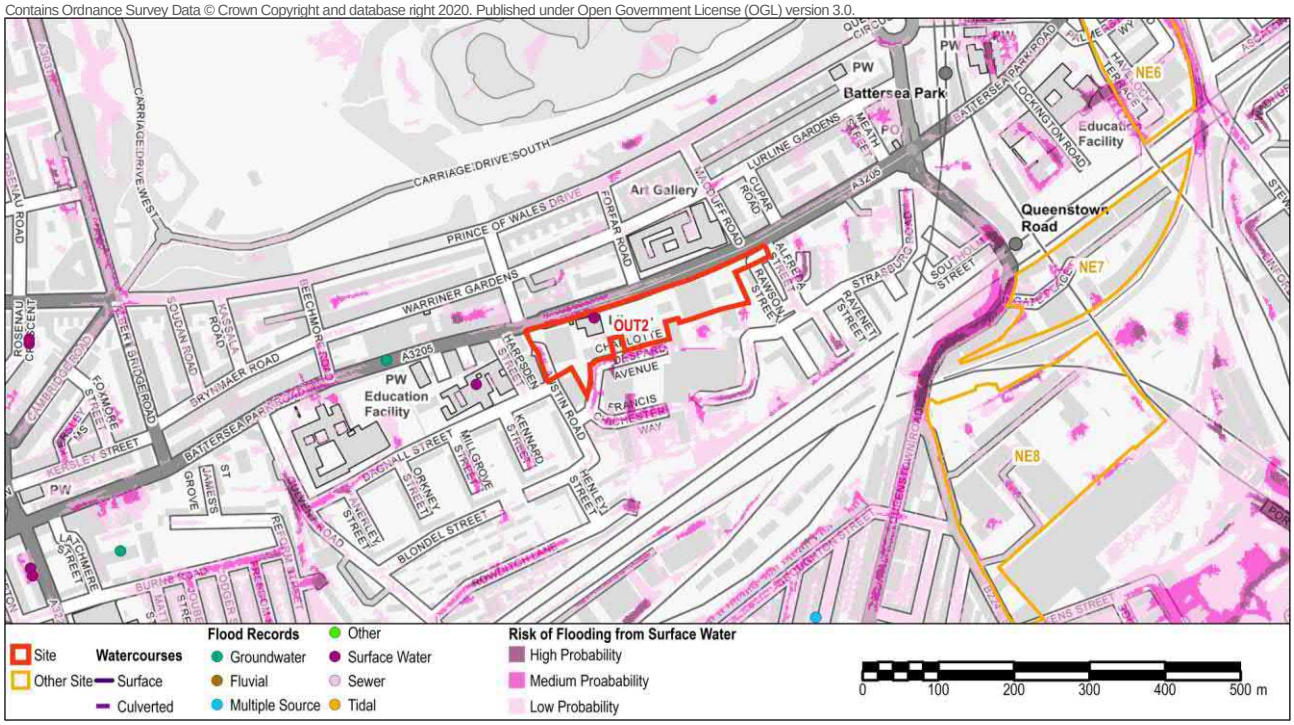

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC1		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs			

Site OUT2 259-311 Battersea Park Road, SW 11 (Doddington Estate part)

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows east, approximately 900m to the north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that in the event of a breach, floodwaters would not extend as far as the site. The site is therefore not considered to be at residual risk of tidal flooding during a breach in the Thames tidal defences. However, the access/egress routes for the site along Battersea Park Road are at residual risk of flooding[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Battersea Park Road to the north of the site. There are 5 reported incidents of surface water flooding within 500m of the site.

There is 1 reported incident of groundwater flooding records within 500m of the site, and broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- In the event of a breach in the flood defences, dry access/egress out of the wider area may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for the Tidal Thames From Deptford Creek to Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site OUT5 Bridge Lane Medical Group Practice, 20 Bridge Ln, Battersea, London SW11 3AD

Site ID:	OUT5	**Area (ha):**	0.2
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

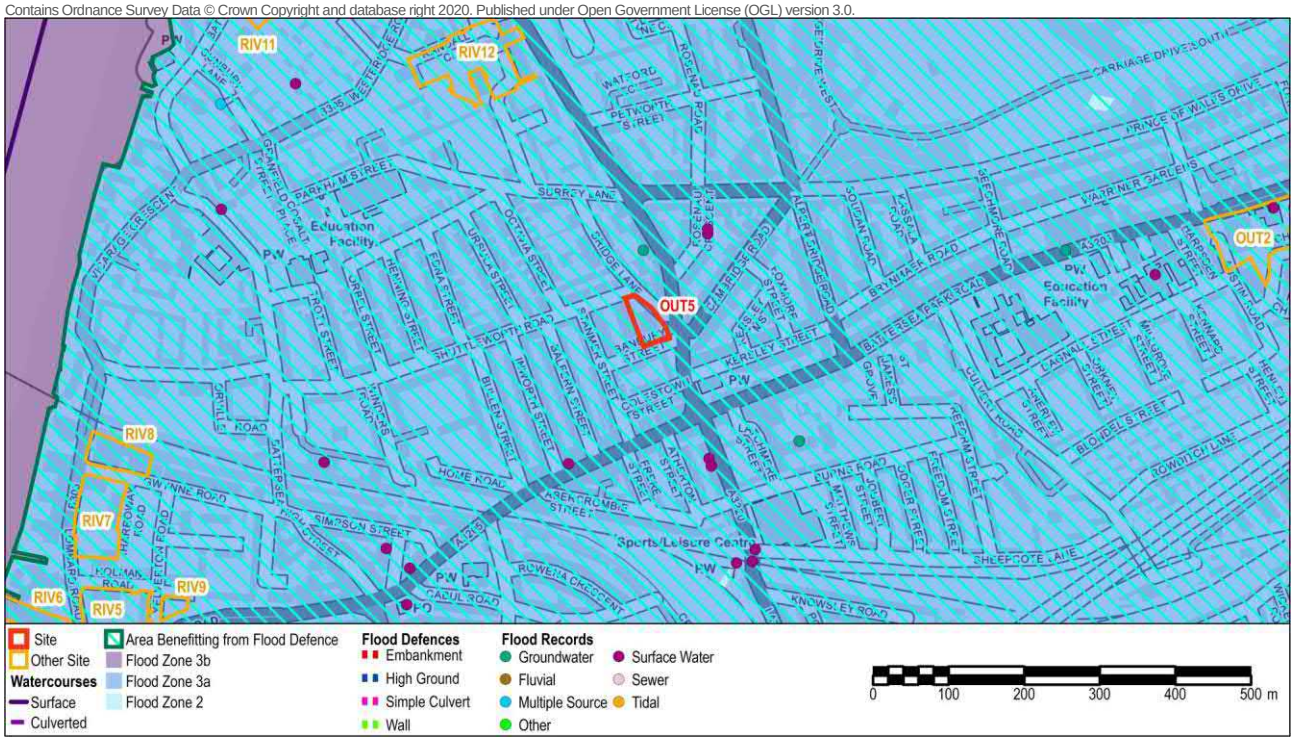

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 16; Groundwater 3; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

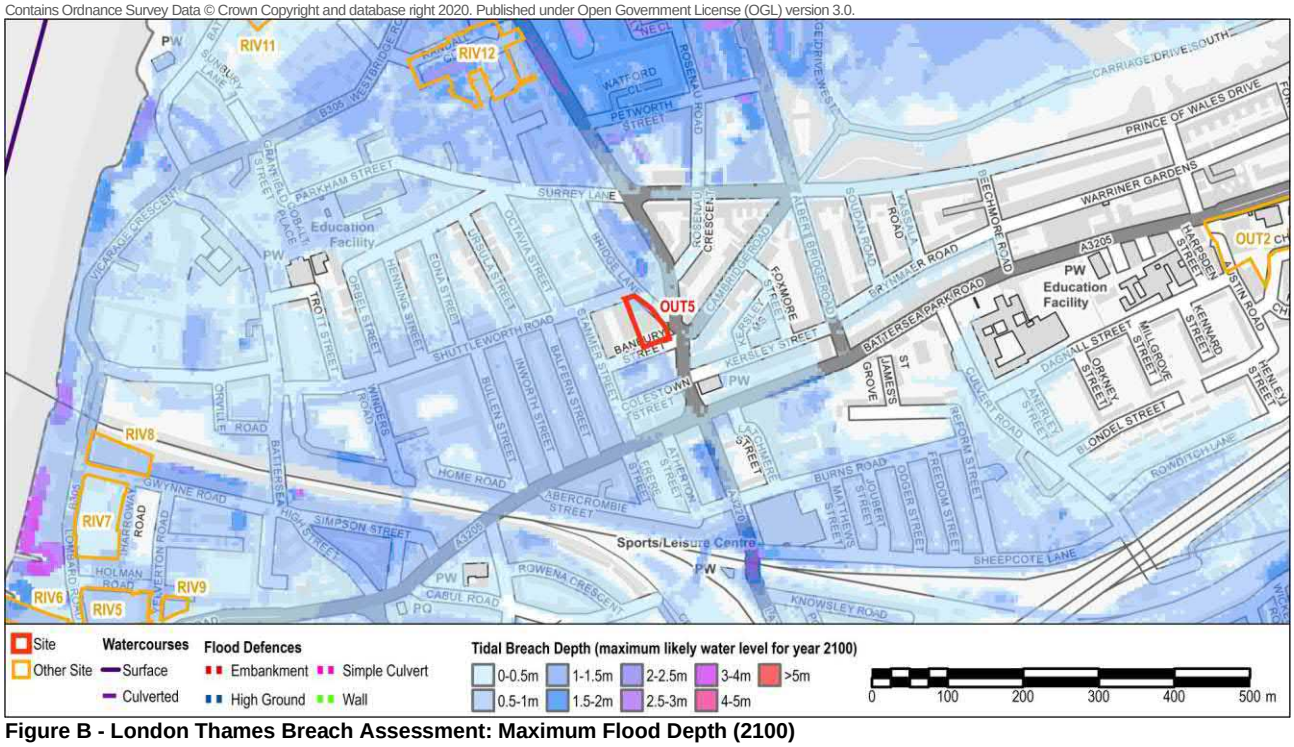

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site OUT5 Bridge Lane Medical Group Practice, 20 Bridge Ln, Battersea, London SW11 3AD

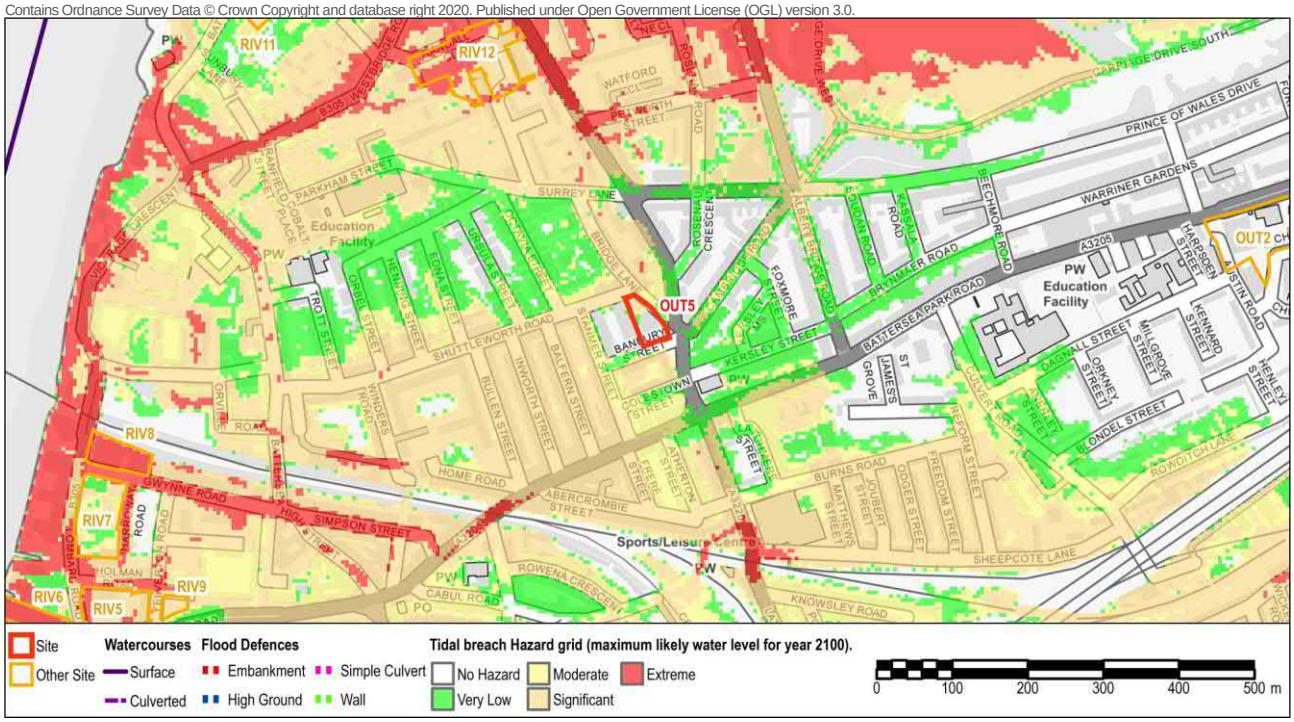

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

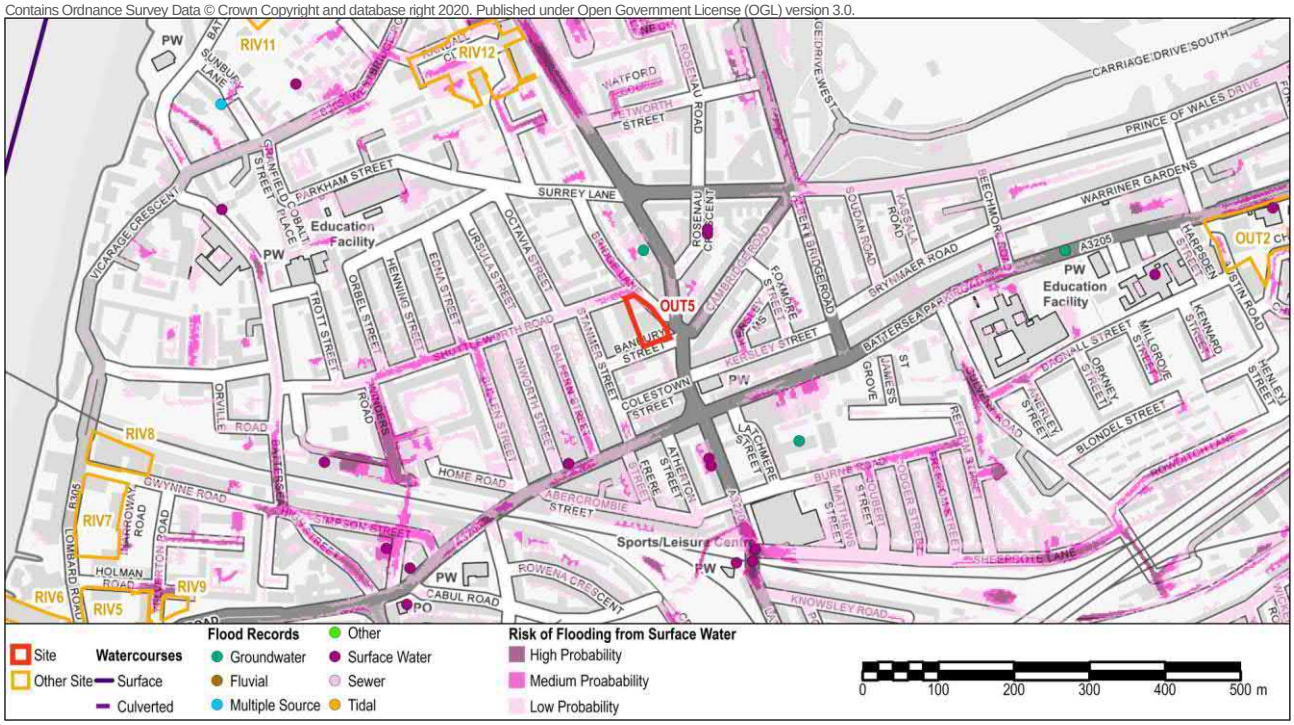

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC1		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs			

Site OUT5 Bridge Lane Medical Group Practice, 20 Bridge Ln, Battersea, London SW11 3AD

Summary

The site is located 780m east of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for some') on the site, and 1-1.5m depth, Significant hazard rating on Battersea Bridge Road ('danger for some') for the year 2100. Flood levels on the site are ~3.73-3.93m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to pond to the north of the site and also on Battersea Bridge Road and Shuttleworth Road to the south of the site. There are 16 reported incidents of surface water flooding within 500m of the site.

There are 3 reported incidents of groundwater flooding within 500m of the site. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding at surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from ~3.73-3.93m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV1 Former Prices Candles Factory, 110 York Road, Battersea, SW11

Site ID:	RIV1	**Area (ha):**	0.79
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

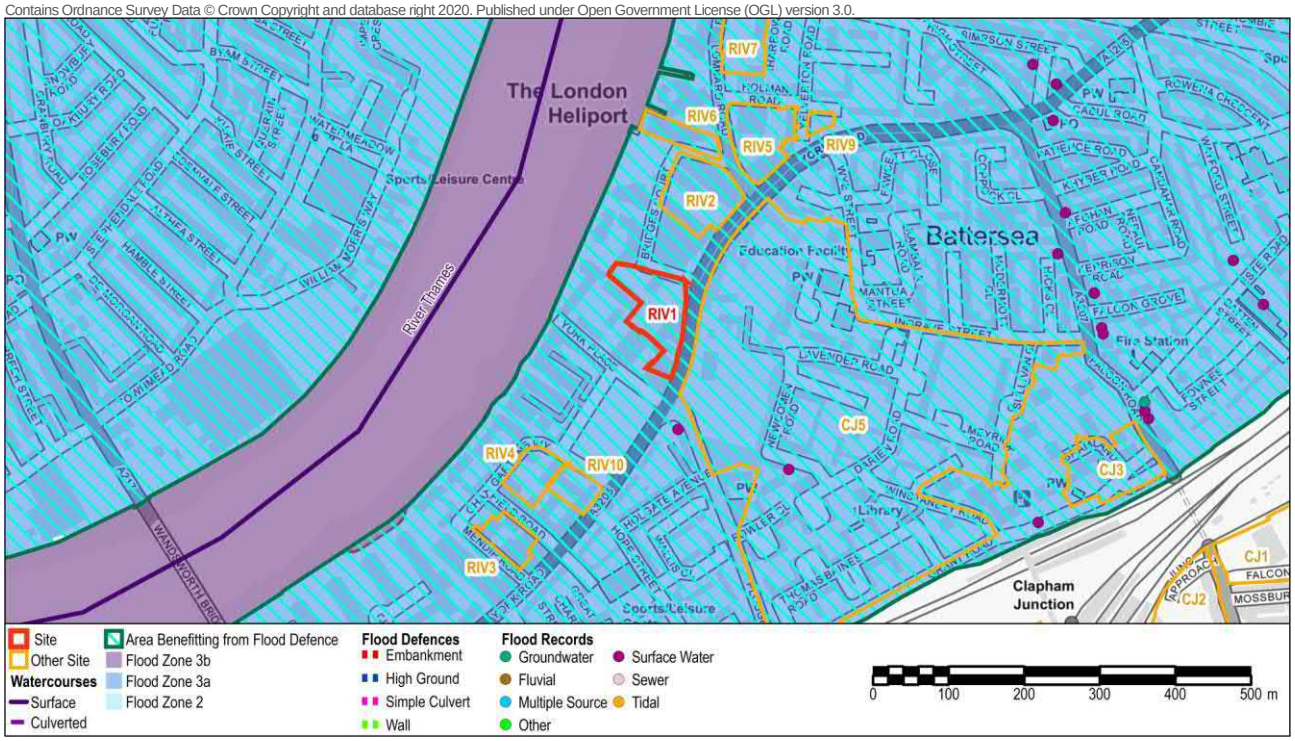

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 4; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

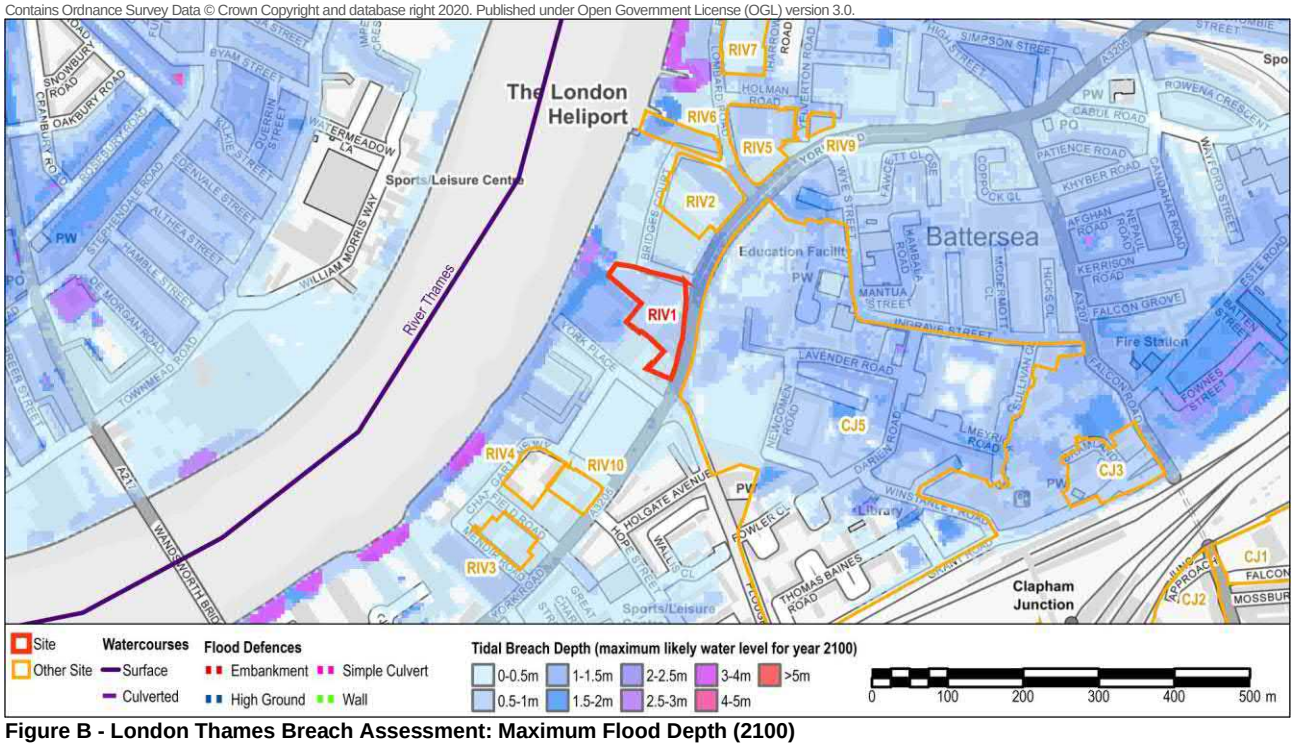

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV1 Former Prices Candles Factory, 110 York Road, Battersea, SW11

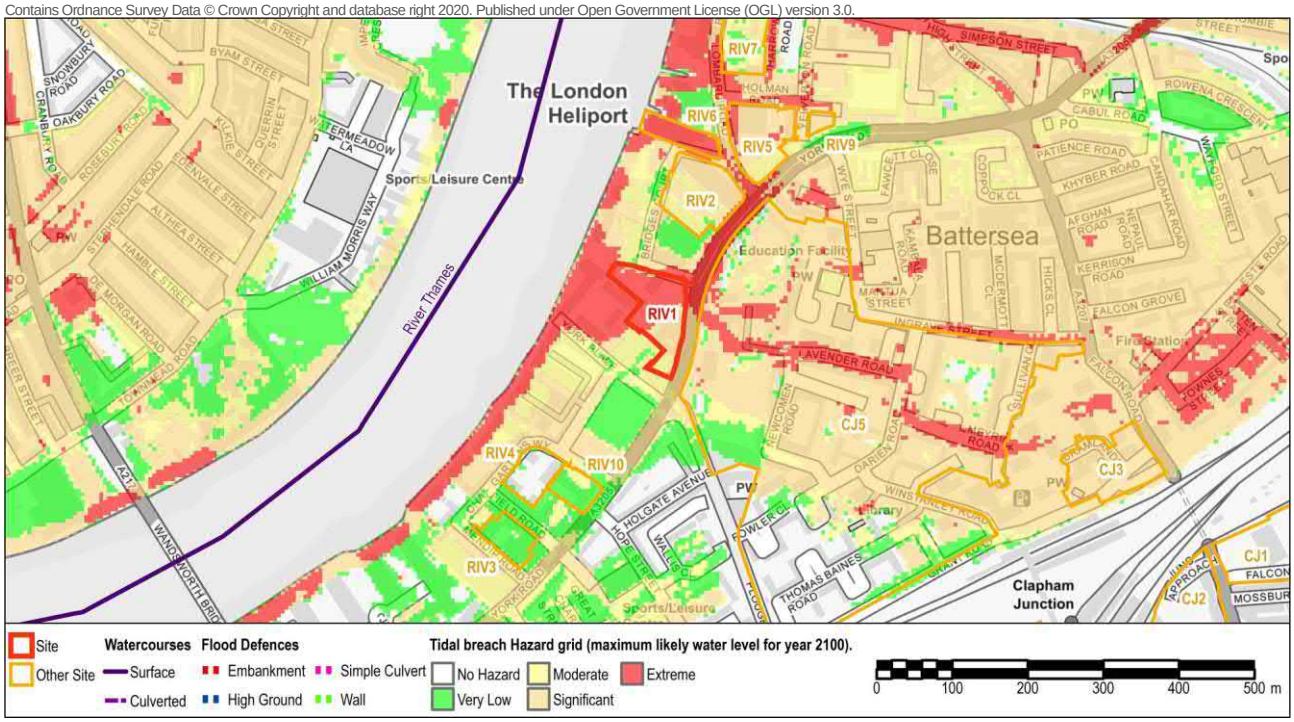

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

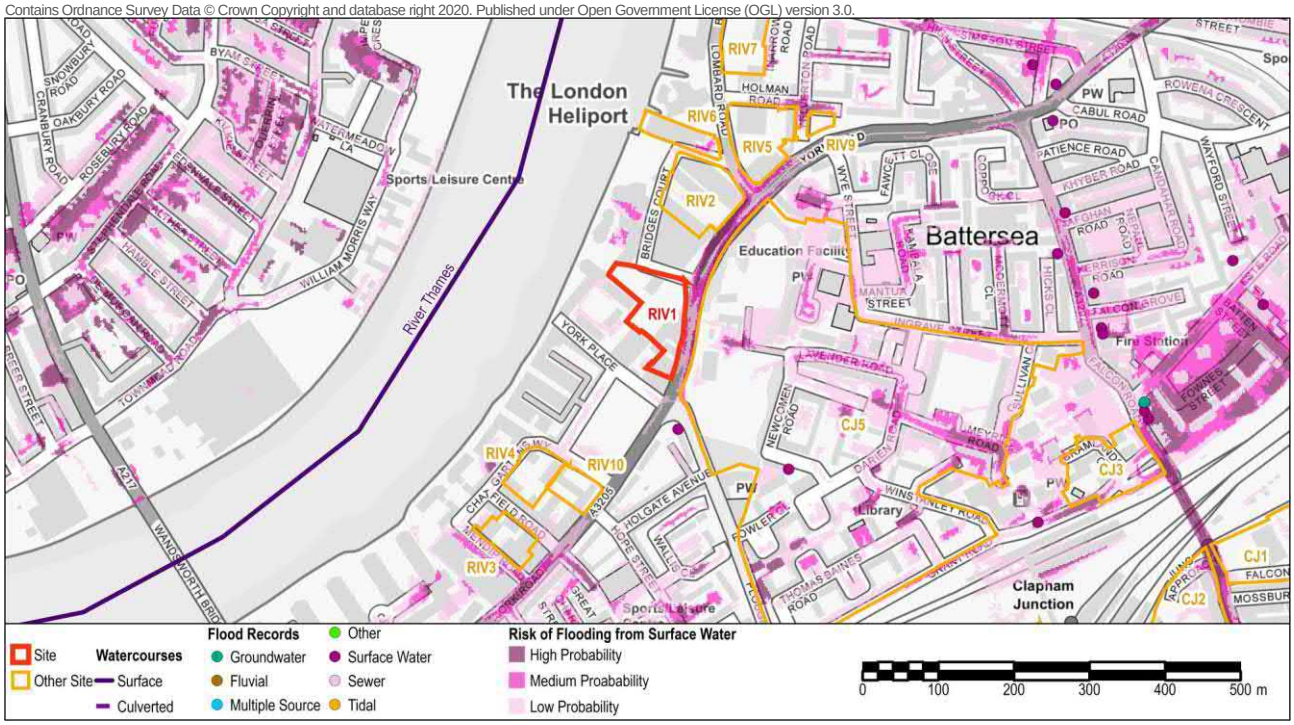

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV1 Former Prices Candles Factory, 110 York Road, Battersea, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 40m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Extreme ('danger for all'), and 1.0-1.5m depth, Extreme hazard rating on York Road ('danger for all') for the year 2100. Flood levels on the site vary from ~4.52-5.24m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on York Road to the south of the site. They are 4 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding below ground and at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.5m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- • The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV2 Dovercourt site, York Road, SW11

Site ID:	RIV2	**Area (ha):**	0.78
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

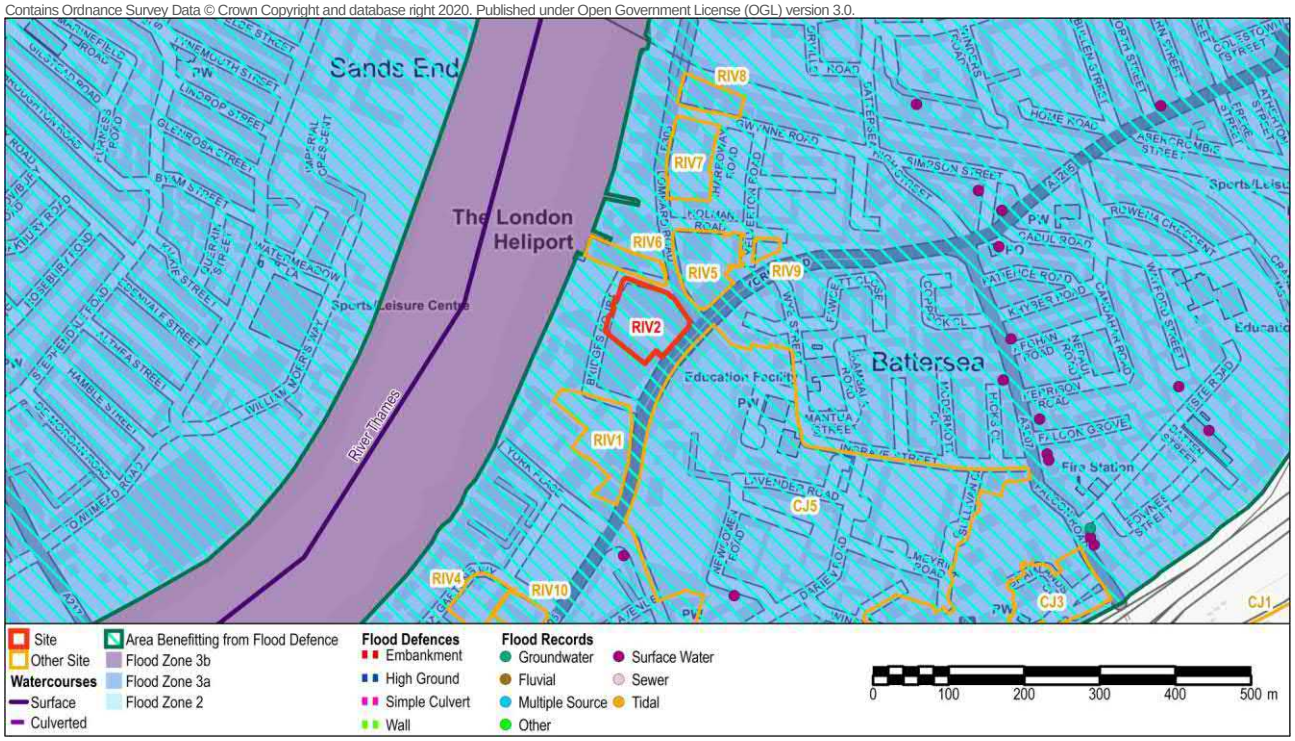

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 9; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

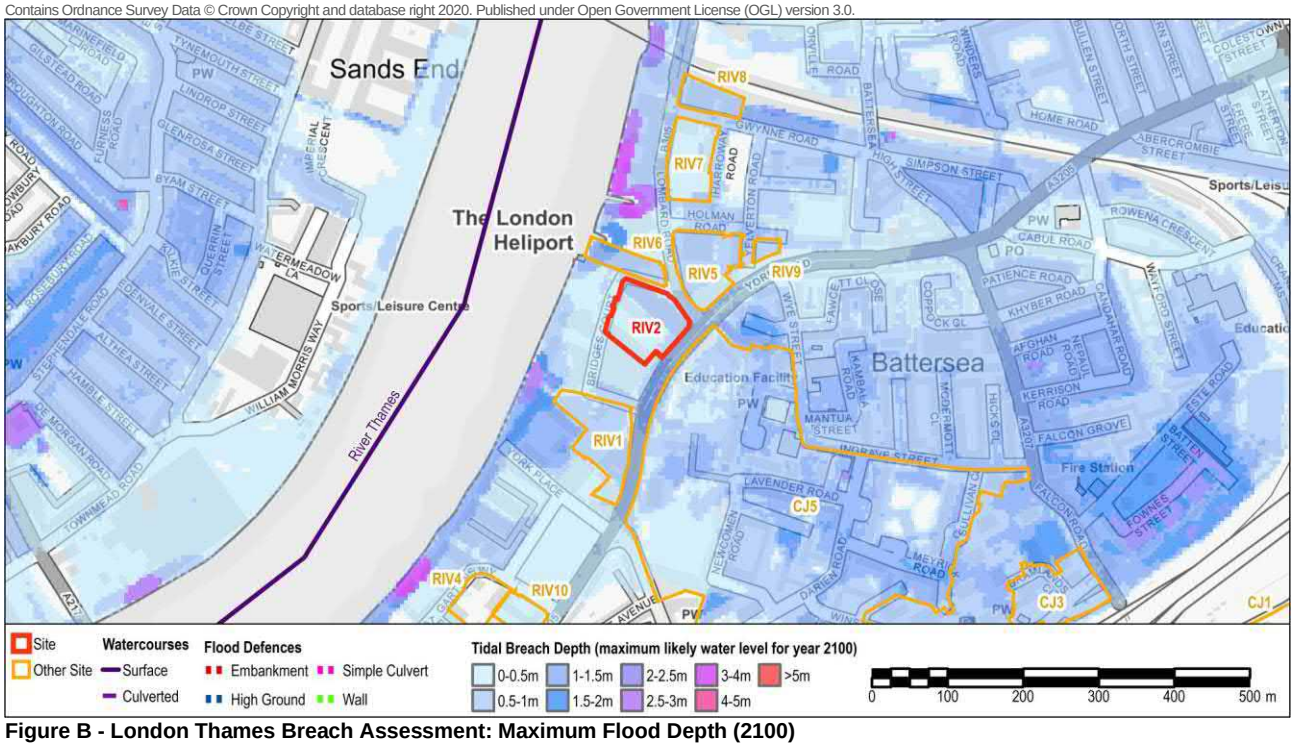

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV2 Dovercourt site, York Road, SW11

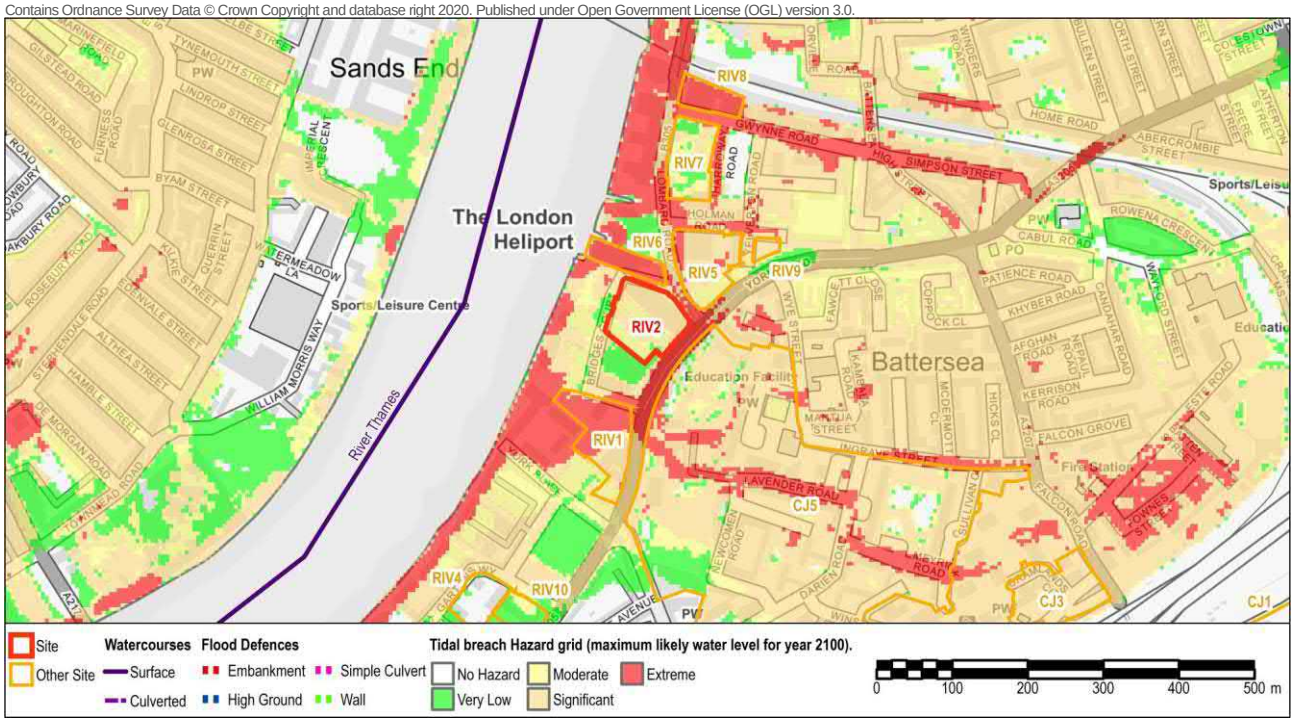

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

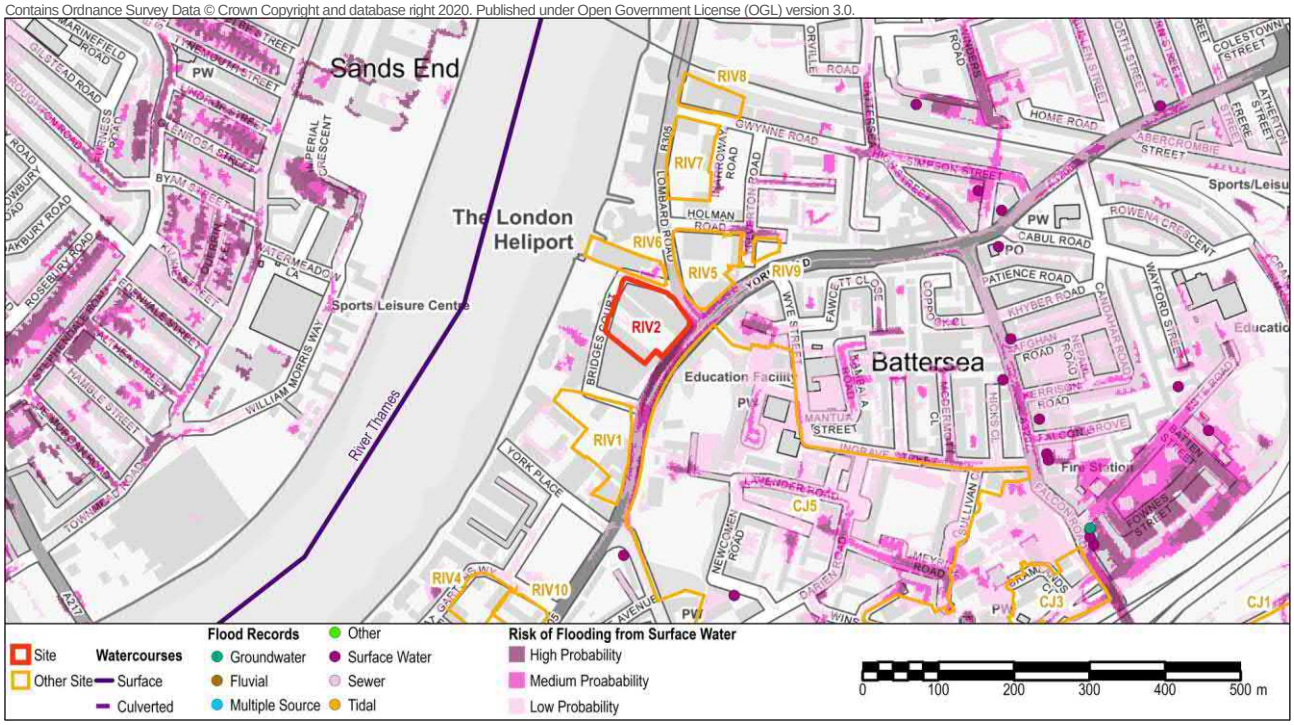

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC2		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	
Other Sources			
Risk of flooding from reservoirs			

Site RIV2 Dovercourt site, York Road, SW11

Summary

The site is located 70m east of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 1.5-2m depth, Extreme hazard rating on York Road ('danger for all') for the year 2100. Flood levels on the site are ~4.75-5.12m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site and also on York Road located adjacent to the site. There are 9 reported incidents of surface water flooding within 500m of the site.

Broadscale mapping suggests that the local area may have limited potential for groundwater flooding.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from ~4.75-5.12m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- • The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV3 41-47 Chatfield Road, SW11

Site ID:	RIV3	Area (ha):	0.31
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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): 100%	Flood Zone 3b (5% AEP): 0%	Area Benefiting from Defences: 100%

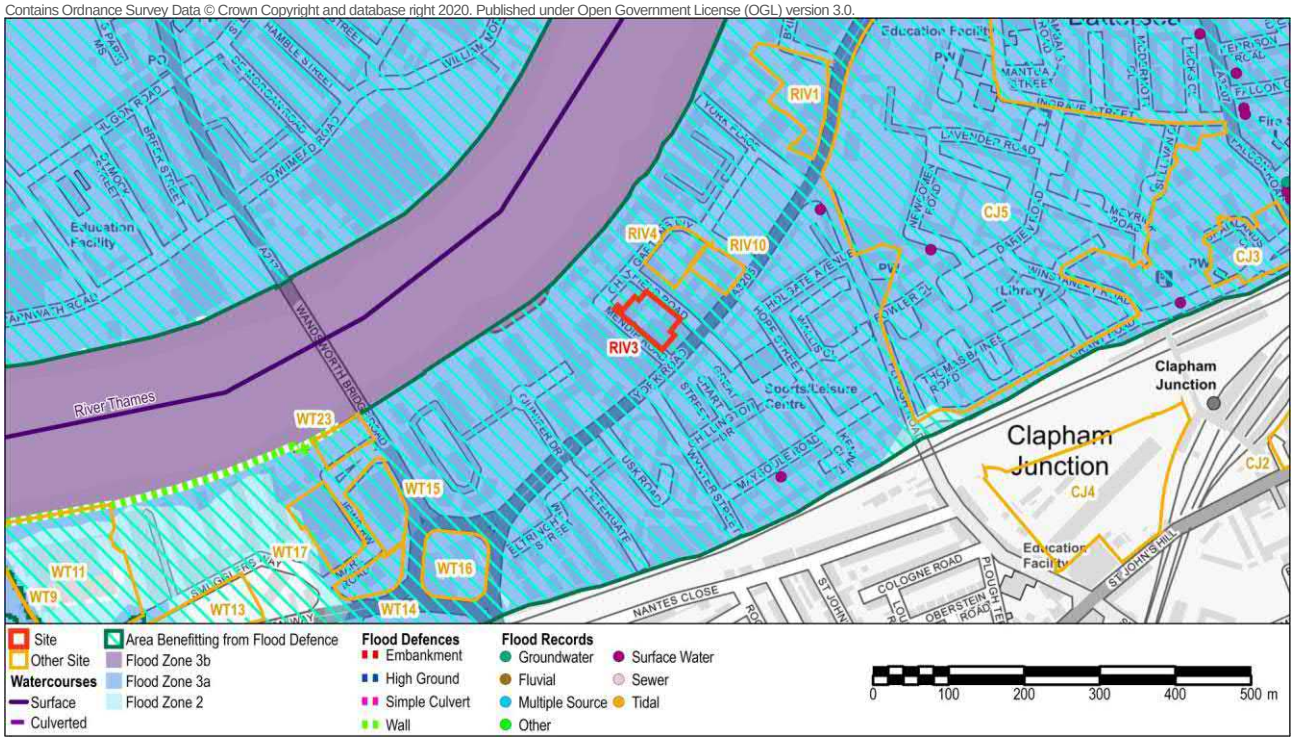

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	Emergency Rest Centre	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 3; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

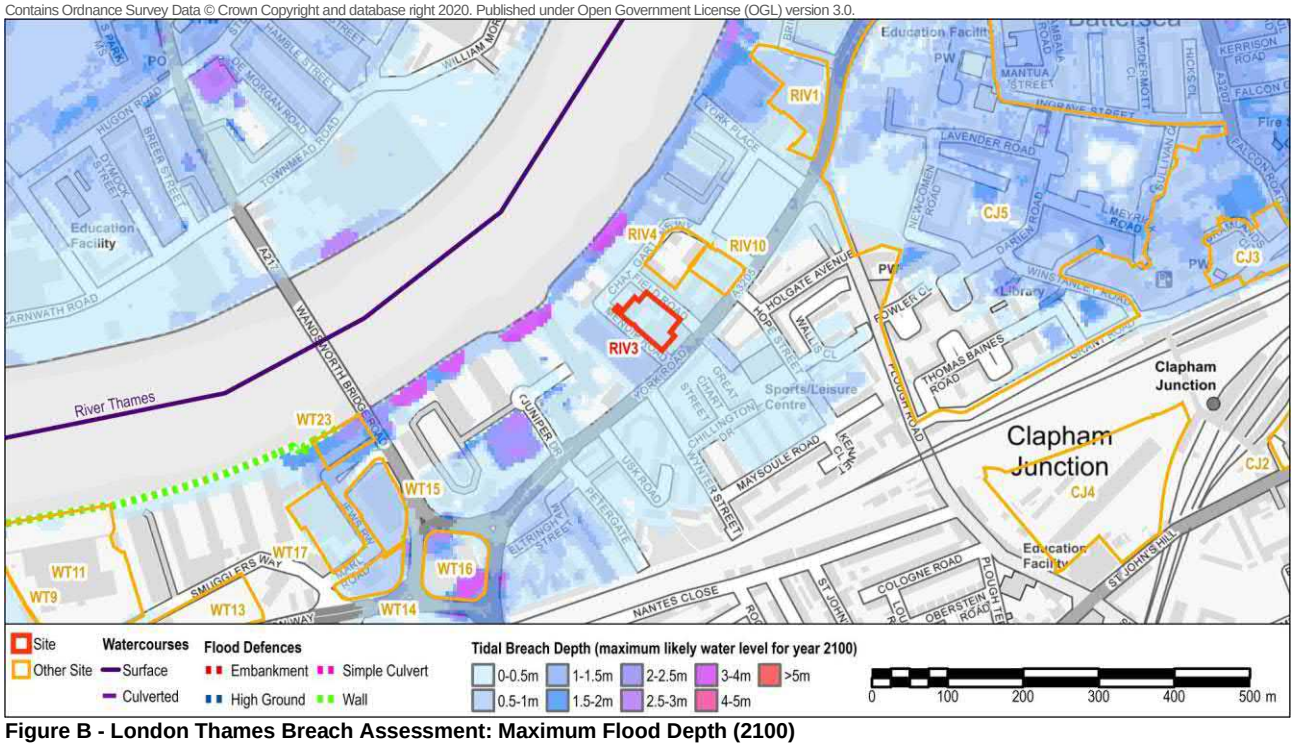

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV3 41-47 Chatfield Road, SW11

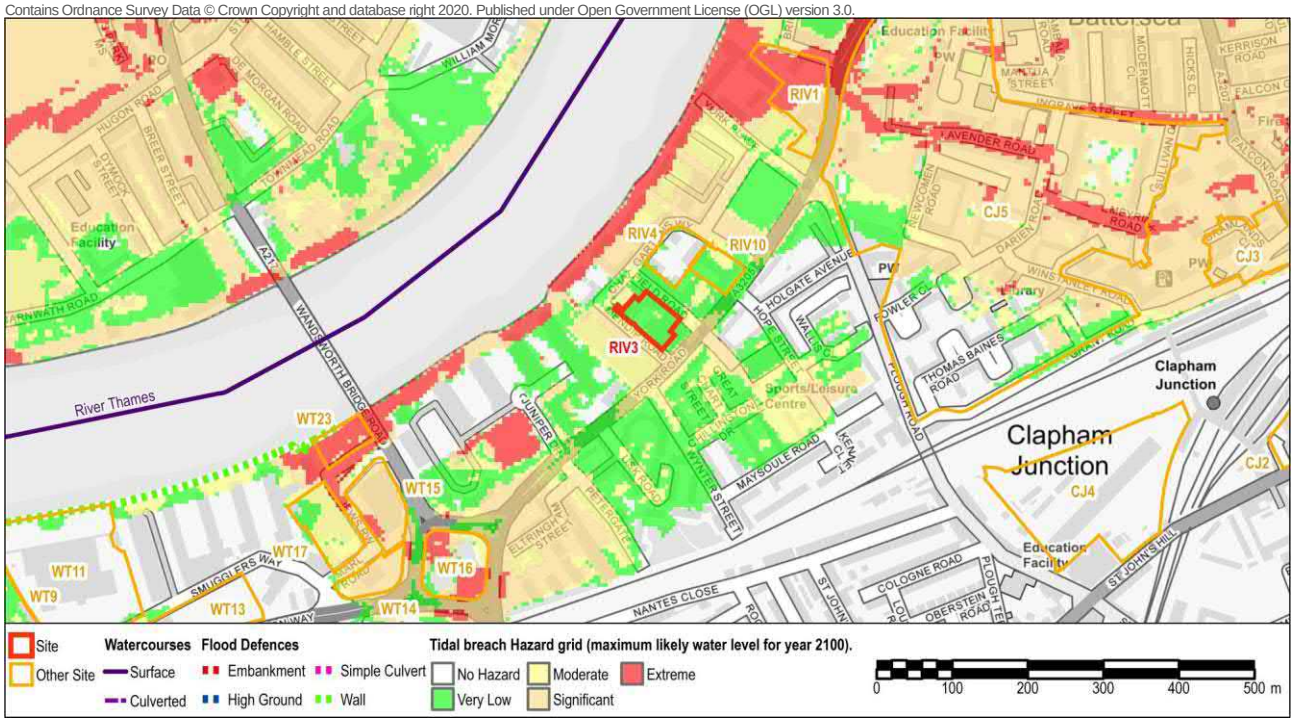

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

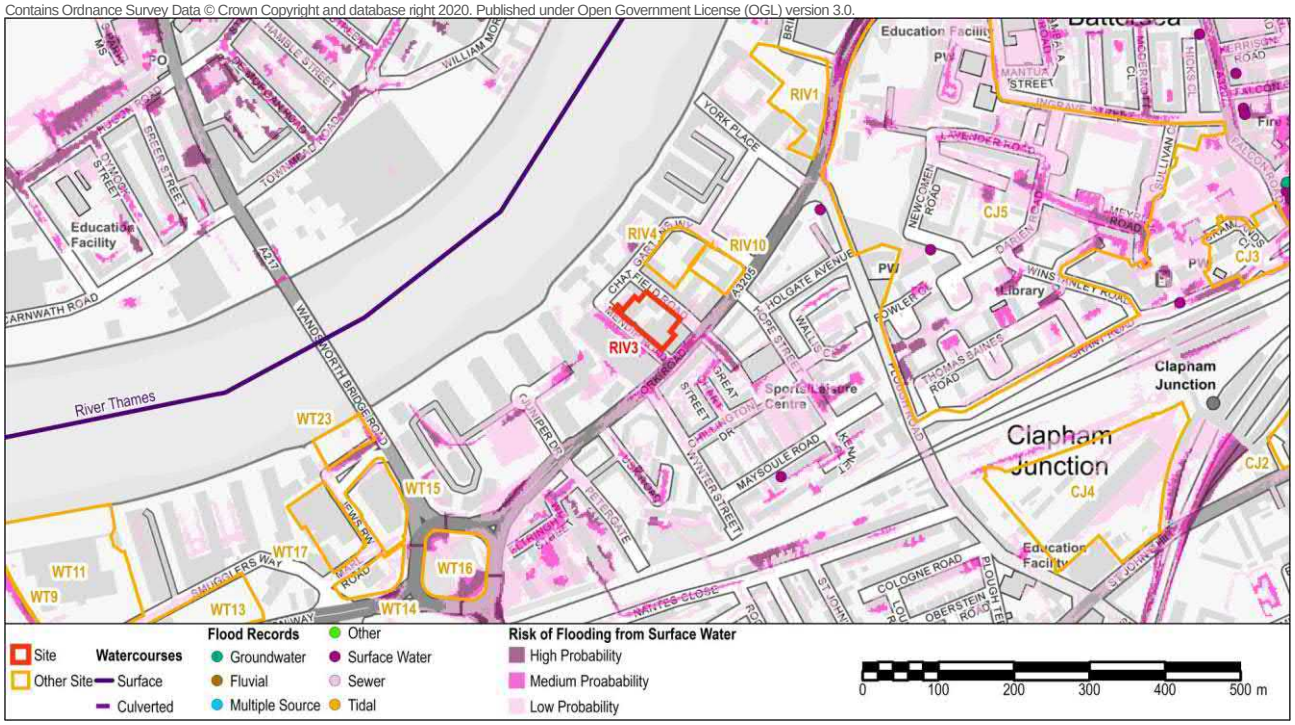

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV3 41-47 Chatfield Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 80m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0-0.5m, with a corresponding hazard rating of Very Low ('caution'), and 0.5-1.0m depth, Significant hazard rating on York Road ('danger for most') for the year 2100. Flood levels on the site vary from ~4.93-5.07m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Mendip Road to the west of the site and Chatfield Road to the east of the site. There are 3 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding below ground and at surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location varies from ~4.93-5.07m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV4 Gartons Industrial Estate, Gartons Way, SW11

Site ID:	RIV4	**Area (ha):**	0.36
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

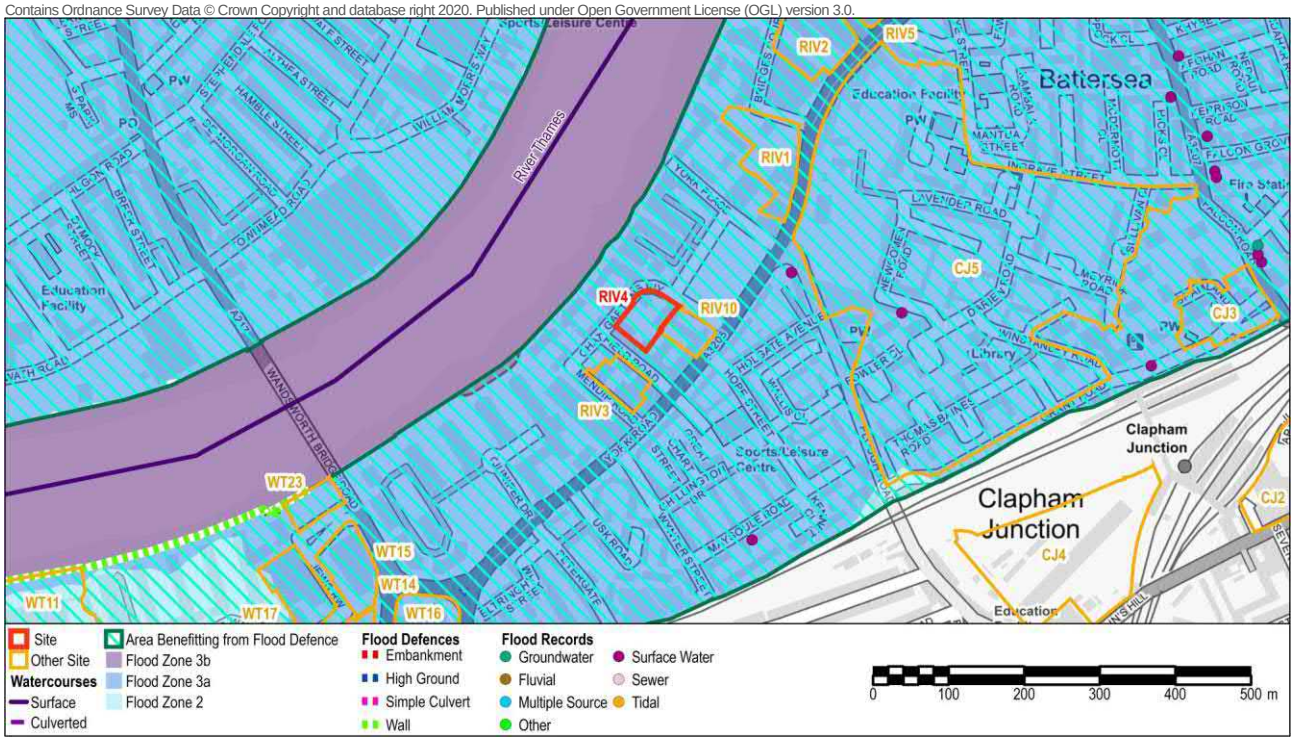

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 3; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

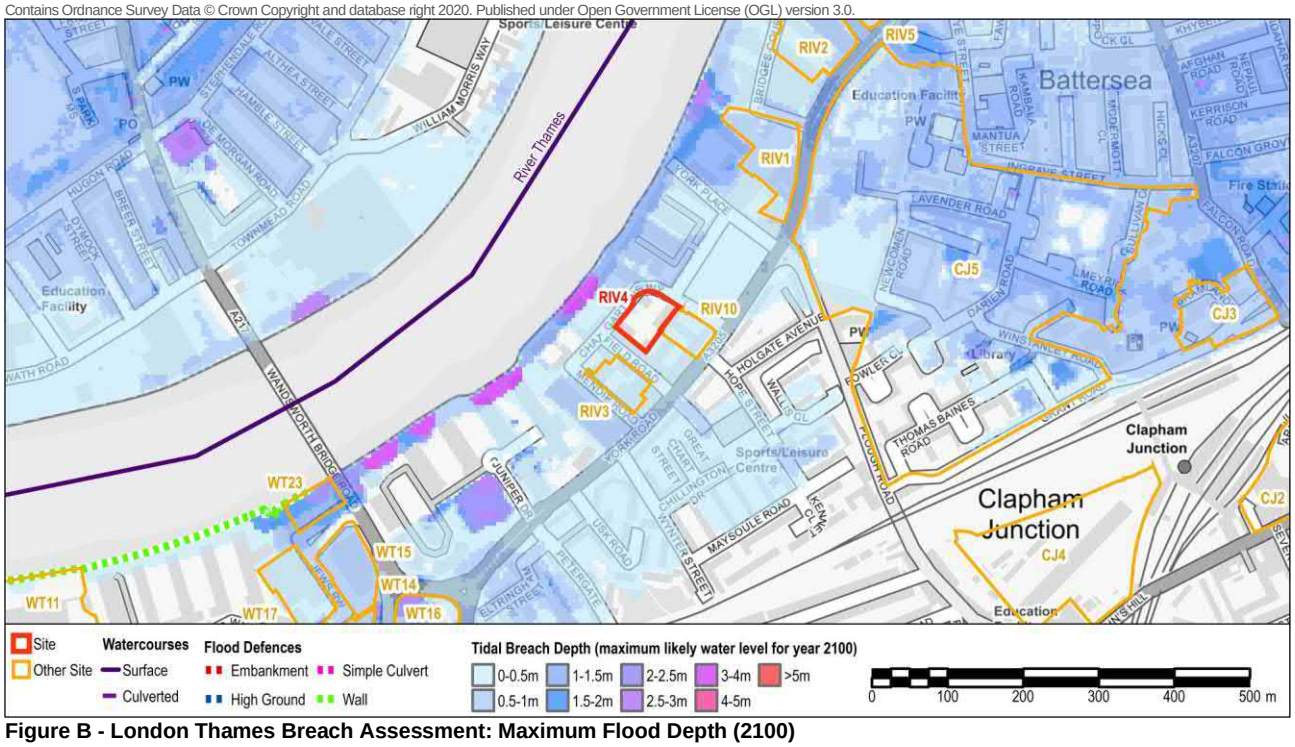

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV4 Gartons Industrial Estate, Gartons Way, SW11

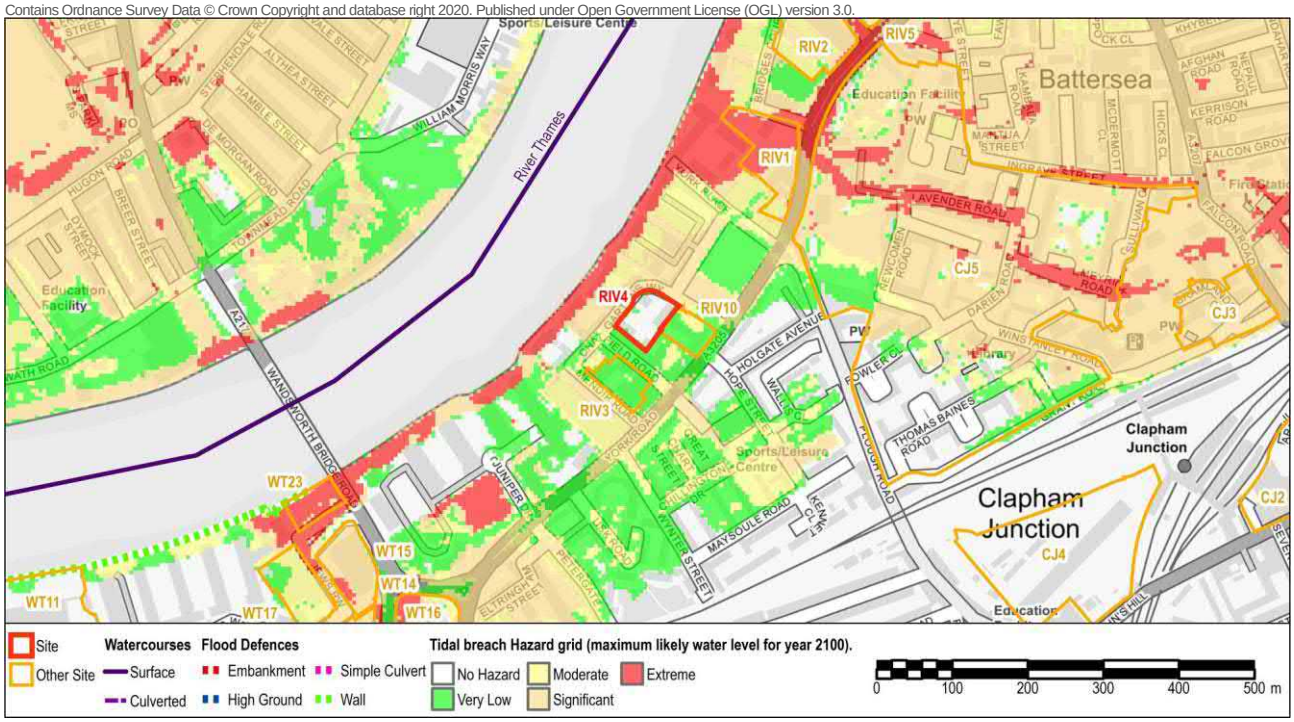

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

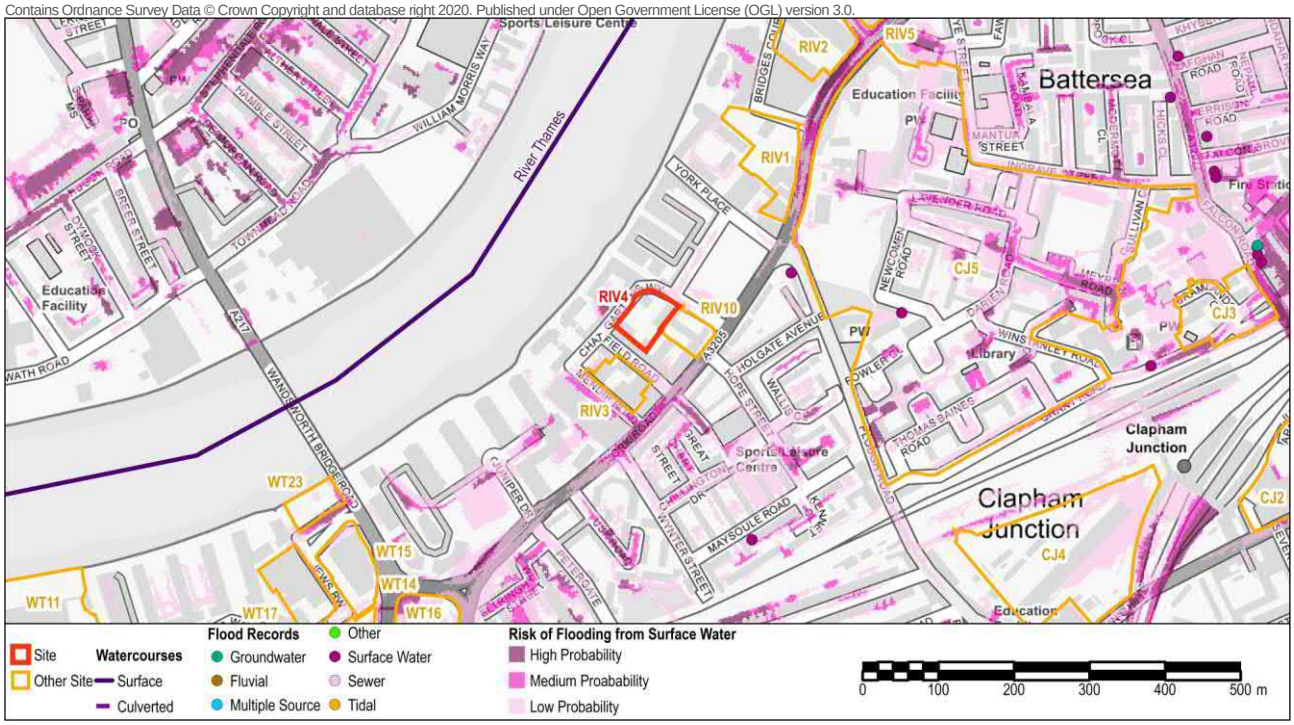

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site and surrounding area could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV4 Gartons Industrial Estate, Gartons Way, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 80m to the north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the area around the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. The site itself is shown to be slightly raised, and therefore not at the same level of risk. Flood water would inundate the site to a depth of 0-0.5m, with a corresponding hazard rating of Very Low ('caution'), and 0.5-1.0m depth, Significant hazard rating on York Road ('danger for most') for the year 2100. Flood levels on the northern edge of the site on Gartons Way are ~5.47m AOD[1] for the year 2100, and ~4.9-5.0m AOD along York Road to the south of the site.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Gartons Way to the north of the site and Chatfield Road to the west of the site. There are 3 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding below ground.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.47m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV5 York Road Business Centre, Yelverton Road, SW11

Site ID:	RIV5	**Area (ha):**	0.7
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

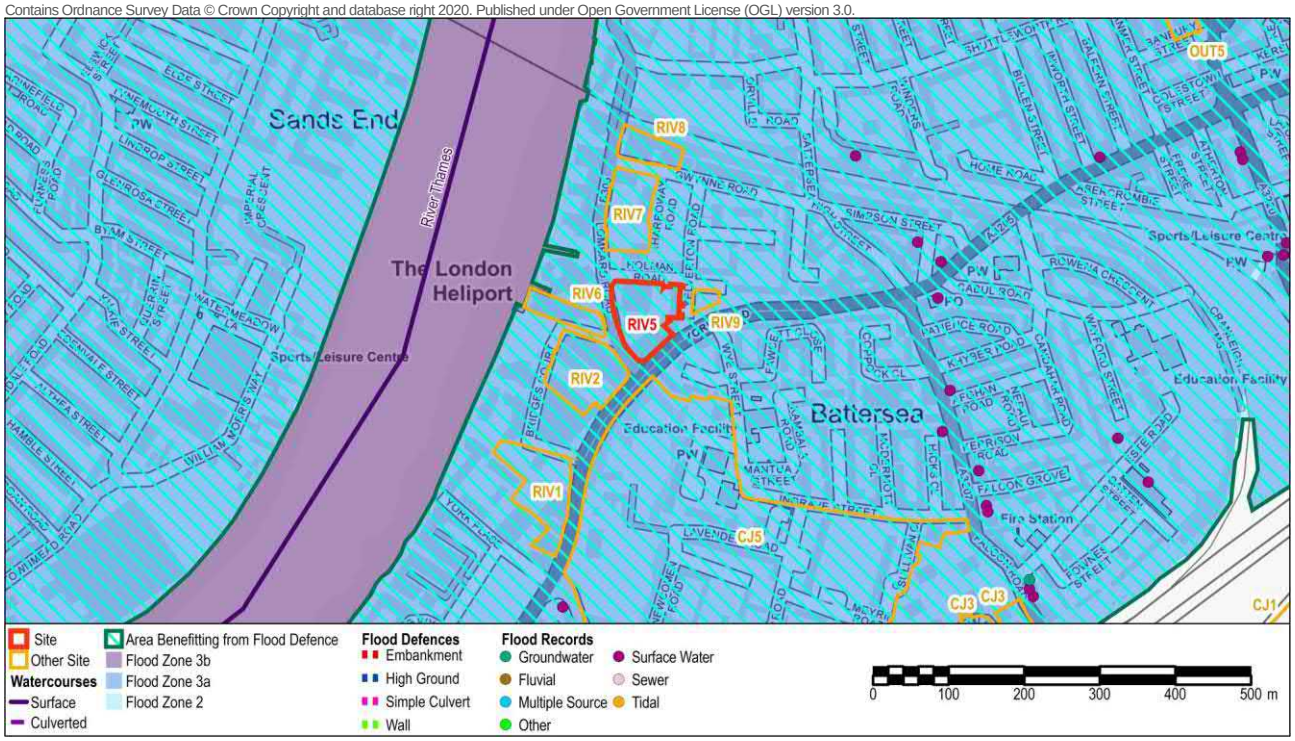

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 11; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

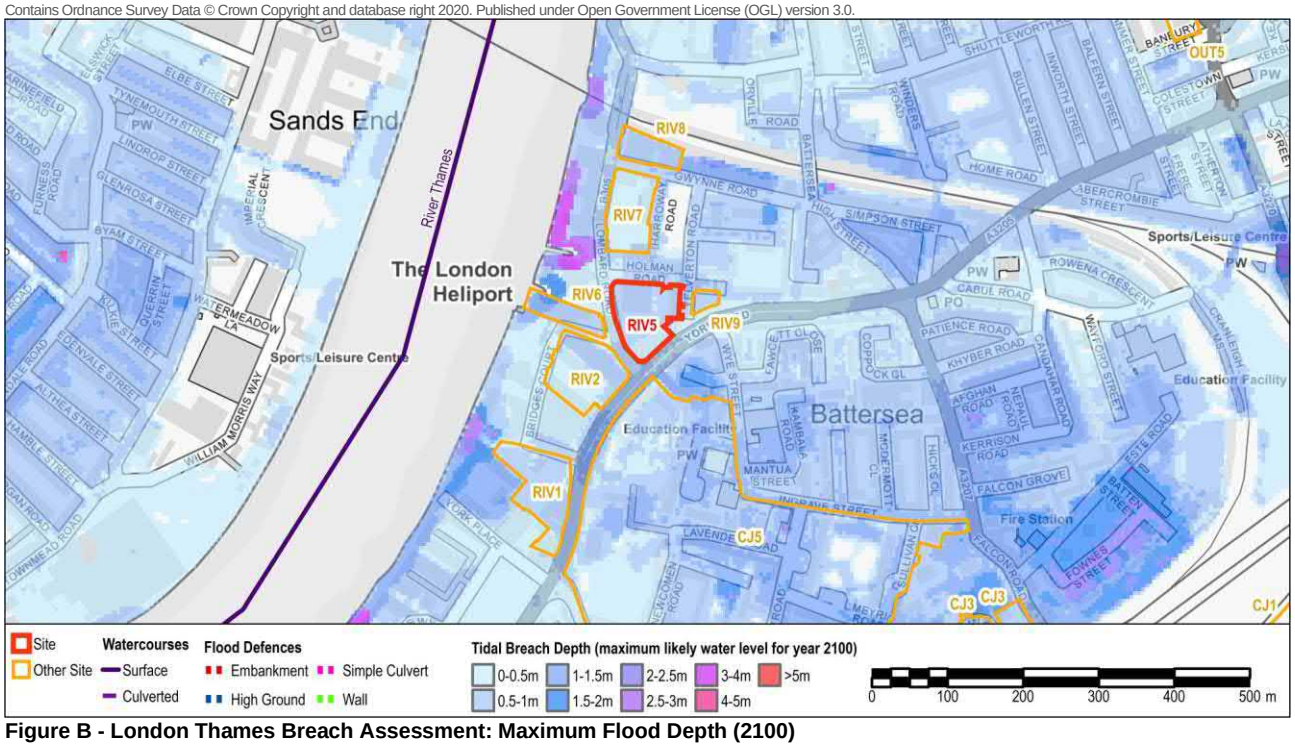

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV5 York Road Business Centre, Yelverton Road, SW11

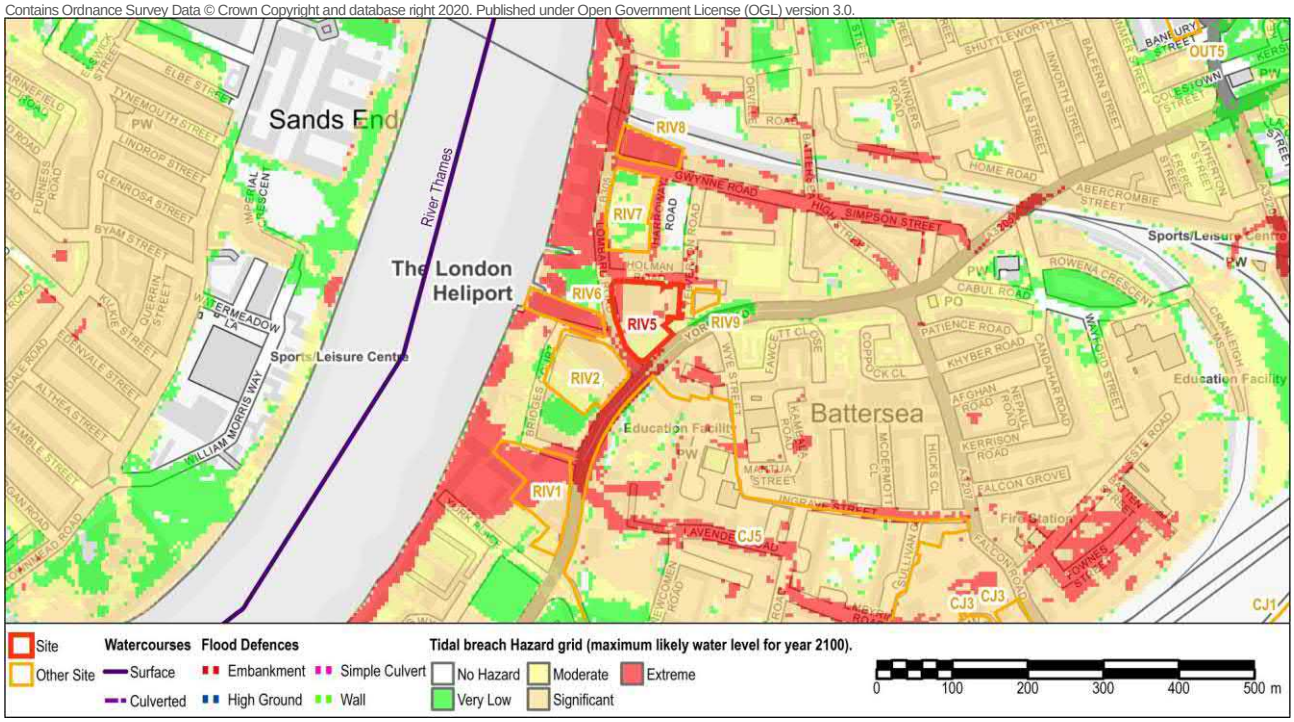

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

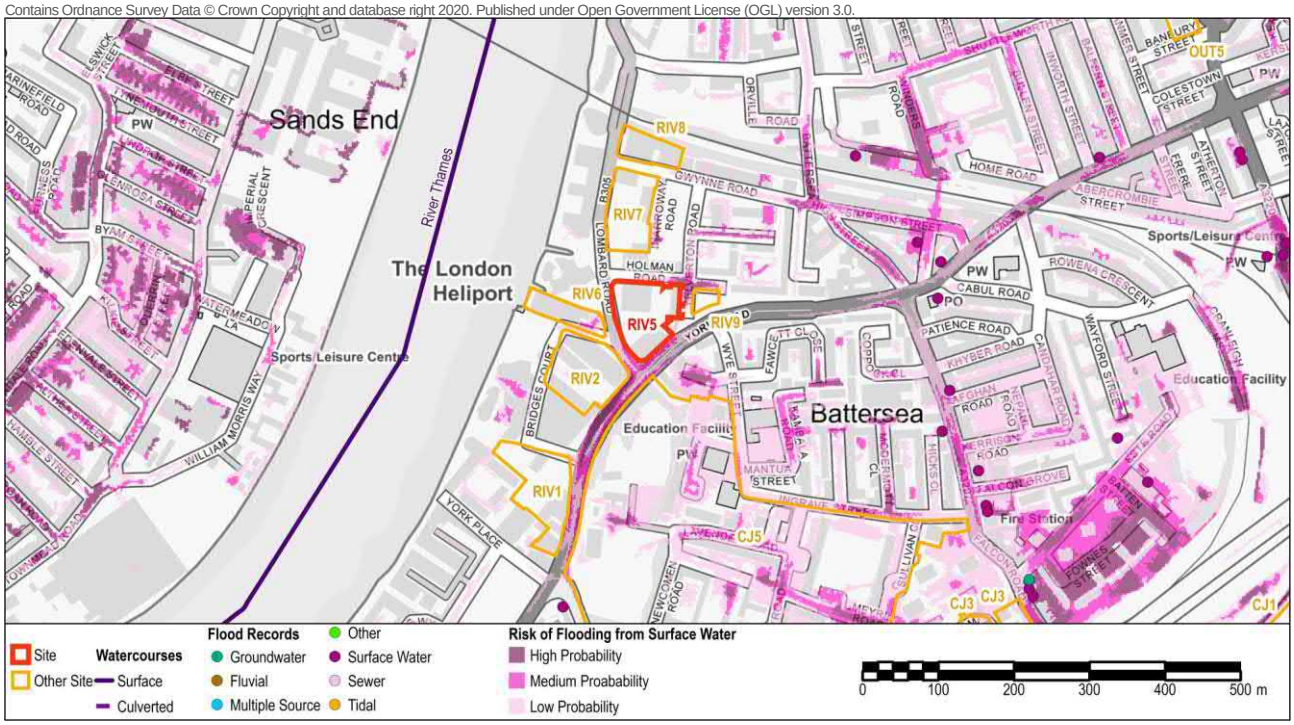

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV5 York Road Business Centre, Yelverton Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 80m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Extreme ('danger for all'), and 1-1.5m depth, Extreme hazard rating on York Road ('danger for all') for the year 2100. Flood levels on the site vary from ~4.41-4.68m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Lombard Road to the west of the site, and Holman Road to the north of the site and York Road to the south of the site. They are 11 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may have limited potential for groundwater flooding to occur.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV6 36 Lombard Road, SW11

Site ID:	RIV6	**Area (ha):**	0.3
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

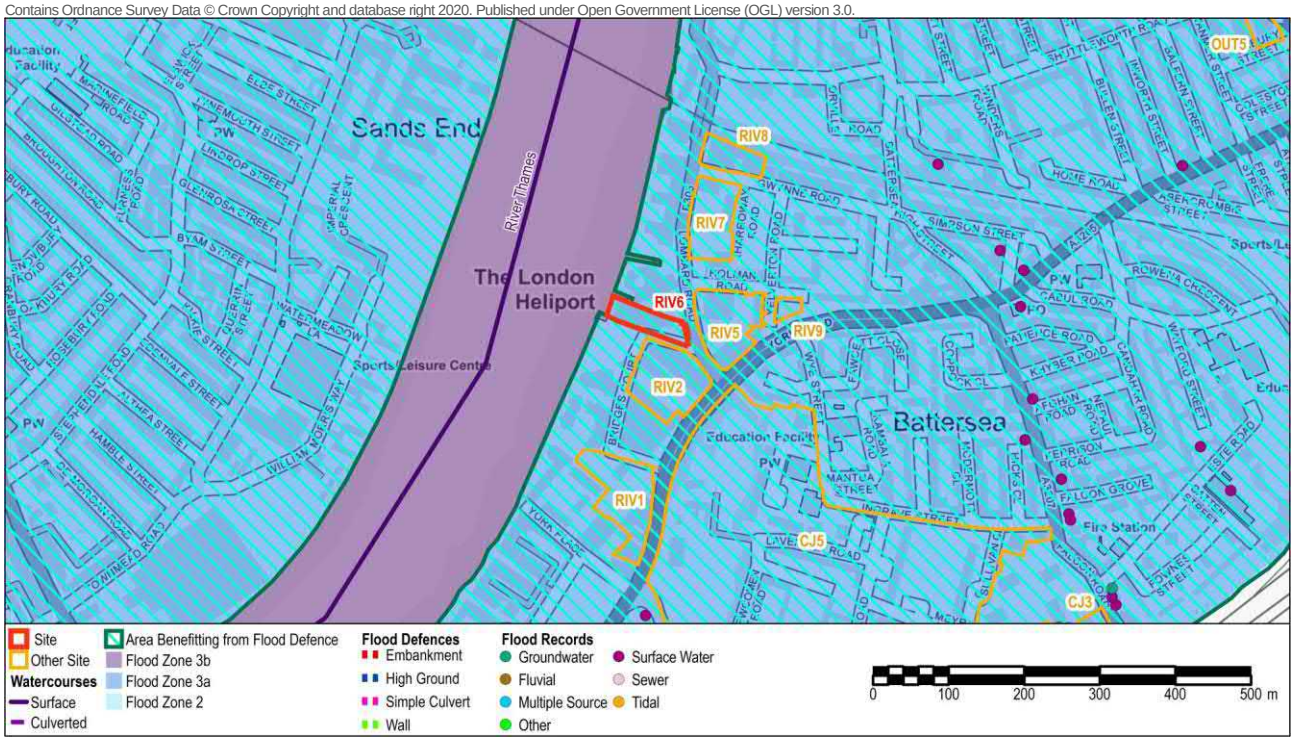

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 8; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

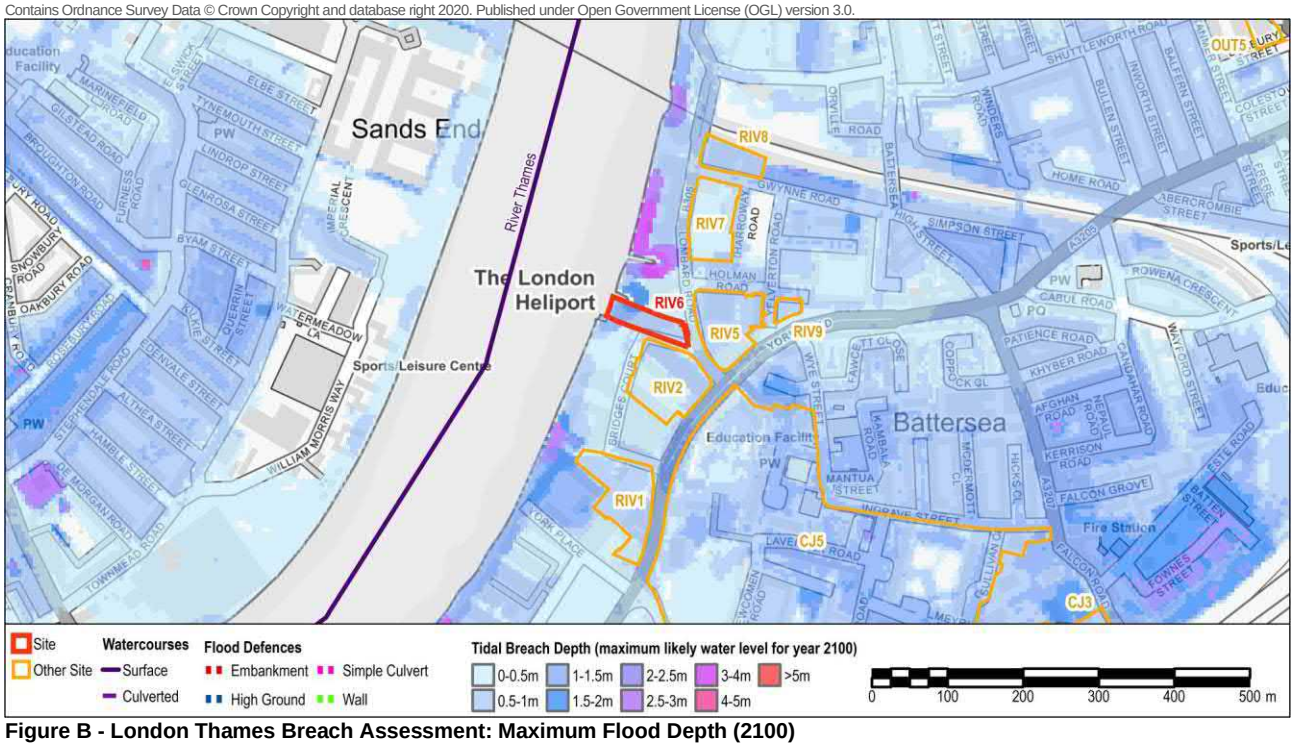

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV6 36 Lombard Road, SW11

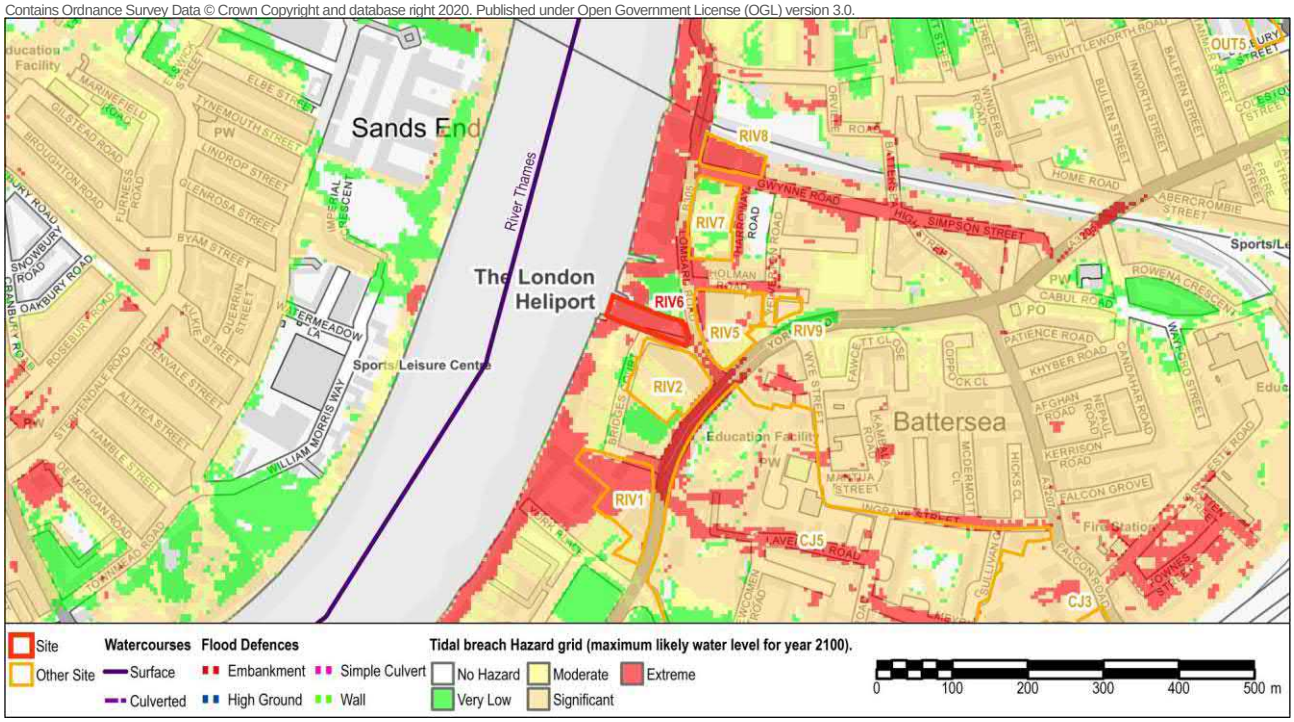

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

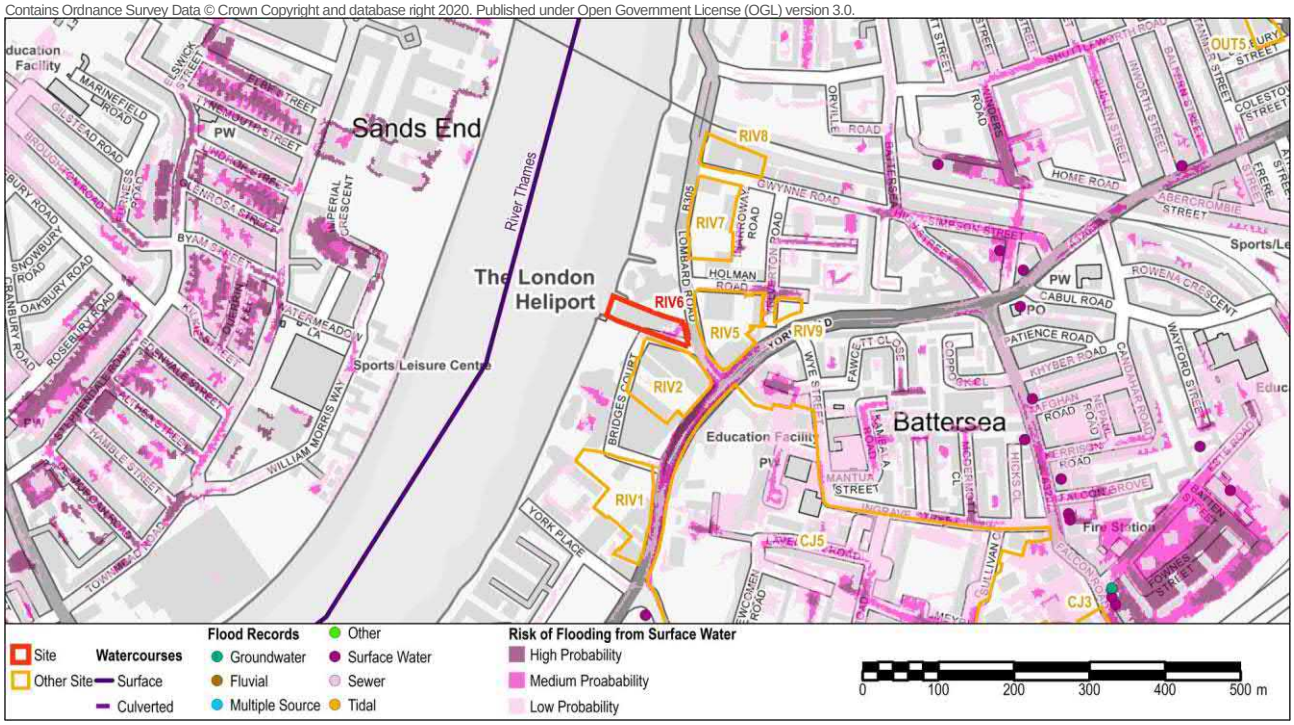

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC2		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site RIV6 36 Lombard Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward next to the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1.5-2.0m, with a corresponding hazard rating of Extreme ('danger for all'), and 05-1.0m depth, Extreme hazard rating on Lombard Road ('danger for all') for the year 2100. Flood levels on the site vary from ~4.13-5.49m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond to the east of the site, and also on Bridges Court and Lombard Road to the south of the site. There are 8 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may have limited potential for groundwater flooding to occur.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The average modelled flood level from the London Thames Breach Assessment across the site is 4.9m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV7 Travis Perkins, 37 Lombard Road, SW11

Site ID:	RIV7	**Area (ha):**	0.61
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

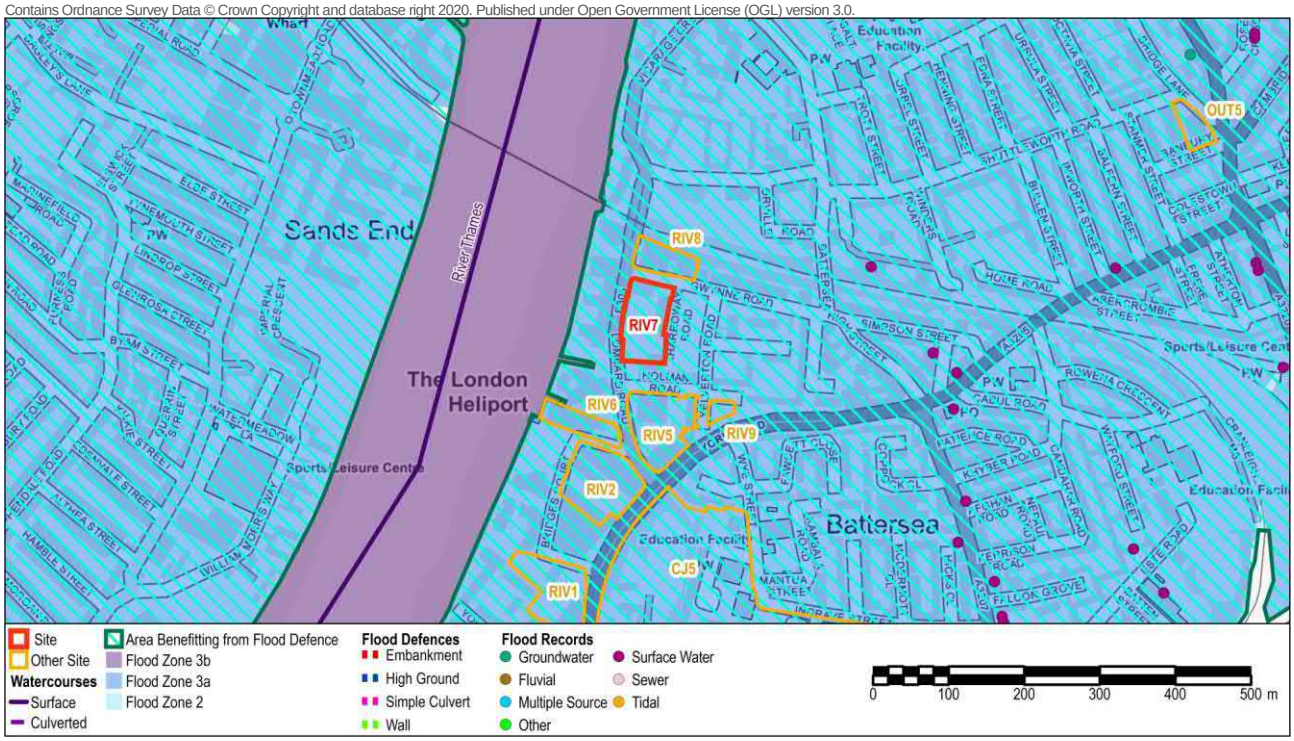

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 8; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

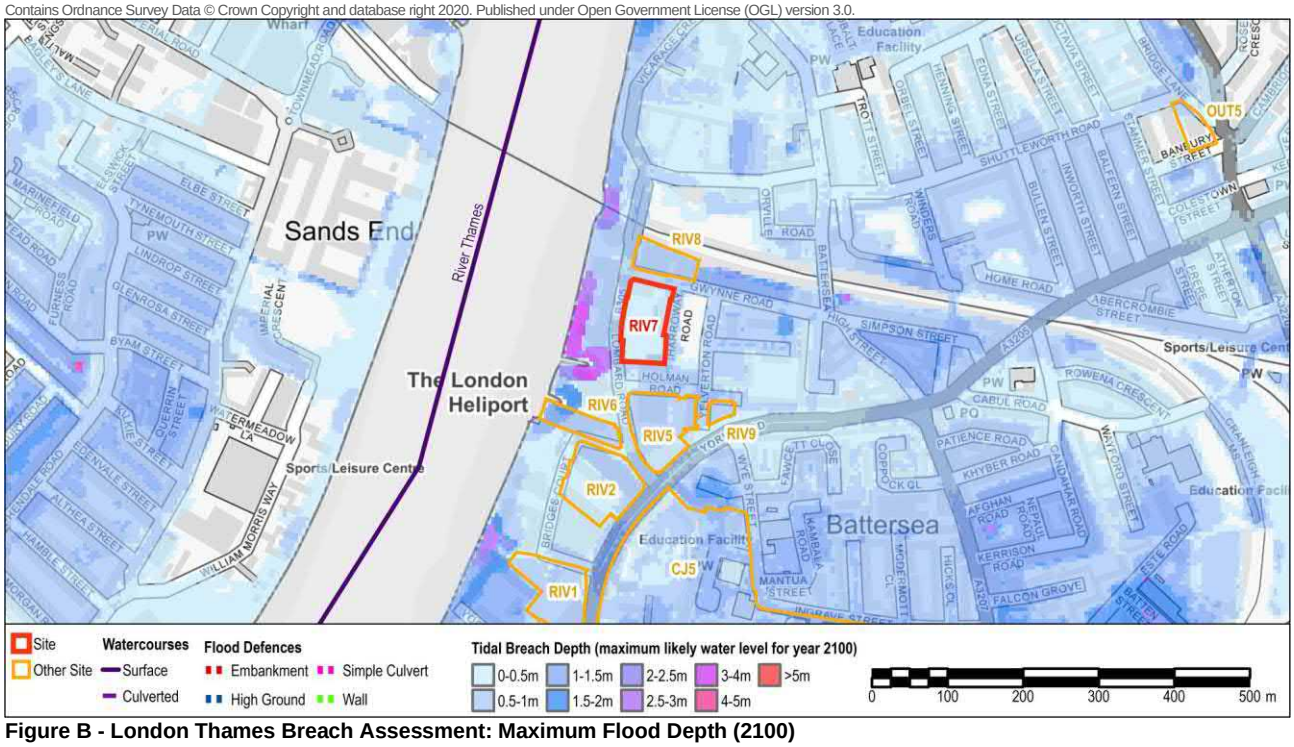

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV7 Travis Perkins, 37 Lombard Road, SW11

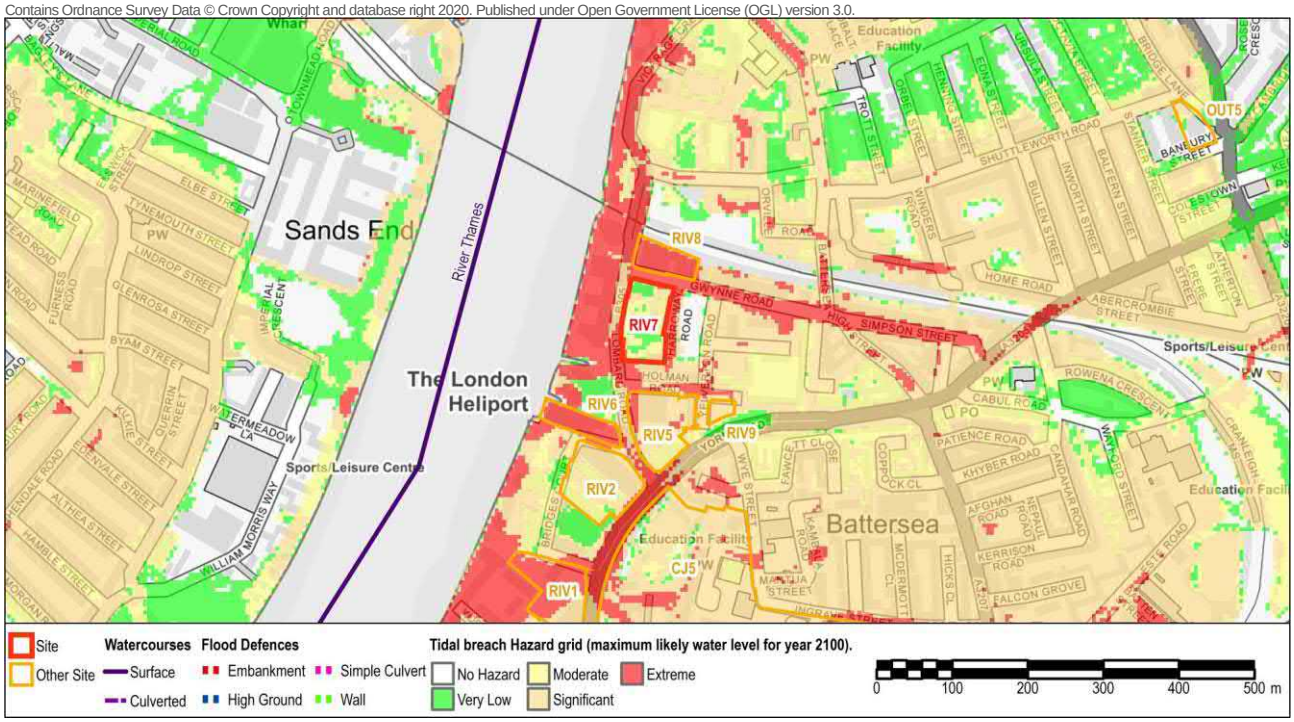

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

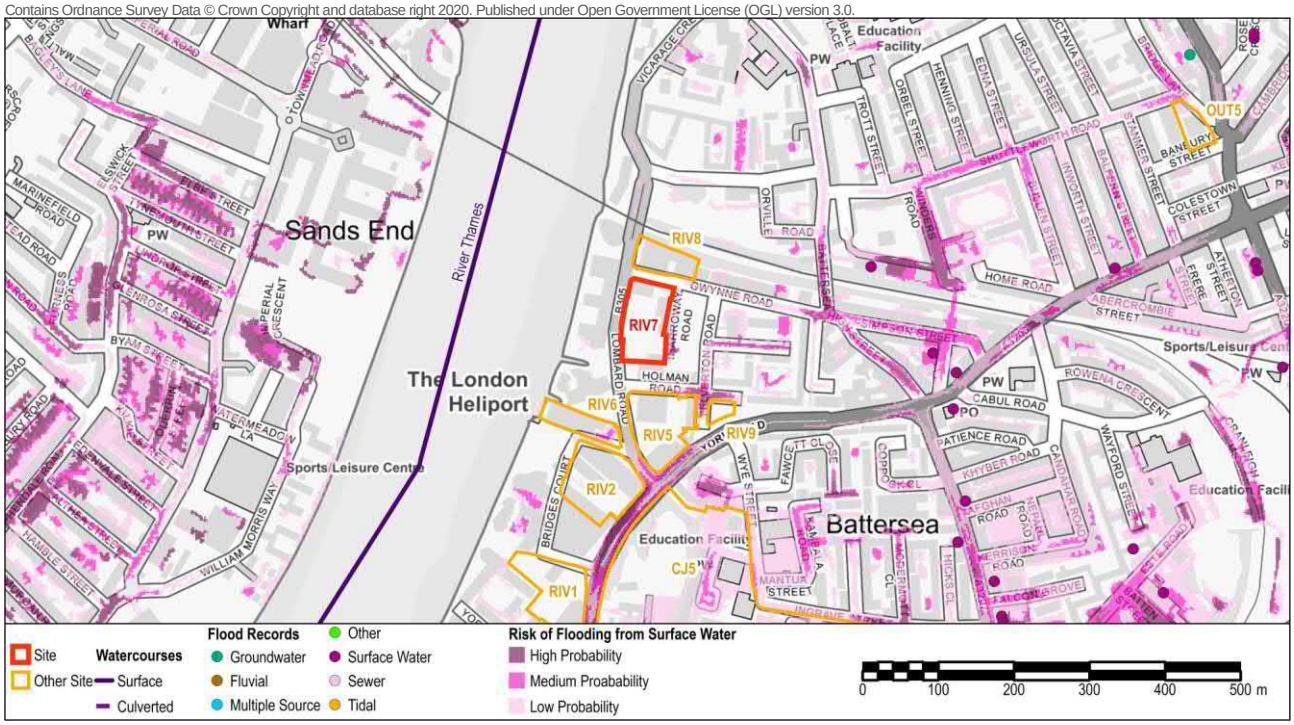

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site and surrounding area could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV7 Travis Perkins, 37 Lombard Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 70m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Extreme ('danger for all'), and 1.0 -1.5m depth, Significant hazard rating on Lombard Road and Gwynne Road ('danger for most') for the year 2100. Flood levels vary across the site from ~4.51-5.58m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Holman Road to the south of the site, Harrow Wat Road and Yelverton Road to the east of the site, and Gwynne Road to the north of the site. There are 8 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may have limited potential for groundwater flooding to occur.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location varies across the site from 4.51-5.58m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- • The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV8 19 Lombard Road, 80 Gwynne Road, SW11

Site ID:	RIV8	**Area (ha):**	0.3
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

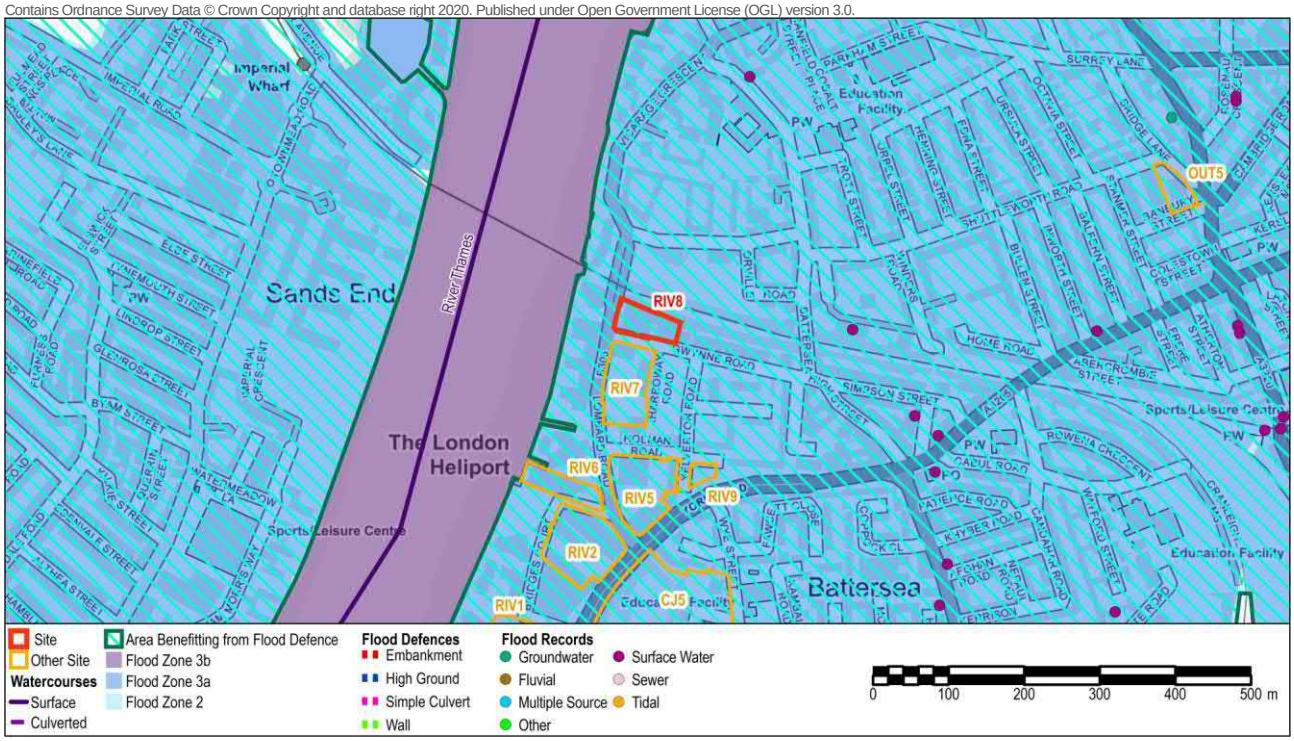

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 7; Groundwater 0; Sewer 0; Multiple source 1; Other source 0		

Tidal Flooding

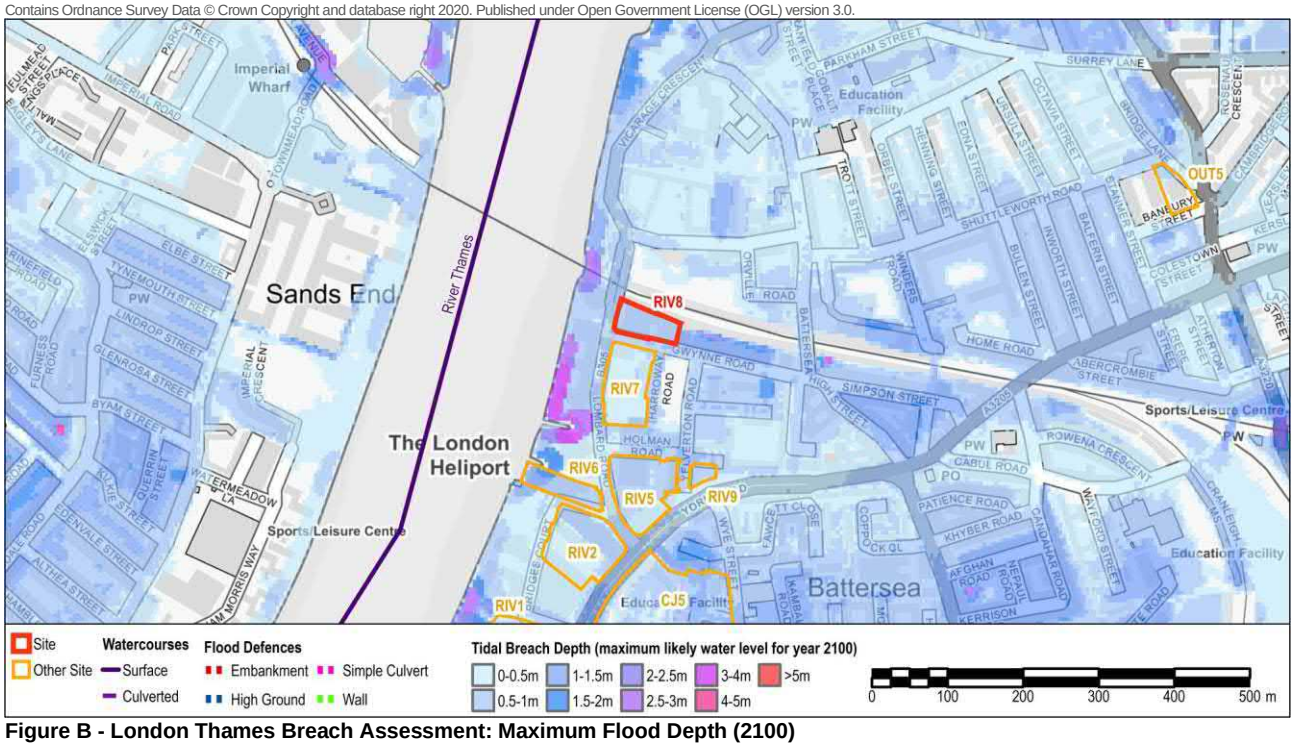

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV8 19 Lombard Road, 80 Gwynne Road, SW11

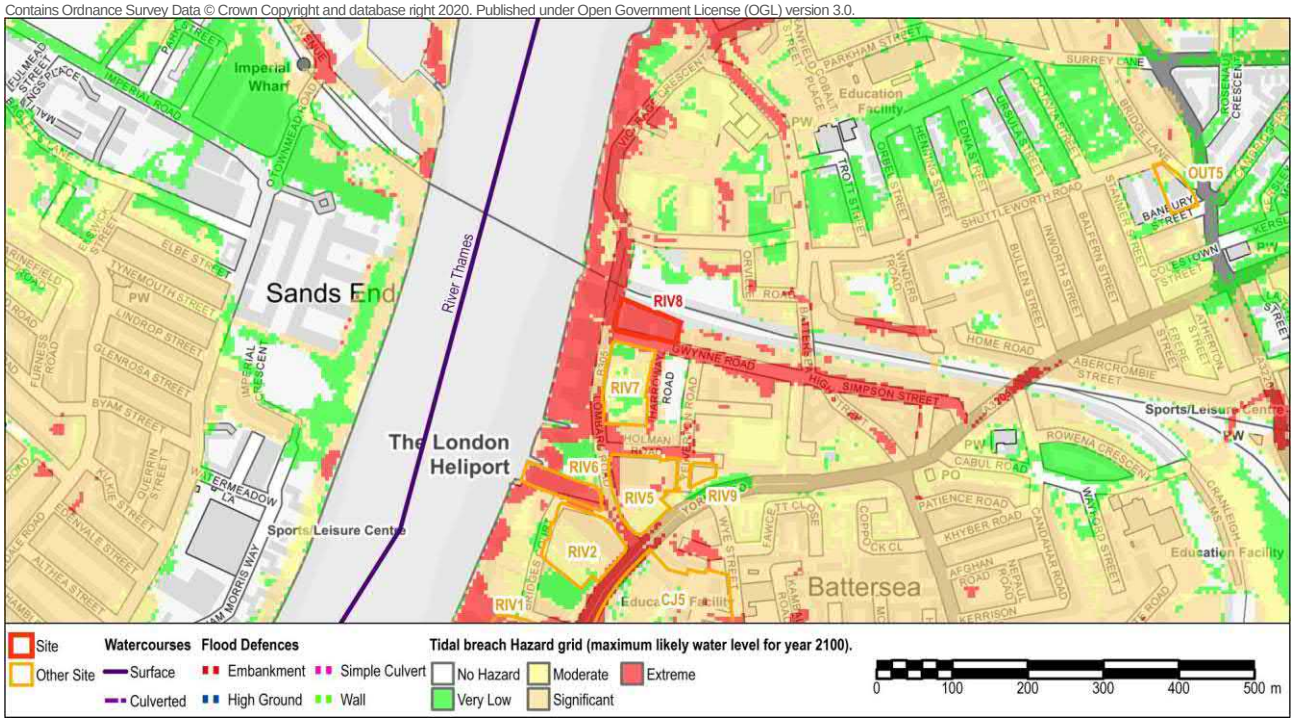

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

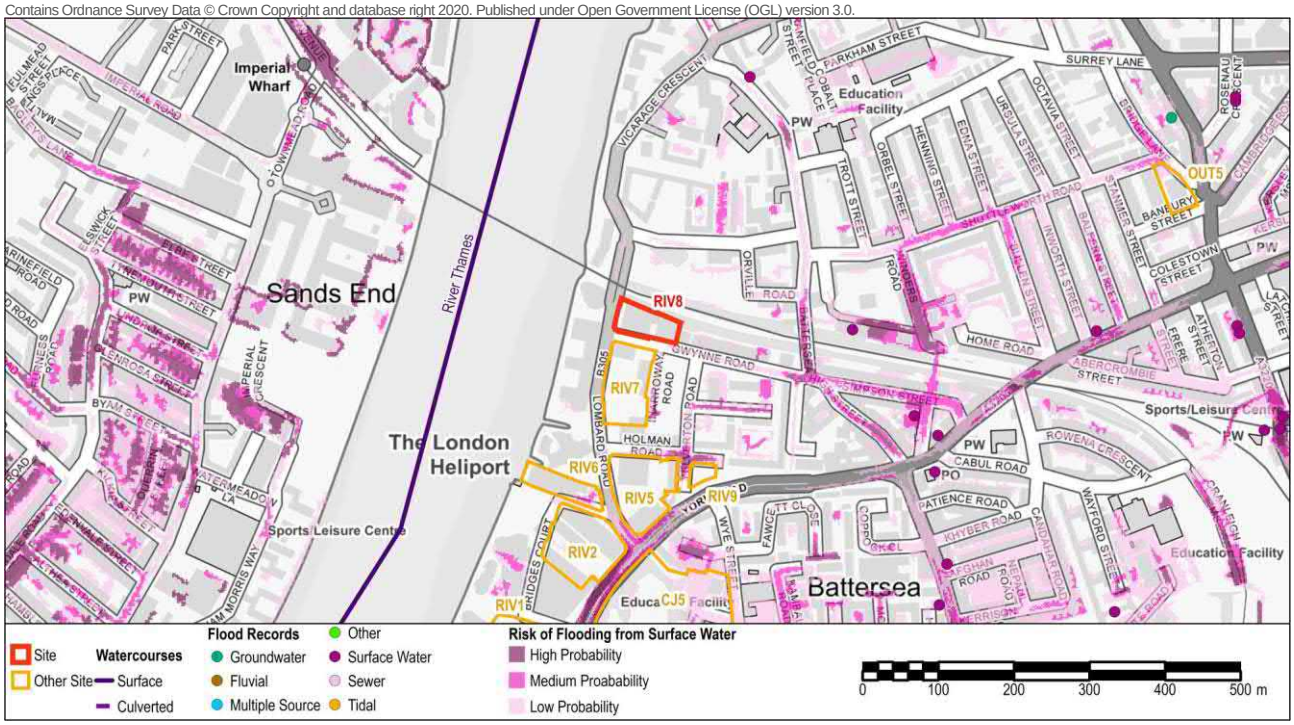

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site and surrounding area could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV8 19 Lombard Road, 80 Gwynne Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 70m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Extreme ('danger for all'), and 1.0-1.5m depth, Extreme hazard rating on Gwynne Road ('danger for all') for the year 2100. Flood levels across the site vary from ~4.86-5.53m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Gwynne Road to the south of the site. There are 7 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.86-5.53m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV9 The Chopper PH, 58-70 York Road, SW11

Site ID:	RIV9	**Area (ha):**	0.08
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

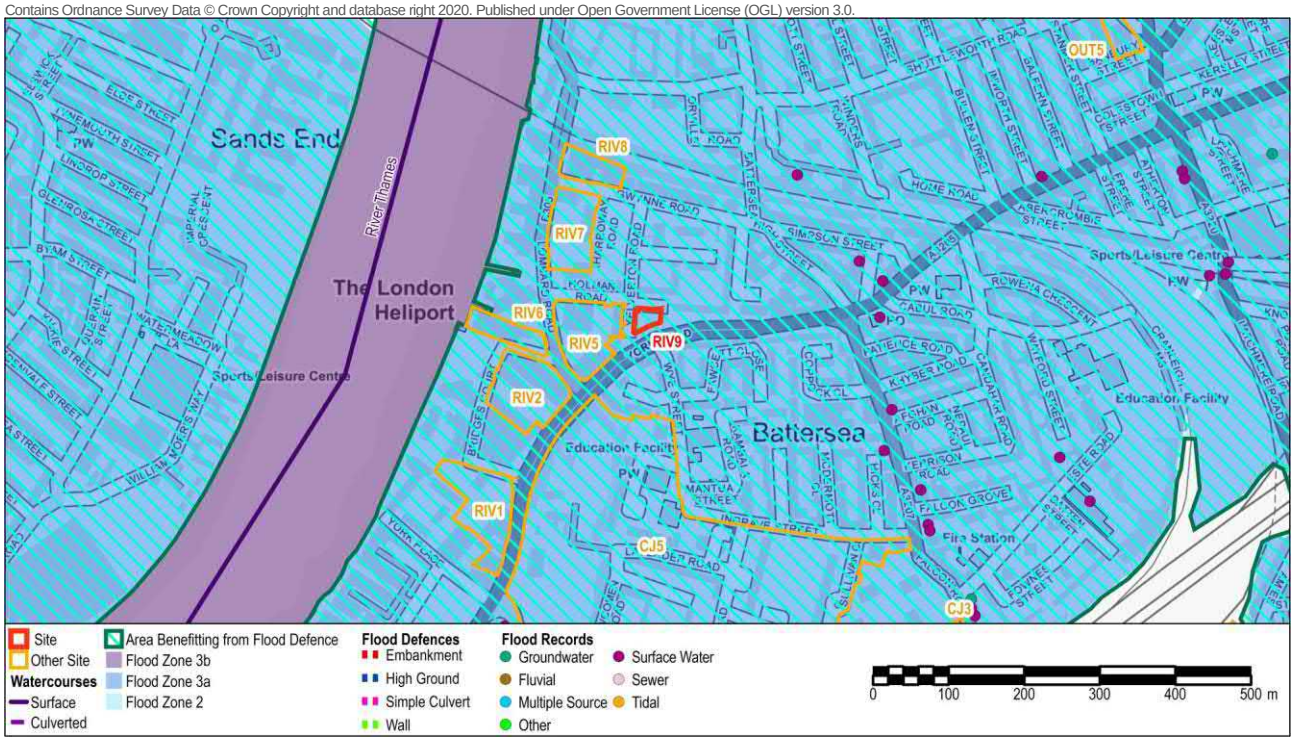

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 11; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

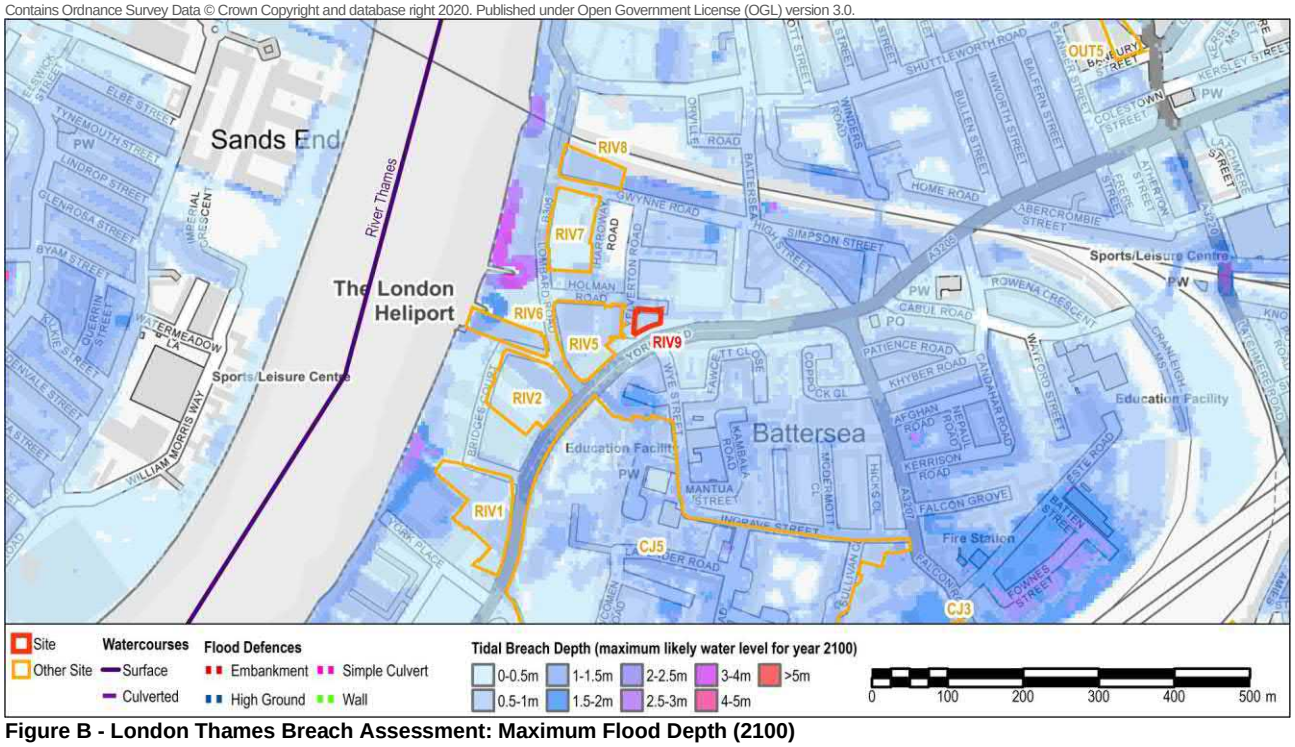

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV9 The Chopper PH, 58-70 York Road, SW11

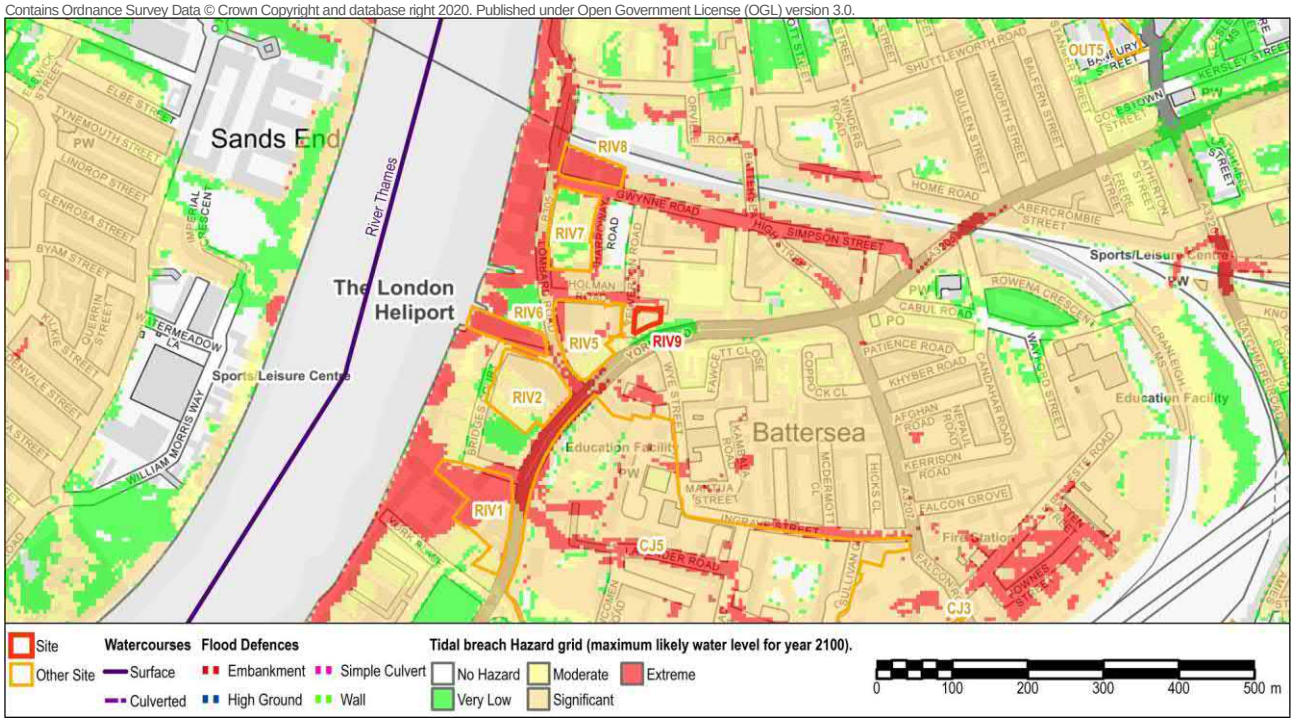

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

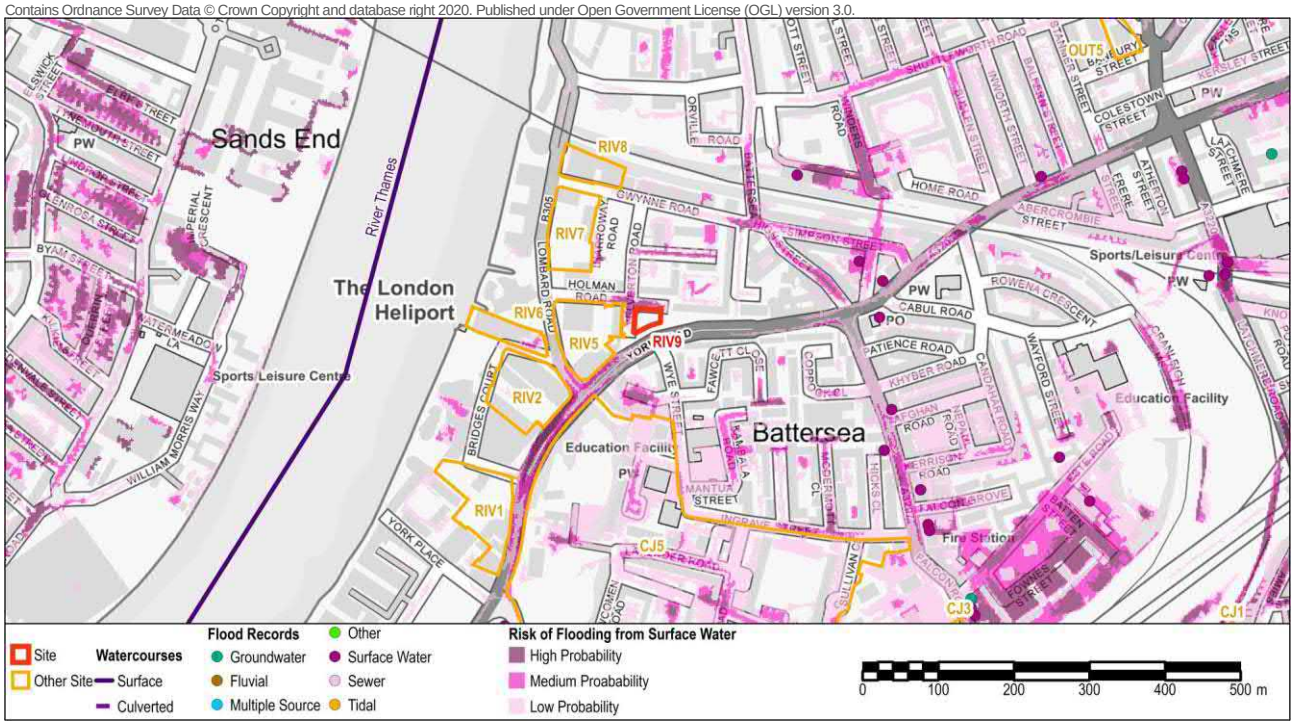

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV9 The Chopper PH, 58-70 York Road, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 210m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most'), and 1.0-1.5m depth, Extreme hazard rating on York Road ('danger for all') for the year 2100. Flood levels across the site vary from ~4.38-4.41m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Yelverton Road to the north of the site and York road to the south of the site. They are 11 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may have limited potential for groundwater flooding to occur.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~4.38-4.41m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV10 200 York Road, Travelodge Hotel, SW11

Site ID:	RIV10	**Area (ha):**	0.25
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

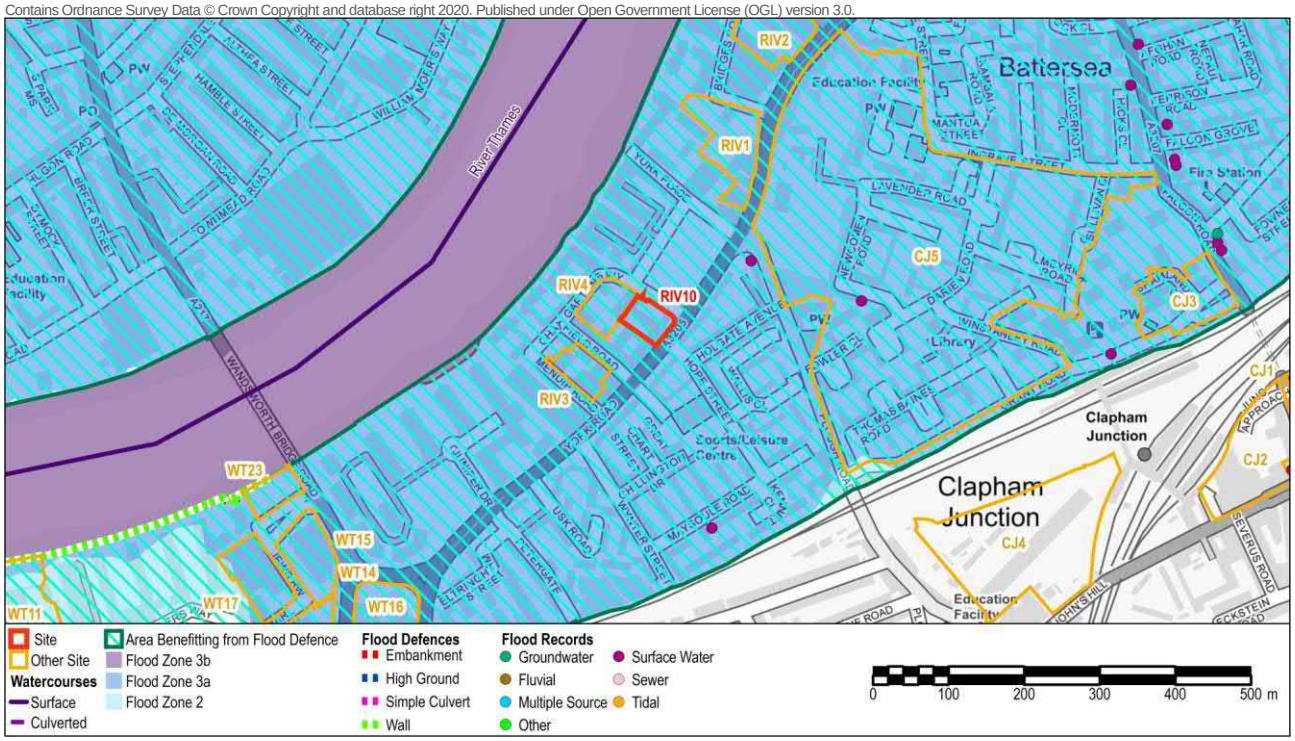

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 3; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

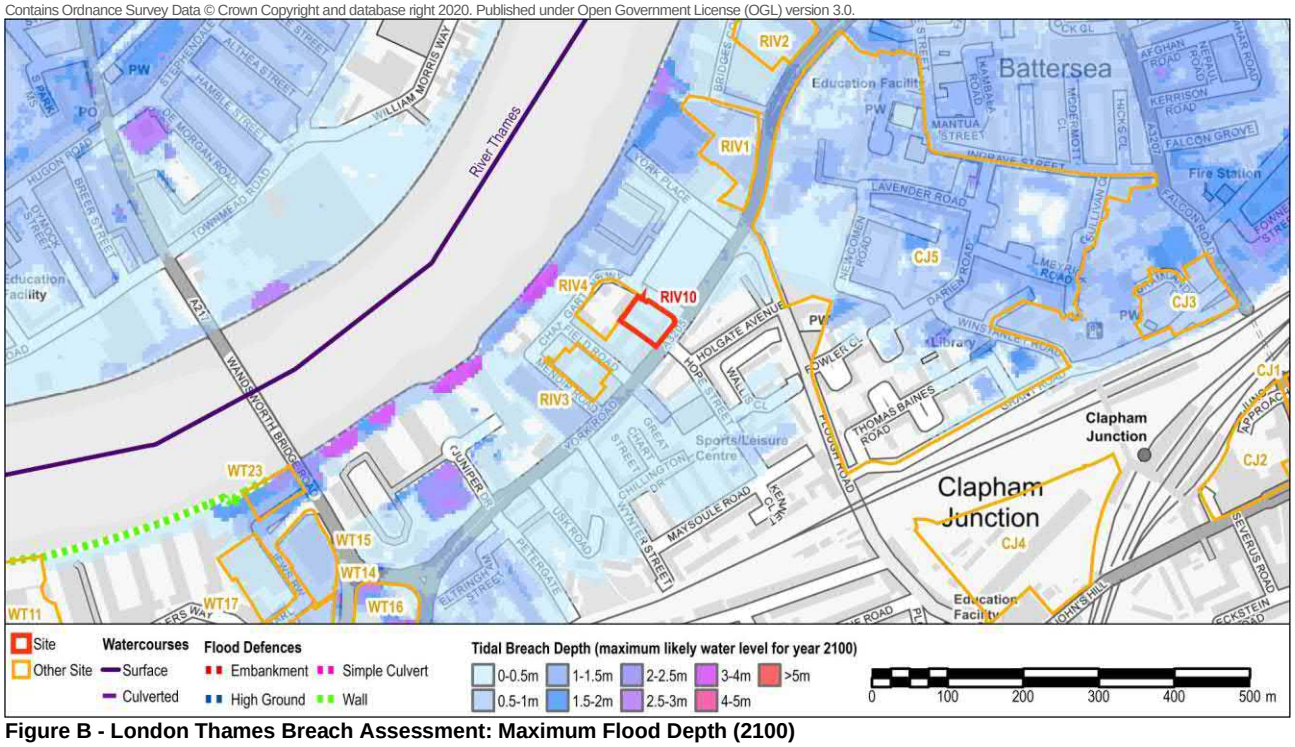

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV10 200 York Road, Travelodge Hotel, SW11

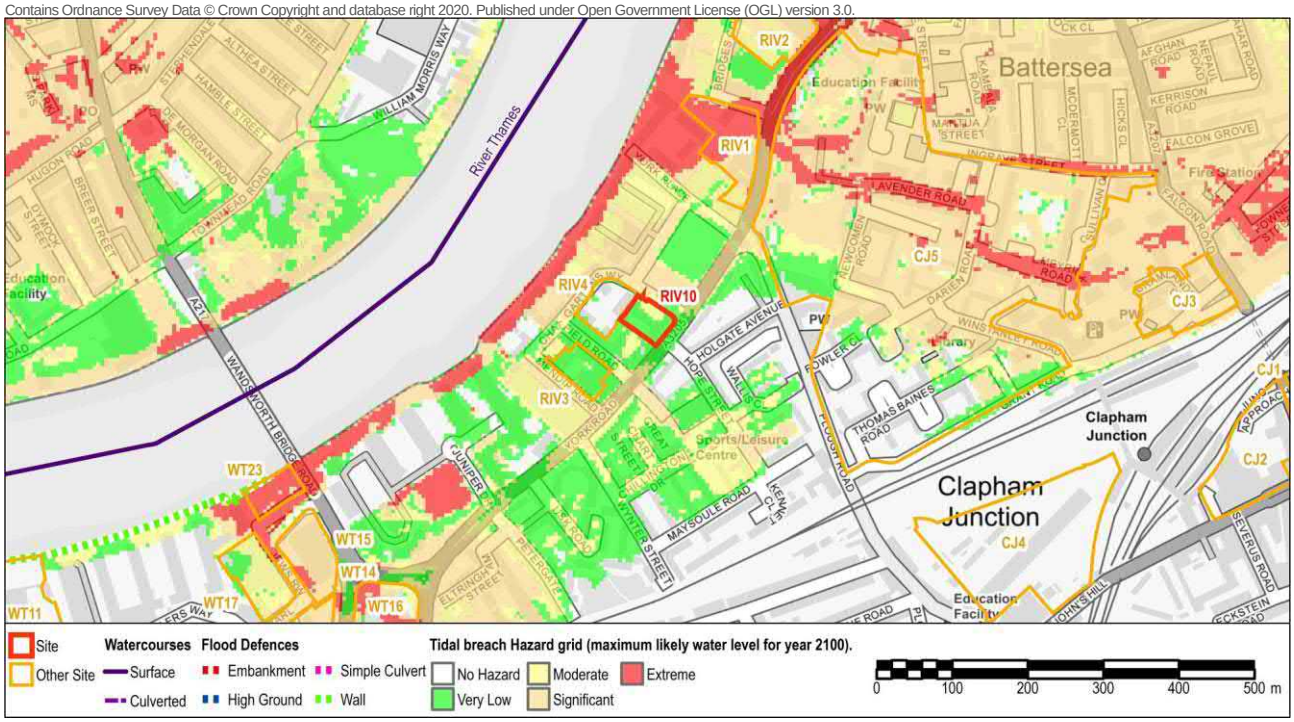

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

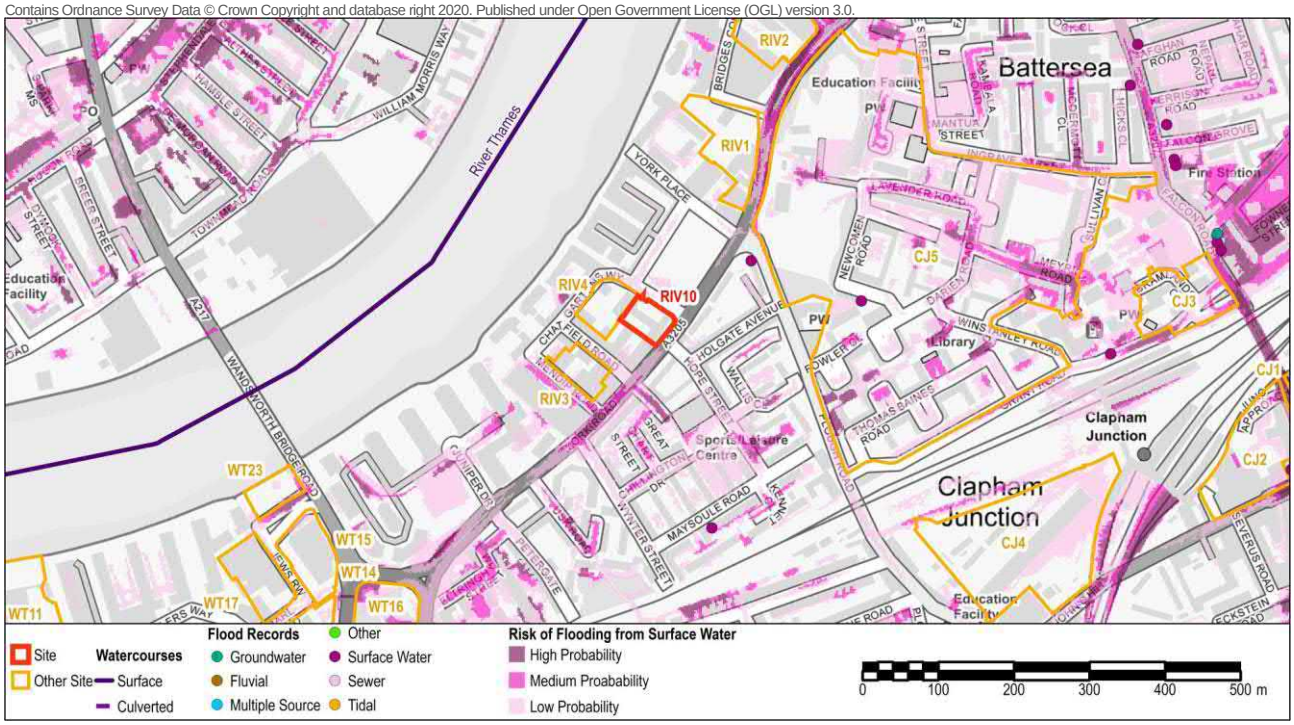

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site and surrounding area could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV10 200 York Road, Travelodge Hotel, SW11

Summary

The site is defined as Flood Zone 3, High probability of flooding. The River Thames flows northward, approximately 160m to the west of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5m, with a corresponding hazard rating of Significant ('danger for most'), and 0.5-1.0m depth, Significant hazard rating on York Road ('danger for most') for the year 2100. Flood levels across the site vary from ~5.03-5.37m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Gartons Way to the north of the site and York Road to the south of the site. There are 3 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding below ground.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.03-5.37m AOD[1].
- In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV11 Battersea Church Road/ Crewkerne Court Garage, Somerset Estate, SW11

Site ID:	RIV11	**Area (ha):**	0.37
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

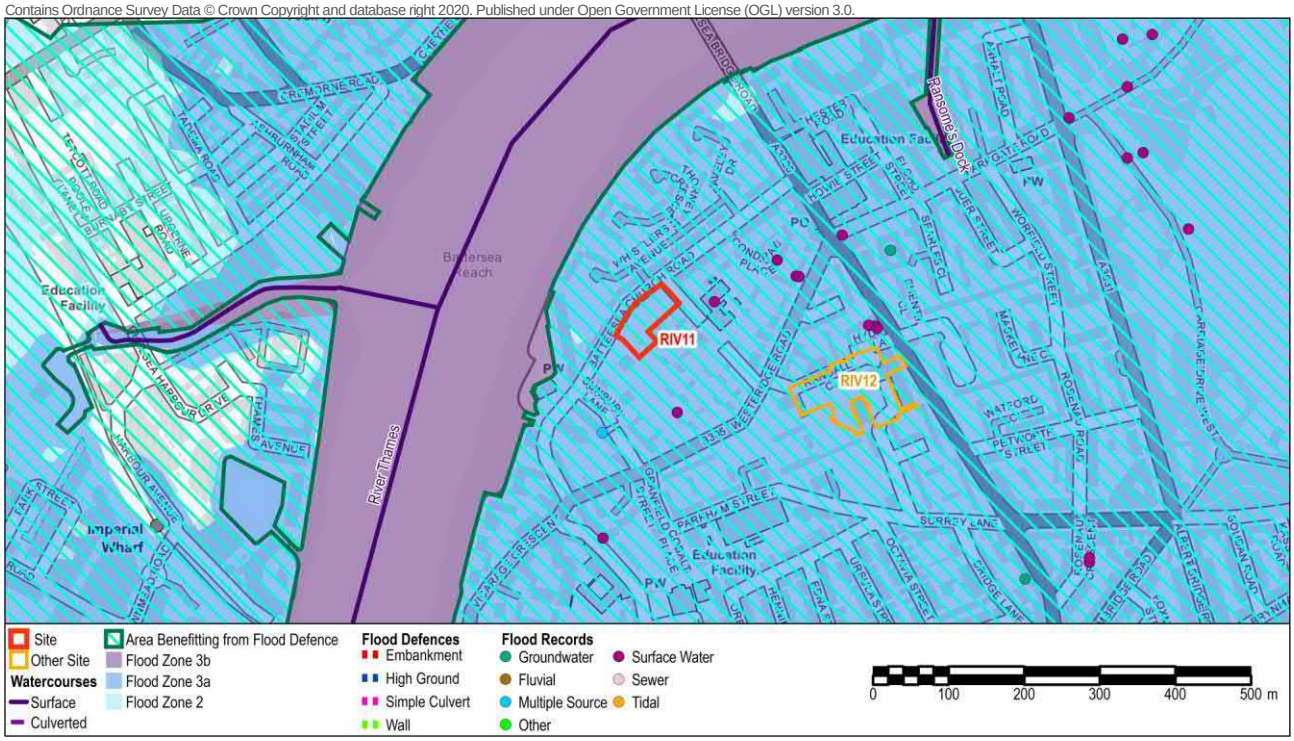

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 10; Groundwater 1; Sewer 0; Multiple source 1; Other source 0		

Tidal Flooding

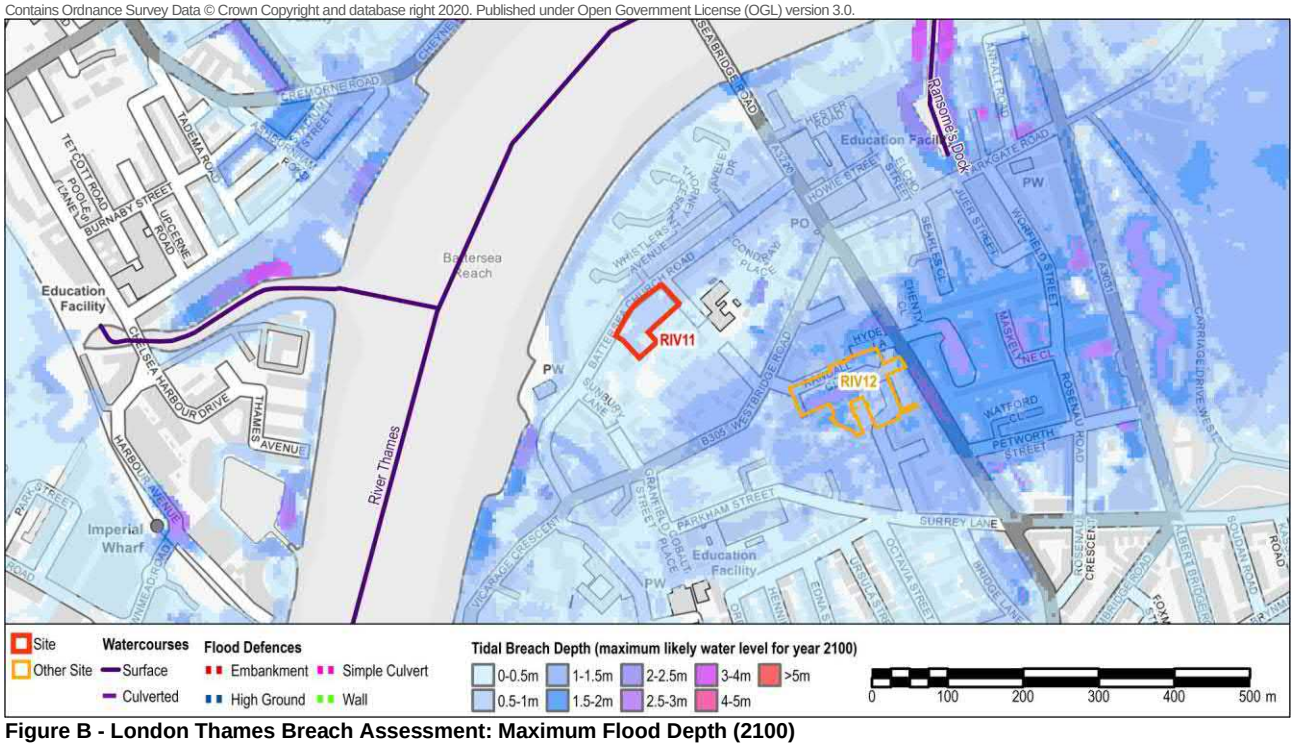

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV11 Battersea Church Road/ Crewkerne Court Garage, Somerset Estate, SW11

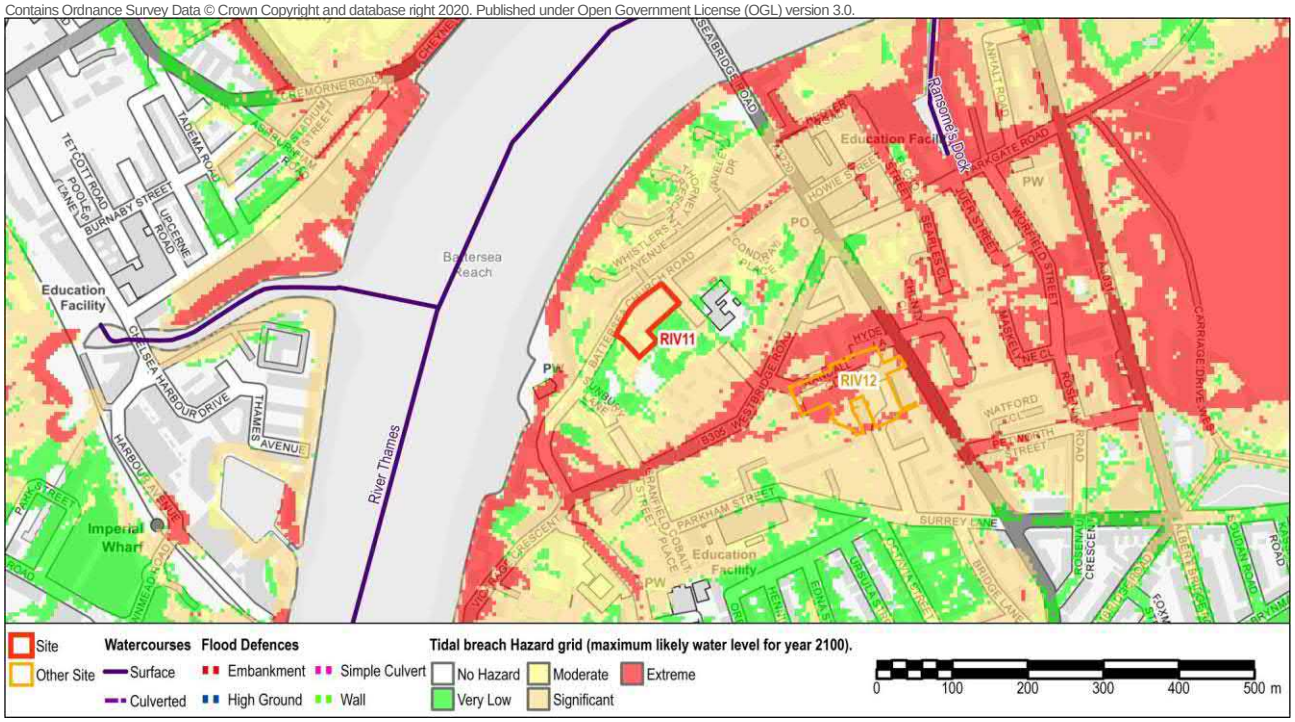

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	Low

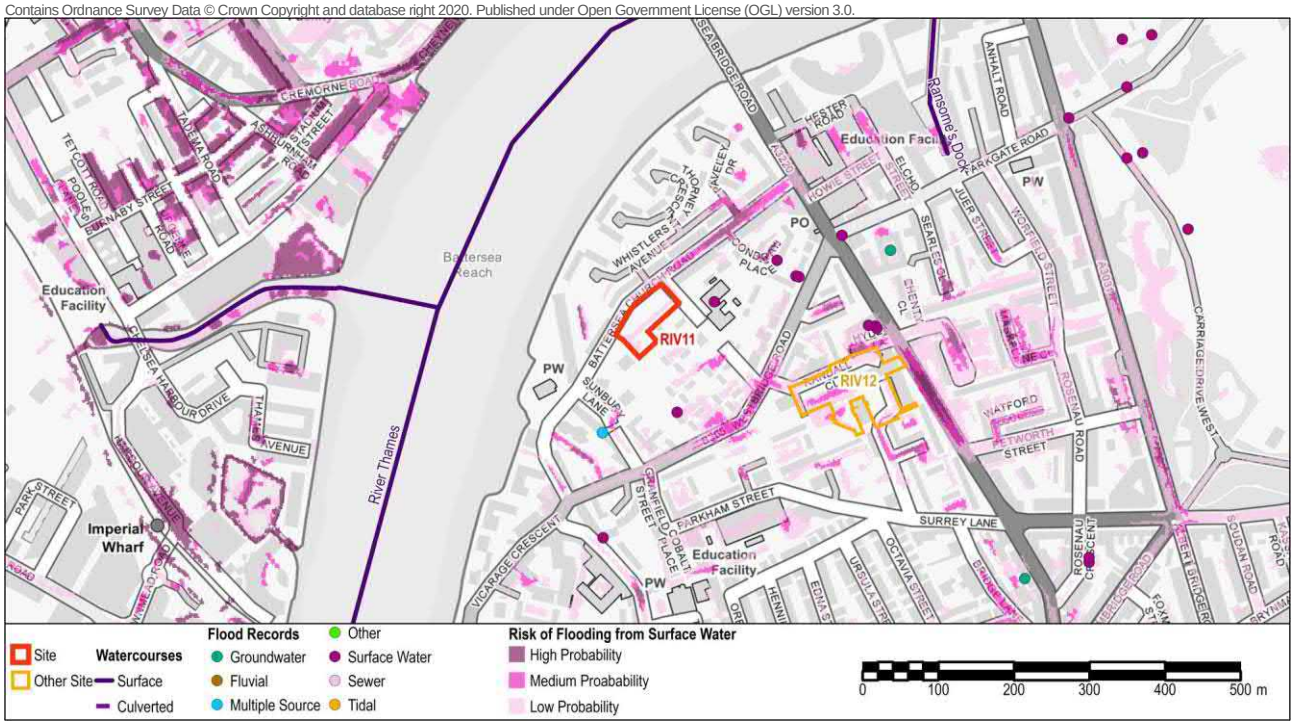

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	

Other Sources

Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site RIV11 Battersea Church Road/ Crewkerne Court Garage, Somerset Estate, SW11

Summary

The site is located 110m west of the tidal River Thames. The site is defined as Flood Zone 3a High probability of flooding and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 0.5-1m depth, Significant hazard rating ('danger for most') on Battersea Church Road for the year 2100. Flood levels on the site are ~4.82-4.89m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site, and also on Battersea Church Road adjacent to the site. There are 10 reported incidents of surface water flooding within 500m of the site.

There is 1 reported incident of groundwater flooding within 500m of the site. Broadscale mapping identifies the potential for groundwater flooding below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.82-4.89m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site RIV12 Randall Close Day Centre and adjacent Surrey Lane Estate Car Park, SW11

Site ID:	RIV12	**Area (ha):**	0.93
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

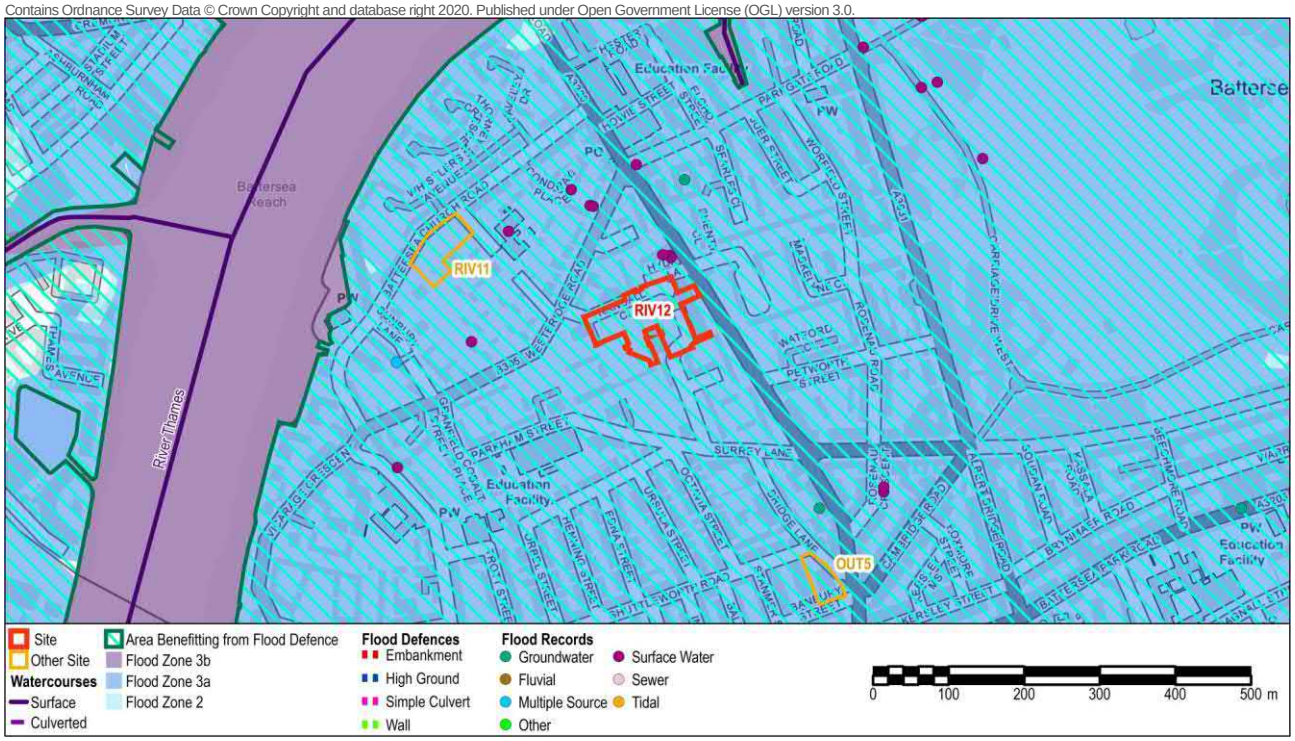

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 18; Groundwater 2; Sewer 0; Multiple source 1; Other source 0		

Tidal Flooding

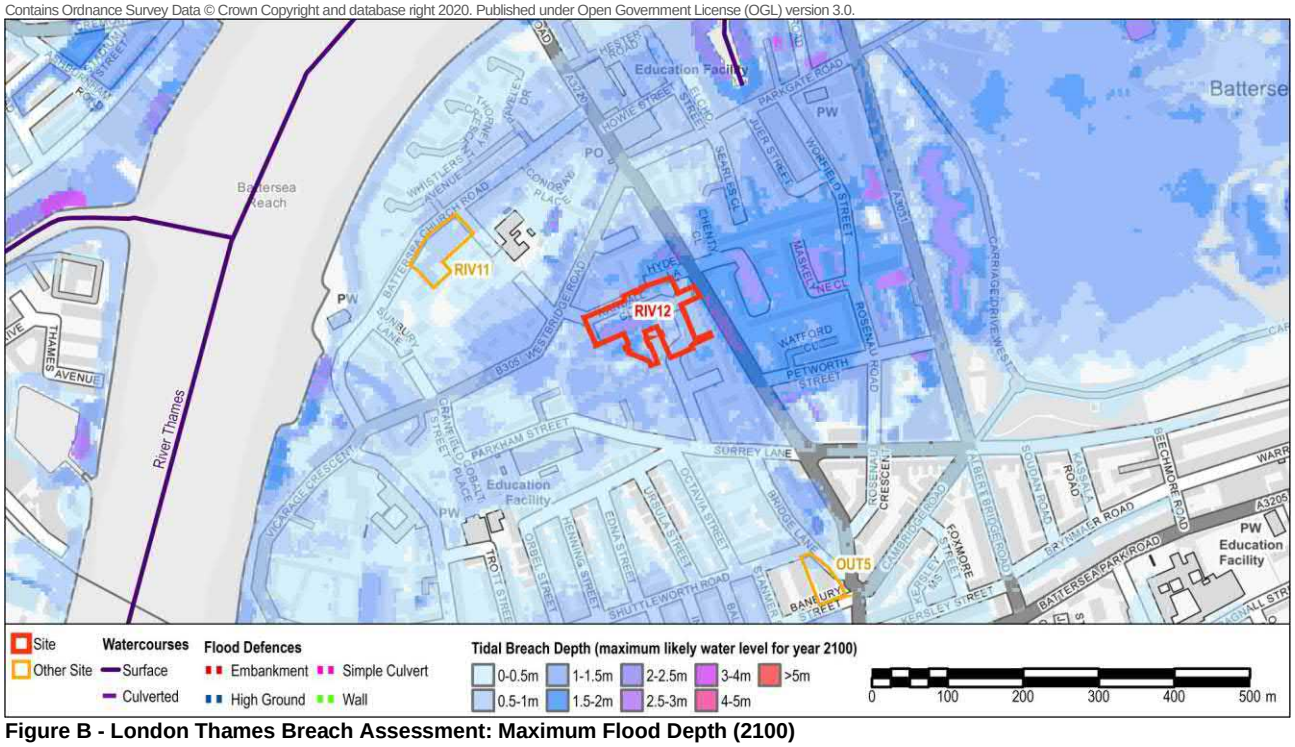

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site RIV12 Randall Close Day Centre and adjacent Surrey Lane Estate Car Park, SW11

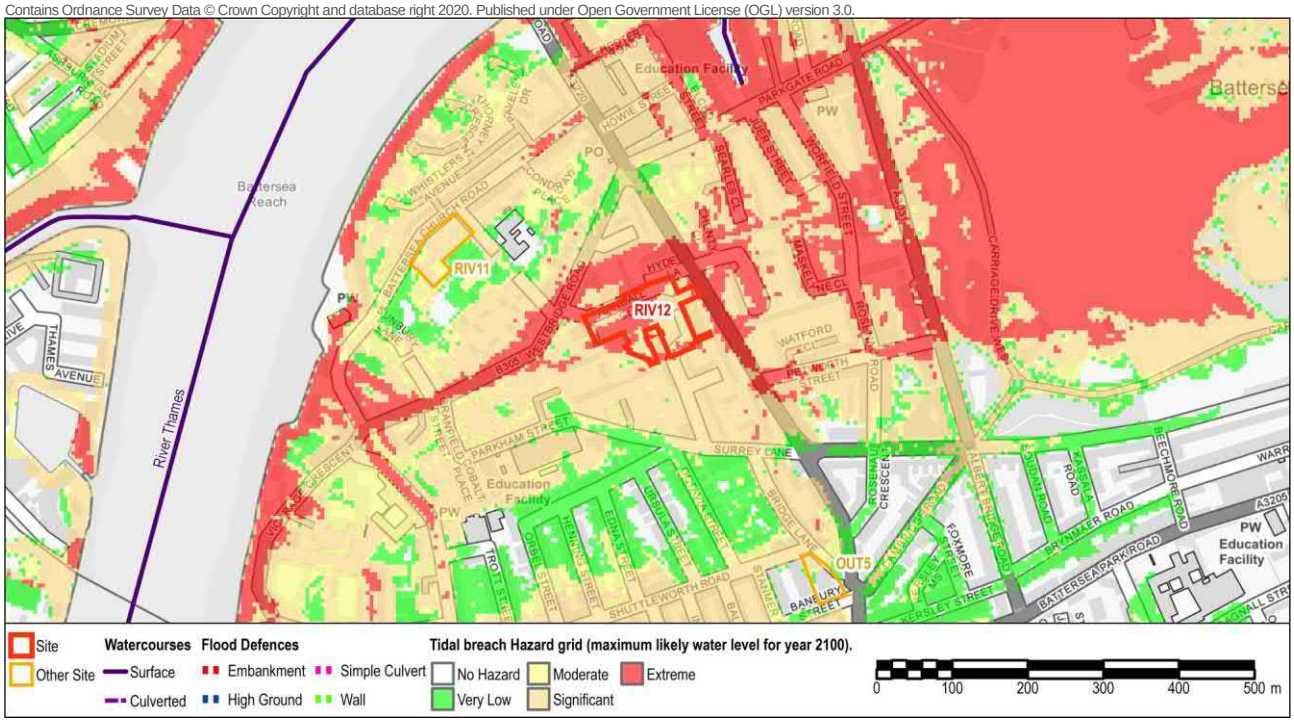

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding

Risk of Flooding from Surface Water (RoFSW)	

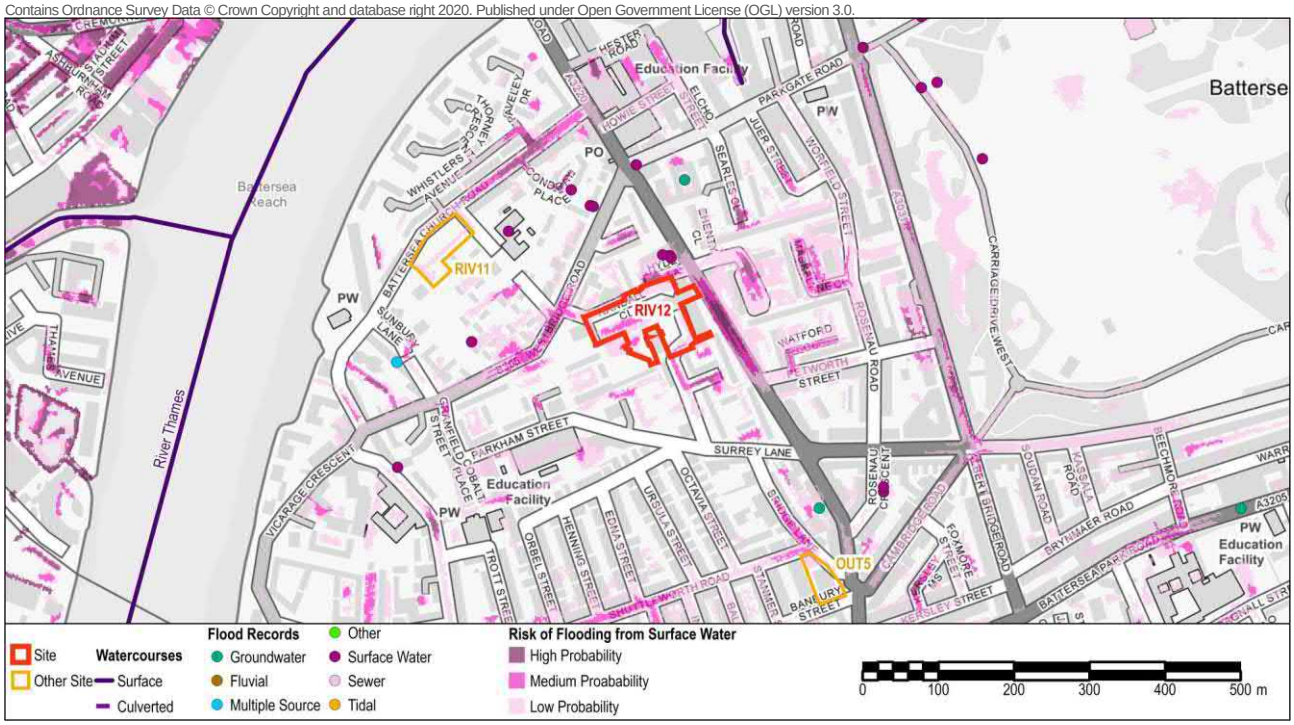

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None
Drainage Catchment	DC1

Groundwater Flooding

Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources

Risk of flooding from reservoirs	

Site RIV12 Randall Close Day Centre and adjacent Surrey Lane Estate Car Park, SW11

Summary

The site is located 70m east of the tidal River Thames. The site is defined as Flood Zone 3 High probability of flooding. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-2m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and up to 2m depth, Extreme hazard rating on Battersea Bridge Road ('danger for all') for the year 2100. Flood levels on the site are ~4.33-4.48m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site and also on Westbridge Road located west to the site. Broadscale mapping suggests there are 18 reported incidents of surface water flooding within 500m of the site.

There are 2 reported incidents of groundwater flooding within 500m of the site. Broadscale mapping suggests that there may be potential for groundwater flooding at surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood levels from the London Thames Breach Assessment in this location vary across the site from 4.33-4.48m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Power Station To Battersea Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site TO2 St Georges Hospital Car Park and adjoining land on Blackshaw Road, Maybury Street, SW17

Site ID:	TO2	**Area (ha):**	2.49
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 73%	**Flood Zone 2 (0.1% AEP):** 21%	**Flood Zone 3 (1% AEP):** 6%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 0%

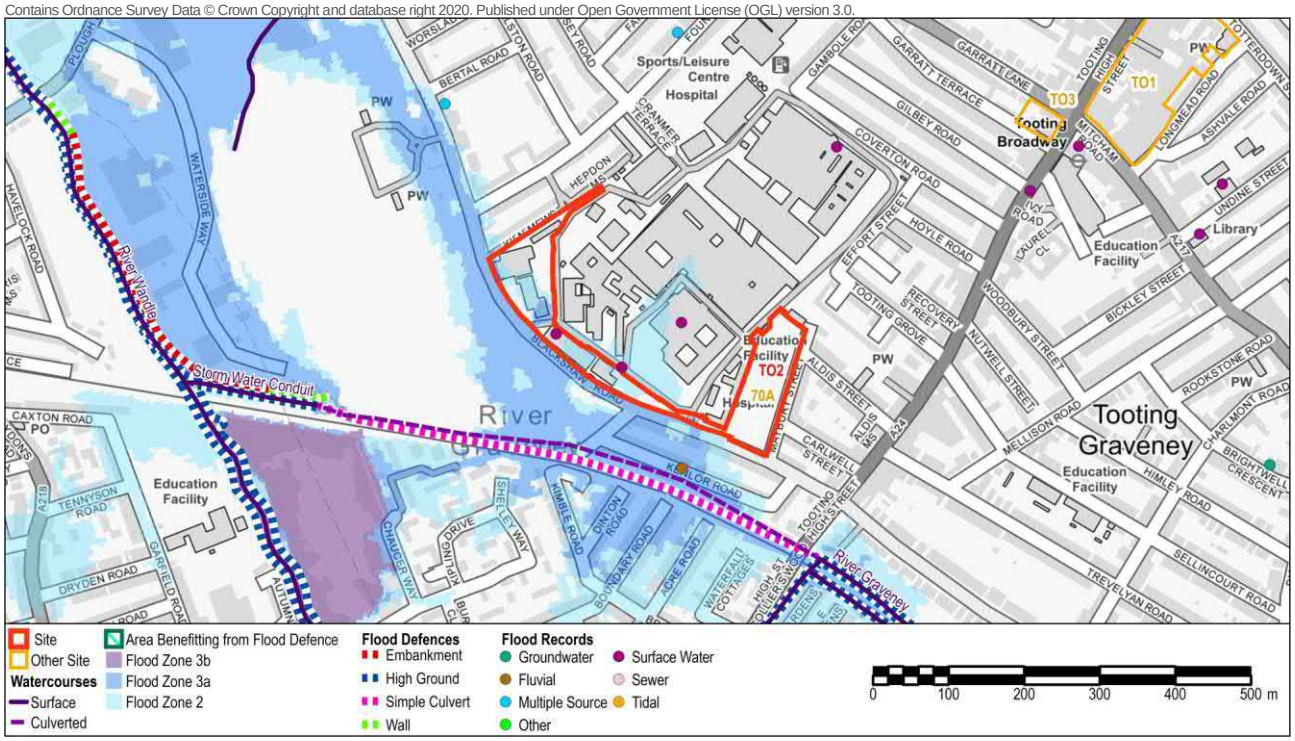

Figure A - Flood Zones and Flood Records

Flood Warning Area	River Graveney At Tooting And Colliers Wood	**Emergency Rest Centre**	Christ the King
Flood Records within 500m of the site:	Tidal 0; Fluvial 1; Surface Water 8; Groundwater 0; Sewer 0; Multiple source 2; Other source 0		

River Flooding

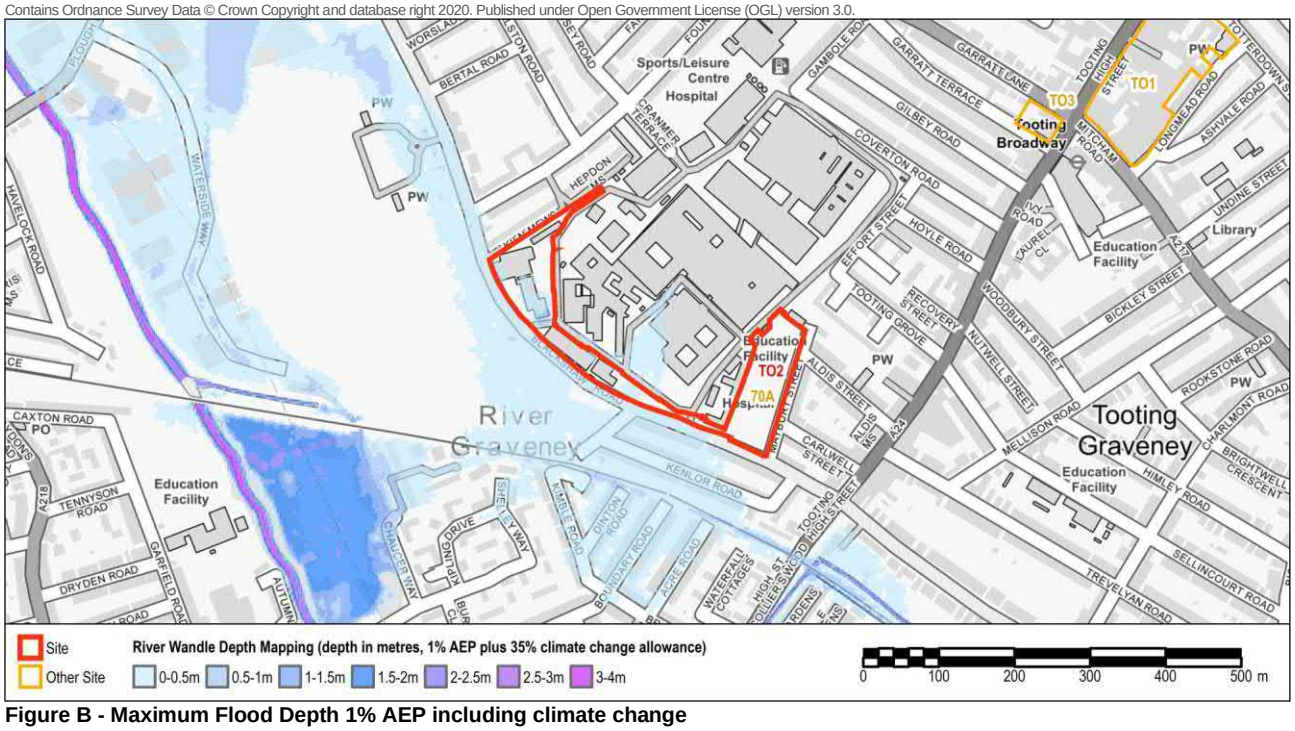

Figure B - Maximum Flood Depth 1% AEP including climate change

Site TO2 St Georges Hospital Car Park and adjoining land on Blackshaw Road, Maybury Street, SW17

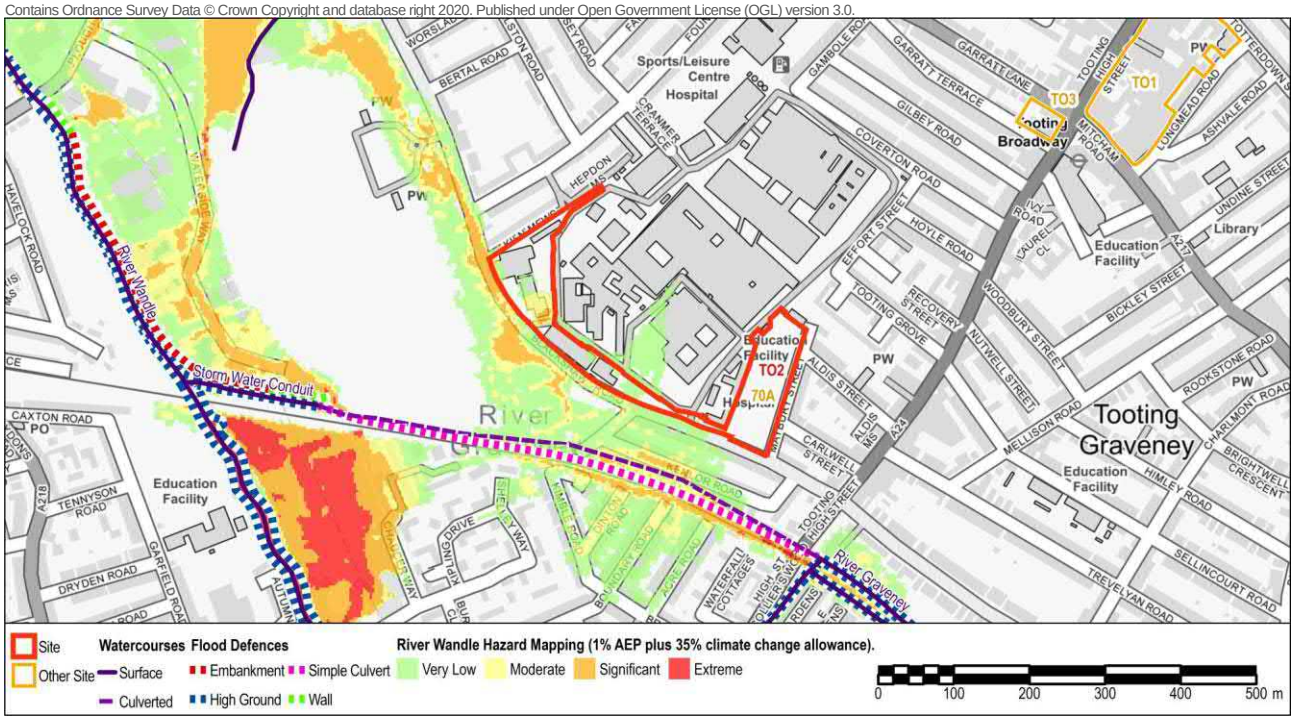

Figure C - Maximum Flood Hazard 1% AEP including climate change

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

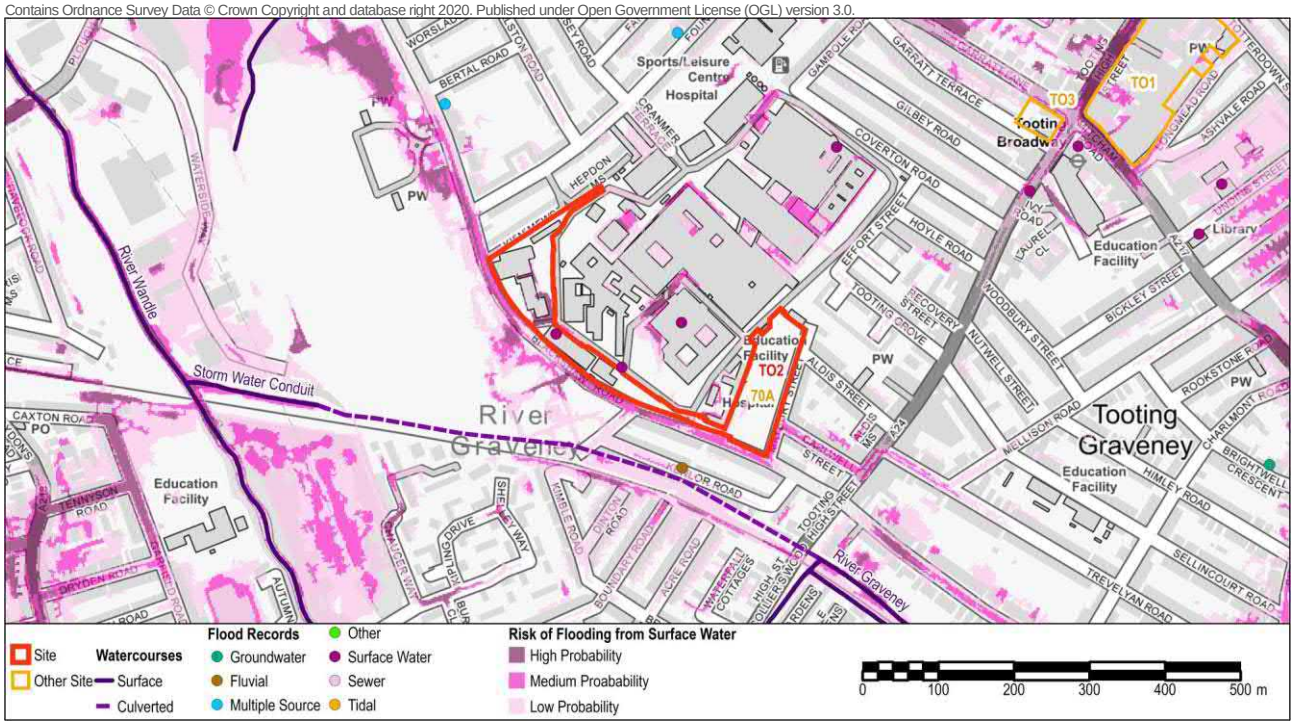

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_017 St Georges Hospital [Wandsworth]		
Drainage Catchment	DC14		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs			

Site TO2 St Georges Hospital Car Park and adjoining land on Blackshaw Road, Maybury Street, SW17

Summary

The River Graveney flows in culvert from east to west approximately 100m to the south of the site, adjacent to the railway line. The majority of the site (73%) is defined as Flood Zone 1 Low probability of flooding from rivers. 21% is defined as Flood Zone 2 Medium probability and 6% as Flood Zone 3a High probability.

Modelling of the River Wandle including the River Graveney shows that the site is at risk of flooding and during the 1% AEP event including 35% allowance for climate change 15% of the site is at risk of flooding. The depth mapping indicates flood water would inundate the site to a depth of up to 0.5m, with a corresponding hazard rating ranging from Low to Significant ('danger for most').

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on the roads around the edge of the site (Blackshaw Road). There are records of surface water flooding in proximity to the site and it is located within a Critical Drainage Area (CDA 017 St Georges Hospital). There are 8 reported incidents of surface water flooding within 500m of the site.

There are no recorded records of groundwater flooding in close proximity to the site. Broadscale mapping suggests there may be potential for groundwater flooding to occur at surface in this area.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas in Flood Zone 1 and 2 at lower risk of river flooding, as well as areas at lower risk of surface water flooding.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change.
- The access/egress routes for the site along Blackshaw Road are also shown to be at risk of flooding during the 1% AEP event including 35% climate change allowance with depths up to 0.5m. A place of safe refuge should be provided within the proposed development above the 1% AEP event including an appropriate allowance for climate change[2] modelled flood level, and a Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate the development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- The site is located within the Flood Warning Area for River Graveney at Tooting and Colliers Wood. Occupants of the site should sign up to receive the Flood Warning Service.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT2 Ram Brewery/Capital Studios/Former Dexion/Duvall site, Ram Street/Armoury Way SW18

Site ID:	WT2	**Area (ha):**	1.43
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 94%	**Flood Zone 3b (5% AEP):** 6%	**Area Benefiting from Defences:** 6%

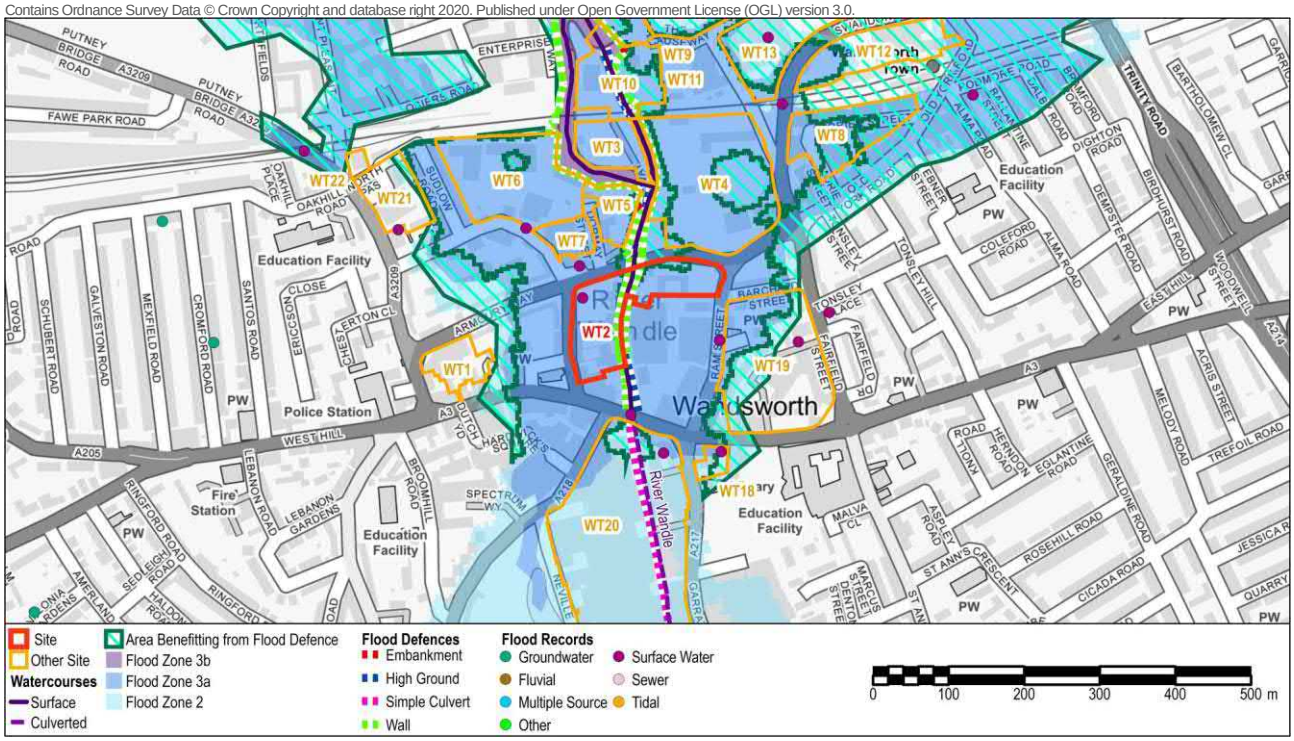

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 15; Groundwater 1; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

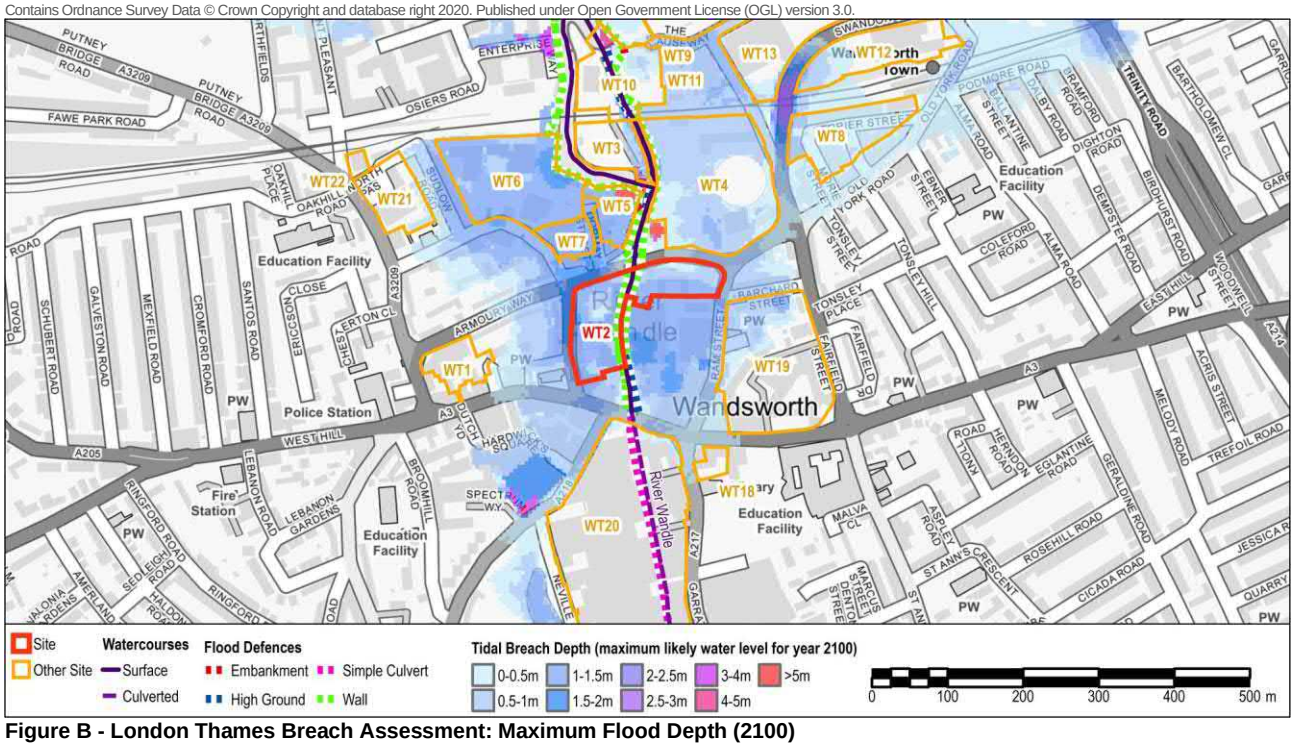

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT2 Ram Brewery/Capital Studios/Former Dexion/Duvall site, Ram Street/Armoury Way SW18

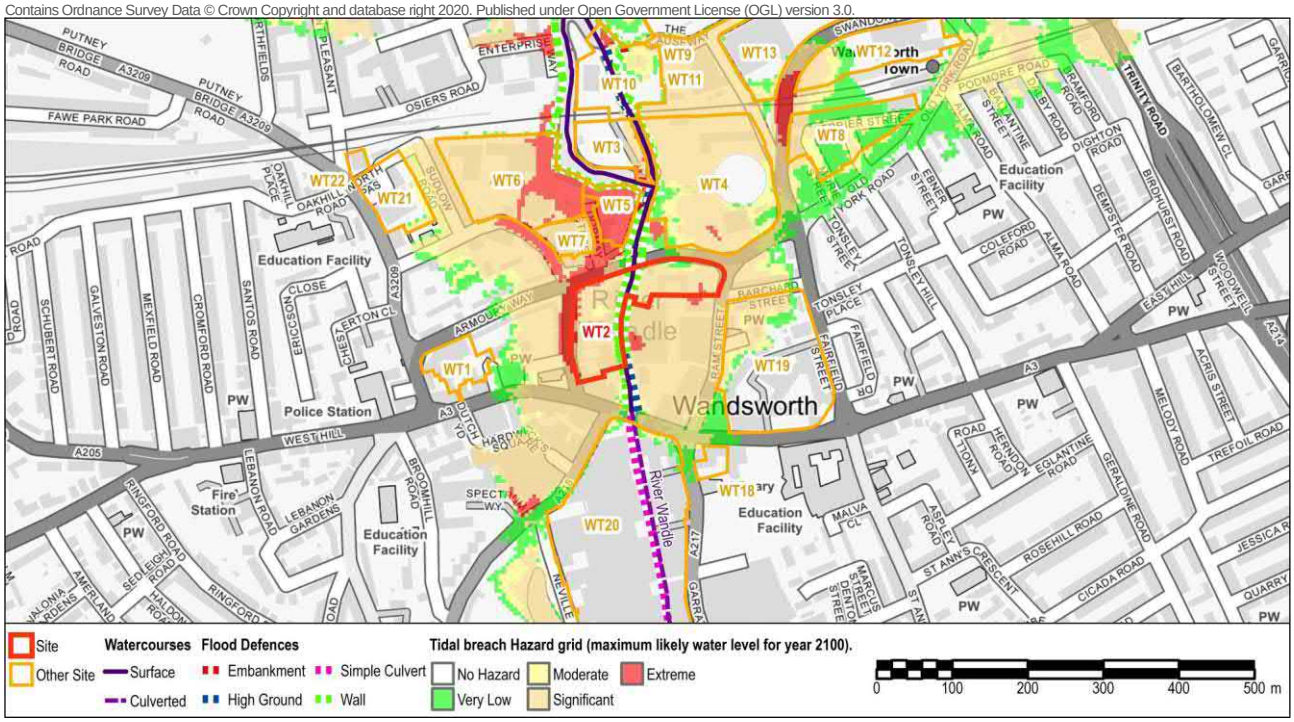

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

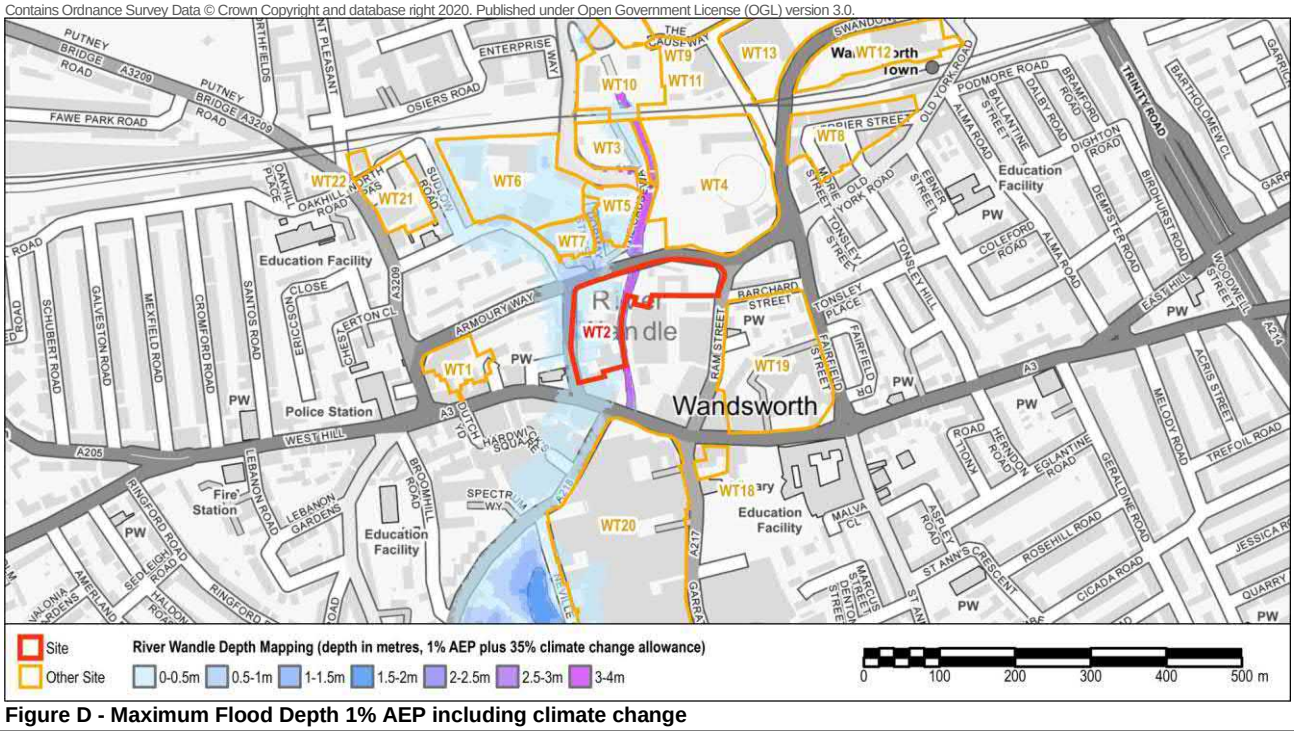

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT2 Ram Brewery/Capital Studios/Former Dexion/Duvall site, Ram Street/Armoury Way SW18

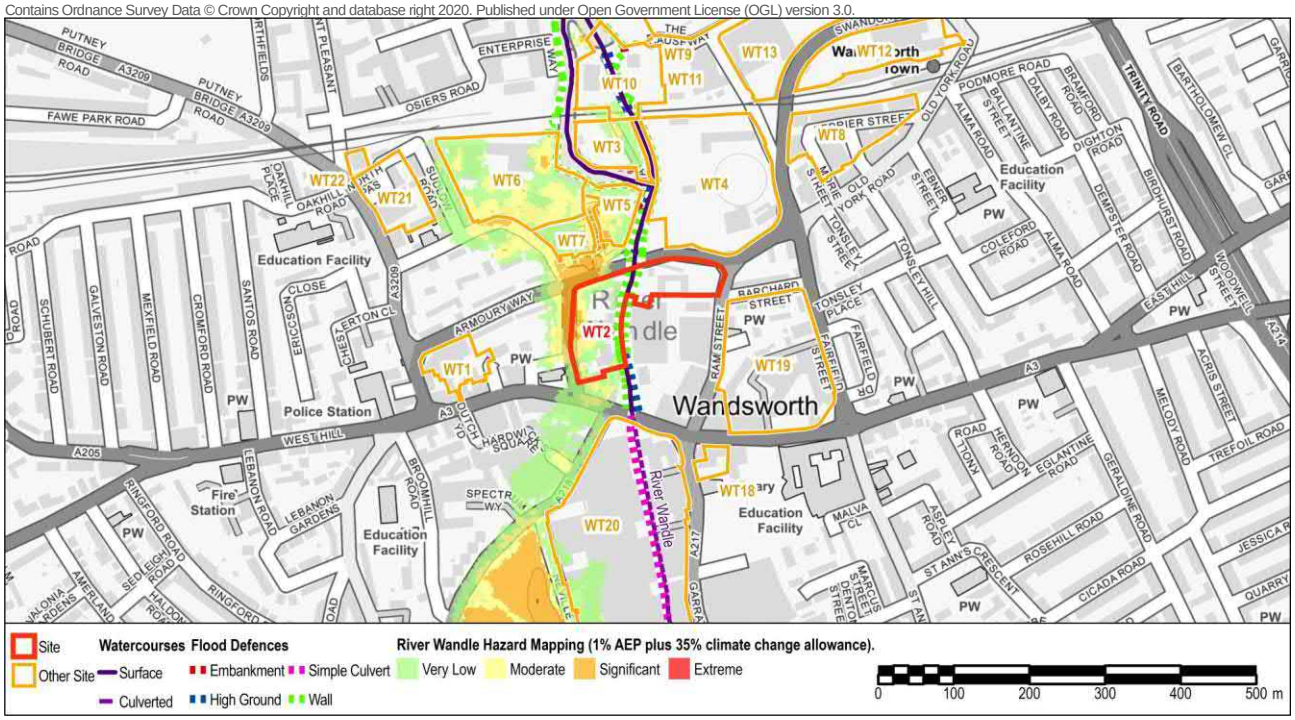

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

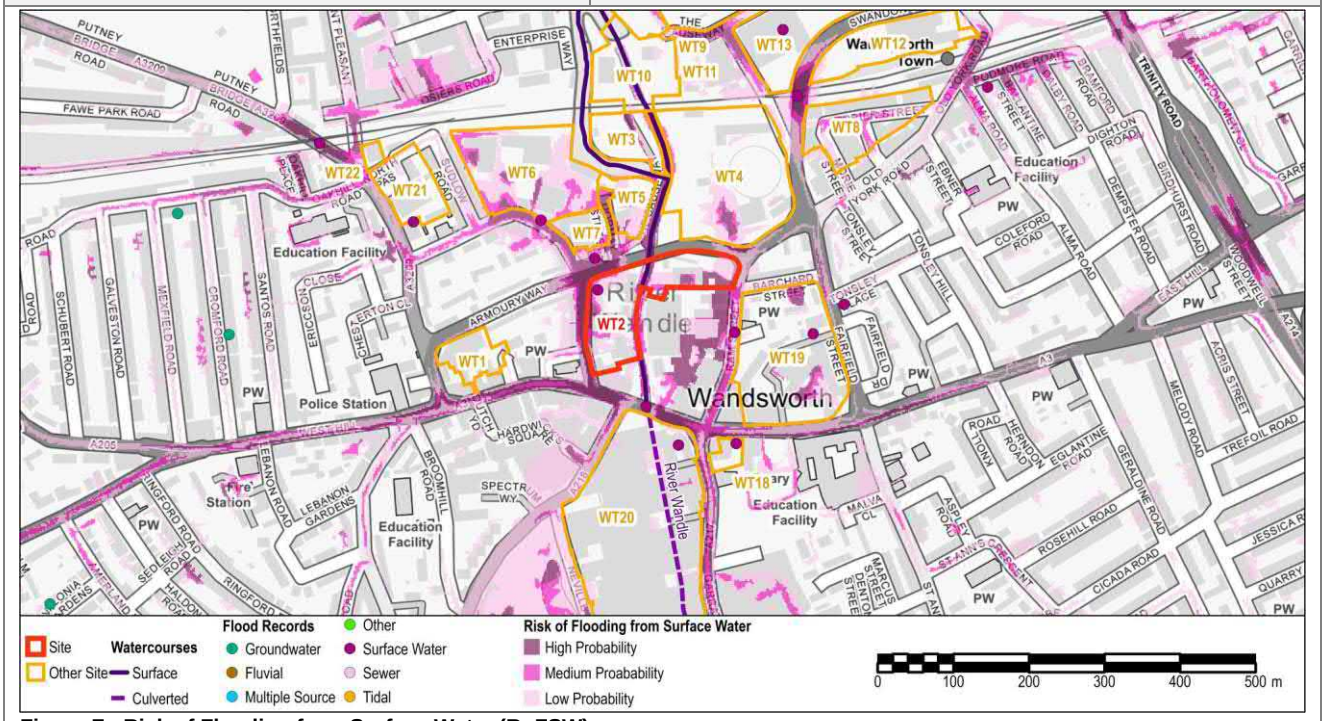

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC6, DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT2 Ram Brewery/Capital Studios/Former Dexion/Duvall site, Ram Street/Armoury Way SW18

Summary

The River Wandle flows north through the site.The majority of the site (94%) is defined as Flood Zone 3a High probability of flooding from rivers or the sea, with a small area (6%) of Flood Zone 3b Functional Floodplain.

Modelling shows the site to be at risk of flooding from the River Wandle when considering the impact of climate change. During the modelled 1% AEP event including 35%, climate change, 38% of the site is at risk of flooding, and the hazard rating on the site is Significant, which presents a 'danger for most'. Flood levels are~ 4.46-5.10m AOD1 on the site. During the 1% AEP event including 70% allowance for climate change levels increase to ~4.77-5.80m AOD1.

The River Wandle meets the tidal River Thames approximately 490m north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate part of the site to a depth of 1.5-2.0m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 1.5-2.0m depth, Extreme hazard rating on Armoury Way and Wandsworth Plain ('danger for all') for the year 2100. Flood levels on the site vary from ~5.53-5.79m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site, and also on Armoury Way and Wandsworth Plain adjacent to the site. Broadscale mapping suggests there are 15 reported incidents of surface water flooding within 500m of the site.

There is 1 reported incident of groundwater flooding within 500m of the site.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (4.46-5.10m AOD[1]). Sleeping accommodation should be set above the tidal extreme water level including an allowance for climate change[2] (5.53-5.79m AOD).
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
  • In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for River Wandle at Wandsworth and Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.
- Developments are not appropriate within the functional floodplain 3b unless it is water compatible.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT3 Causeway Island including land to the east, SW18

Site ID:	WT3	**Area (ha):**	0.54
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 95%	**Flood Zone 3b (5% AEP):** 5%	**Area Benefiting from Defences:** 0%

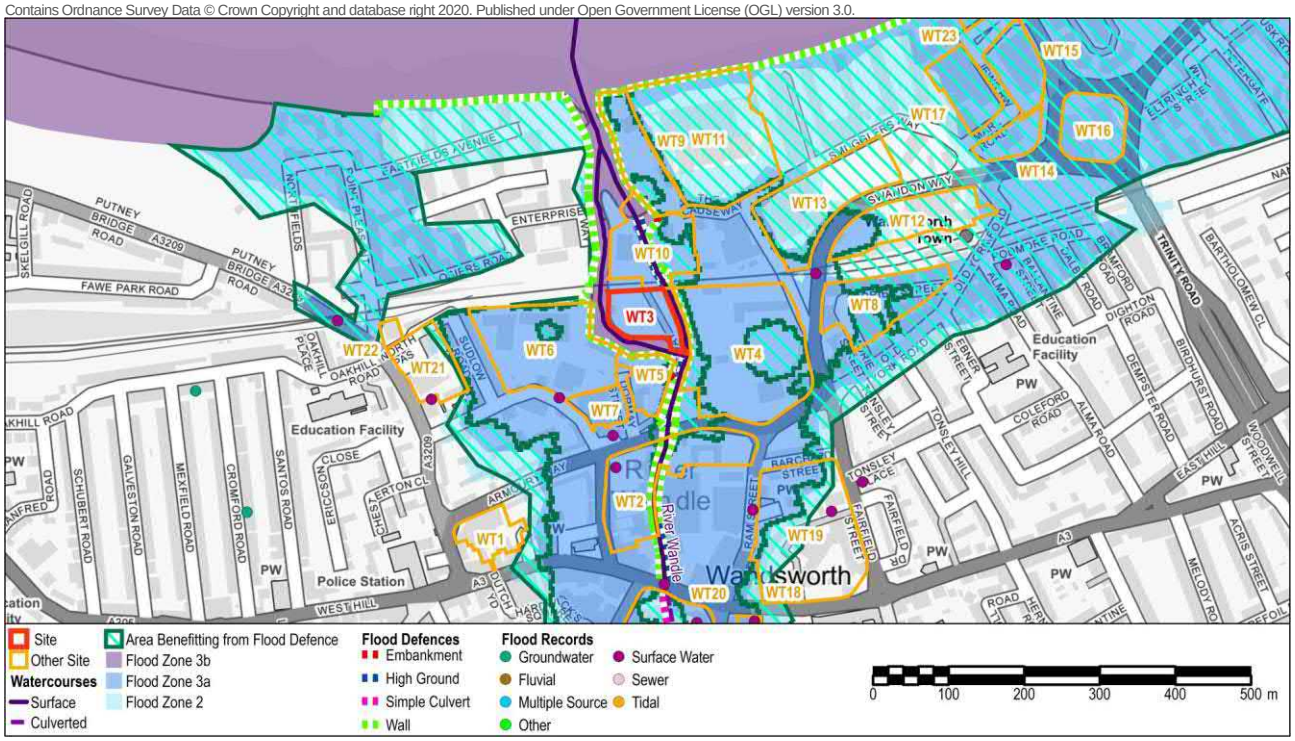

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 15; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

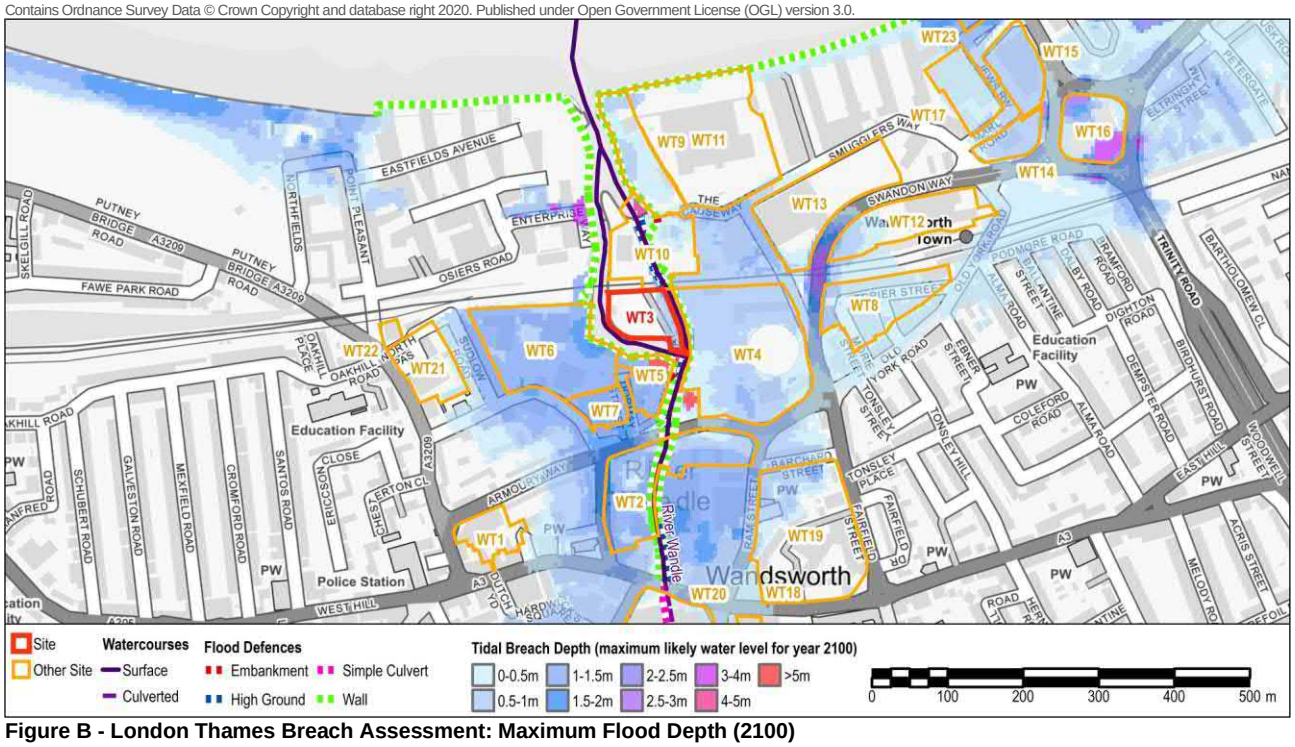

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT3 Causeway Island including land to the east, SW18

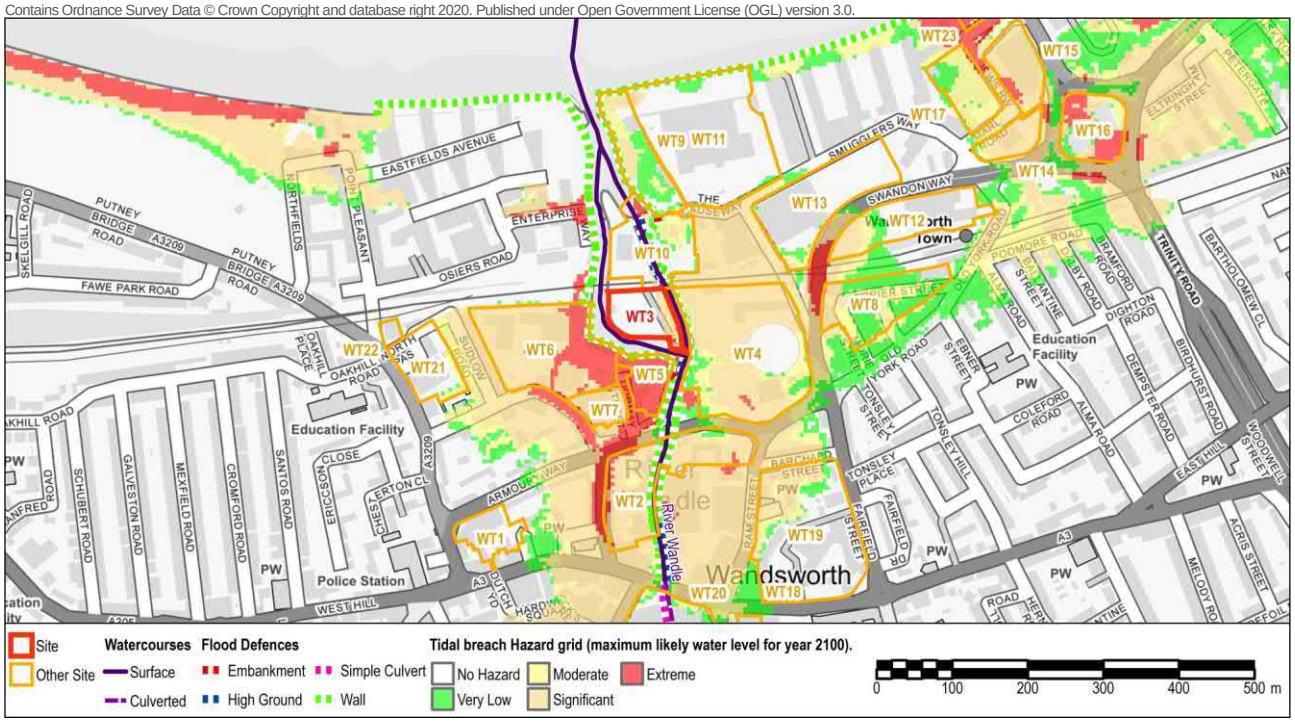

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

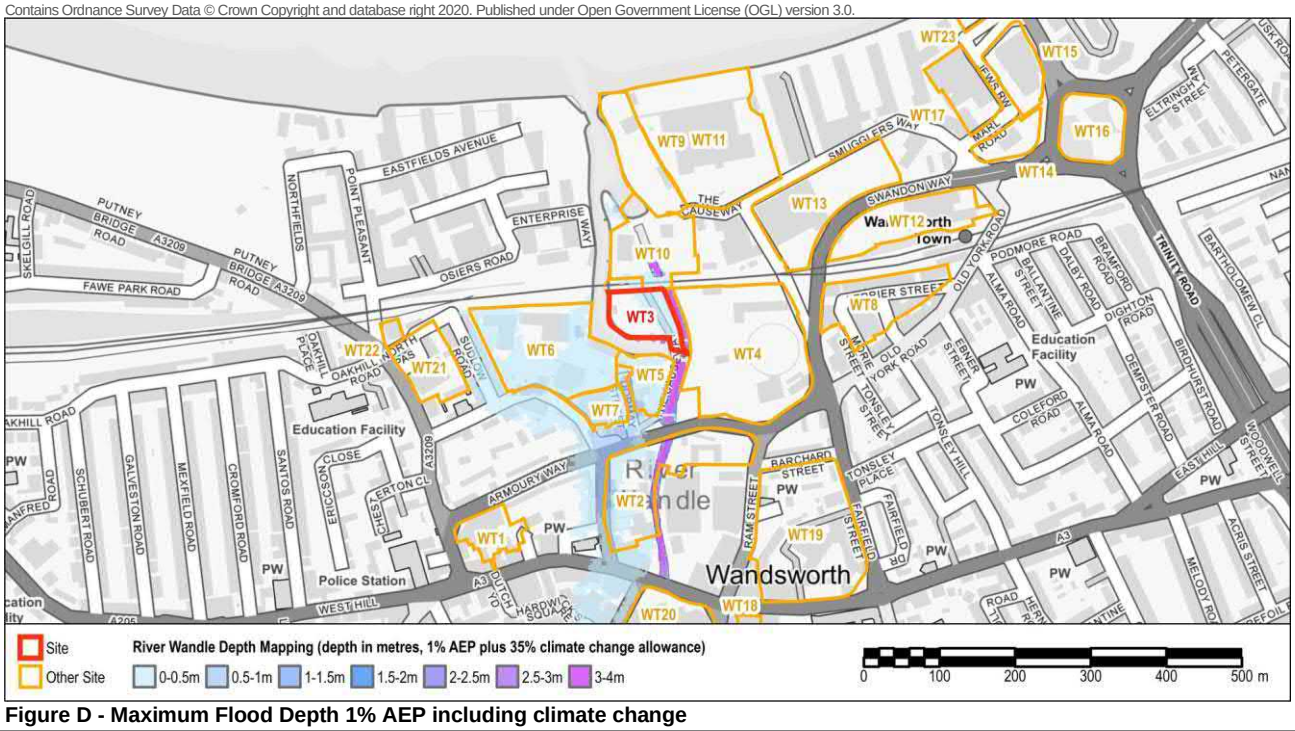

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT3 Causeway Island including land to the east, SW18

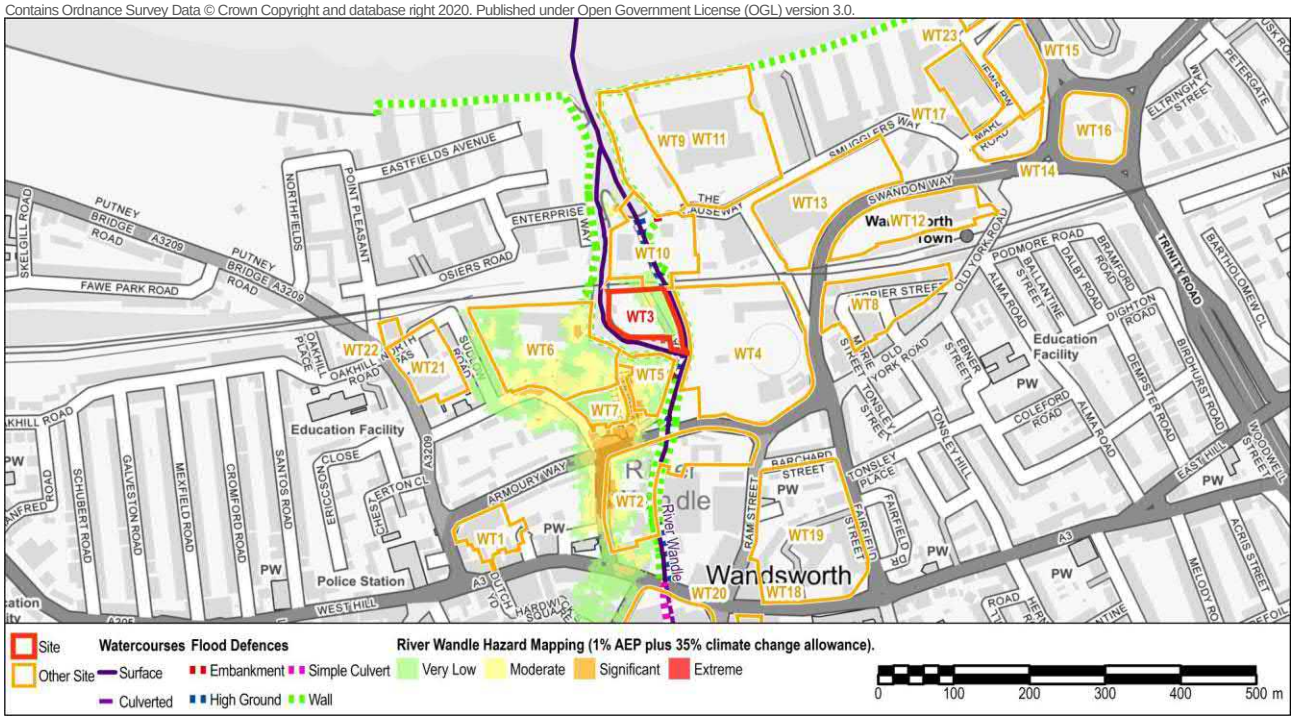

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

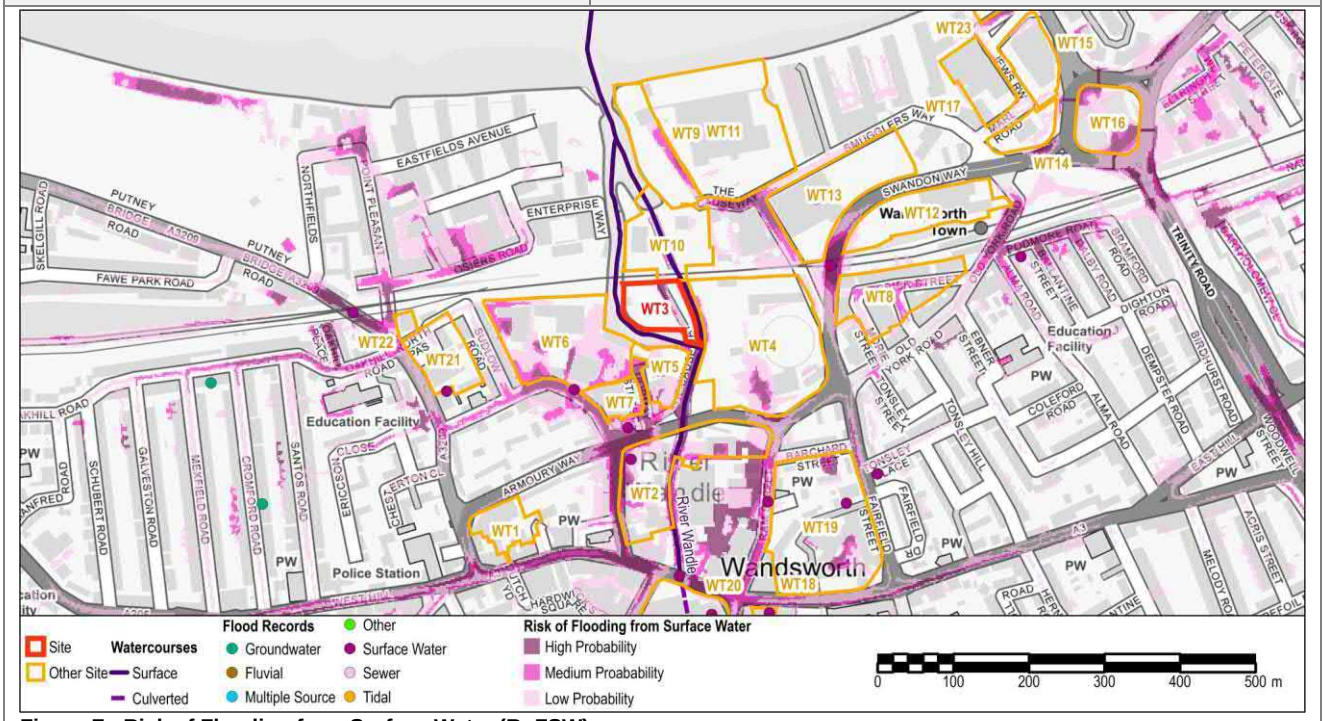

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC3		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the area around the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT3 Causeway Island including land to the east, SW18

Summary

The majority of the site (95%) is defined as Flood Zone 3a High probability of flooding, and the remainder of the site is defined as Flood Zone 3b, Functional Floodplain.

The River Wandle flows north along the east of the site, and the Bell Lane Creek on the west of the site, to join the River Thames approximately 270m north of the site.

Modelling of the River Wandle for the 1% AEP event including 35% allowance for climate change shows that approximately half of the site is at risk of flooding. Flood depths of 0-0.5m are modelled to occur, with hazard rating of Low ('Caution'). The flood level varies from ~4.9-5.0m AOD[1].

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1-1.5m, with flood levels ranging from 5.7-5.9m AOD[1] and a corresponding hazard rating of Significant ('danger for most') on the site, and 1.5-2m depth, Significant hazard rating on Armoury Way ('danger for most') for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on The Causeway road within the site boundary. 15 incidents of surface water flooding have been reported within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (the flood level for the 1% AEP event including 35% and 70% allowances for climate change is 4.9-5.0m AOD).
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2], which in this location is 5.7-5.9m AOD[1].
- The site is located within the Flood Warning Area for River Wandle at Wandsworth and Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.
  • The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- Developments are not appropriate within the functional floodplain 3b unless it is water compatible.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT4 Hunts Trucks, adjoining sites including Gasholder, Armoury Way, SW18

Site ID:	WT4	**Area (ha):**	2.65
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 28%

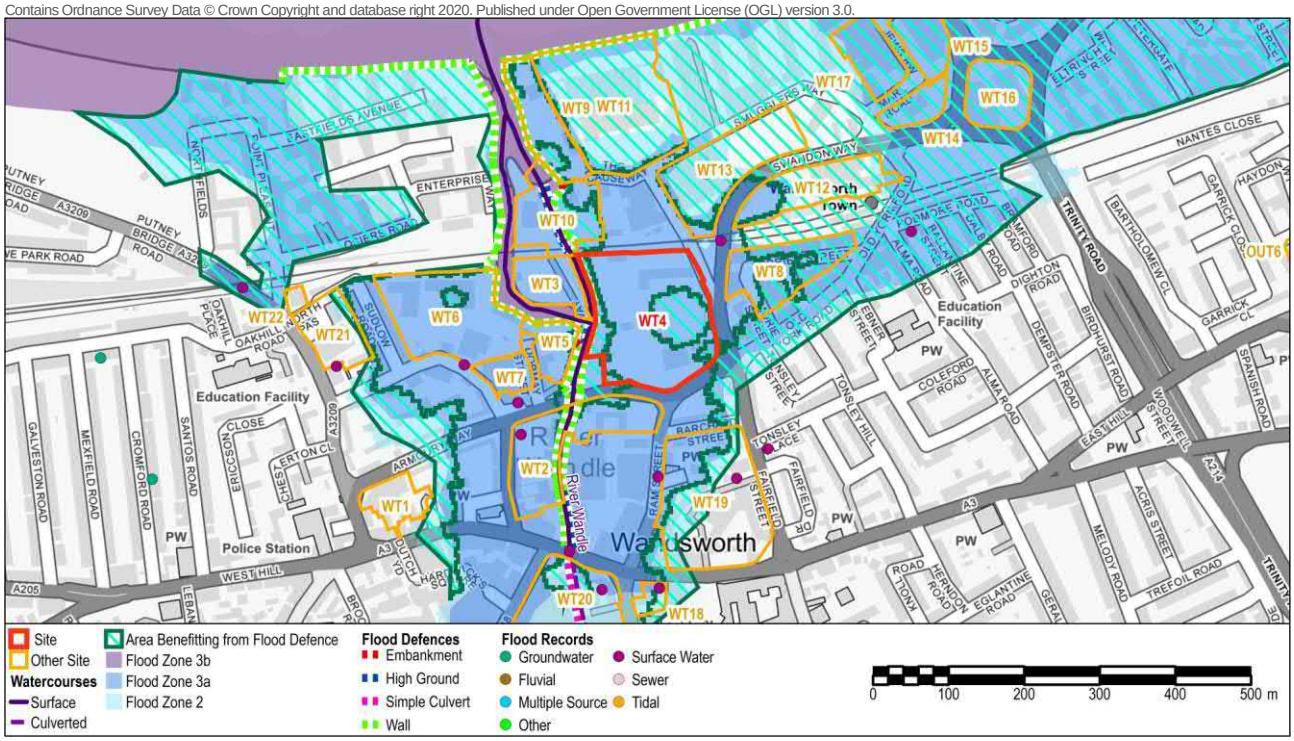

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 15; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

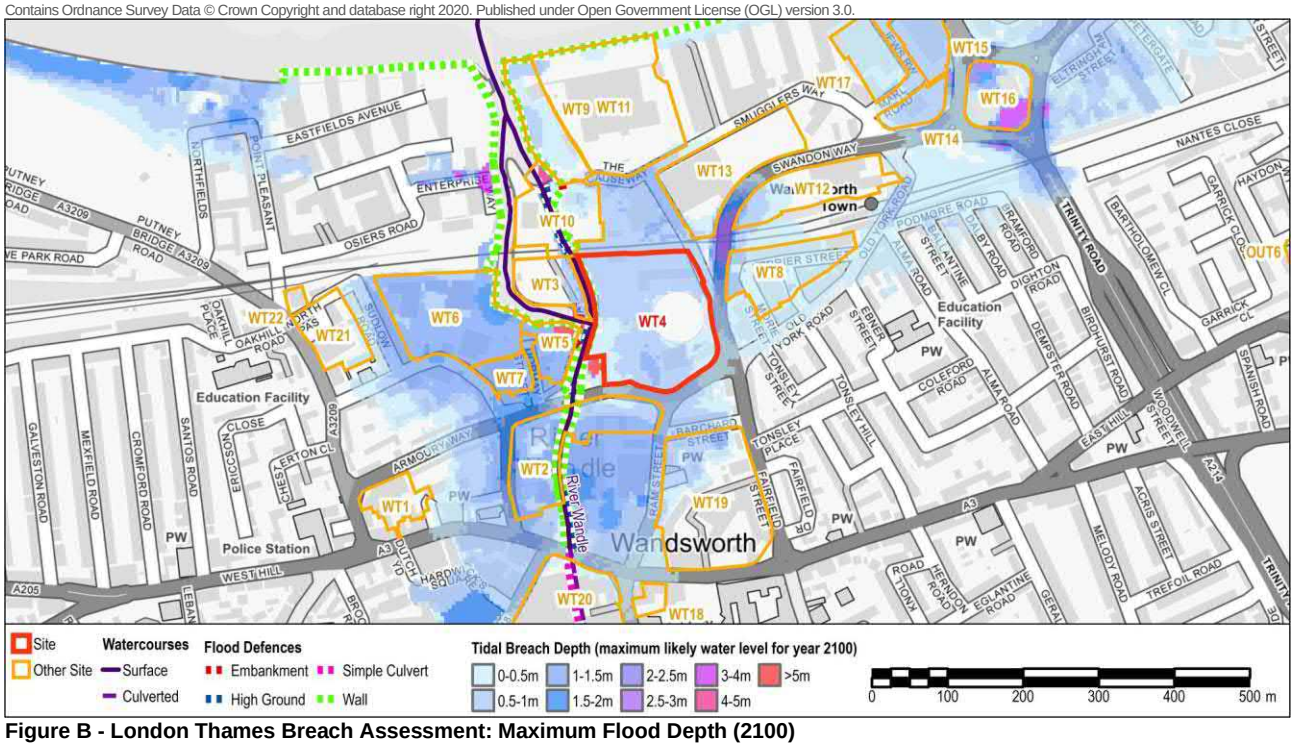

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT4 Hunts Trucks, adjoining sites including Gasholder, Armoury Way, SW18

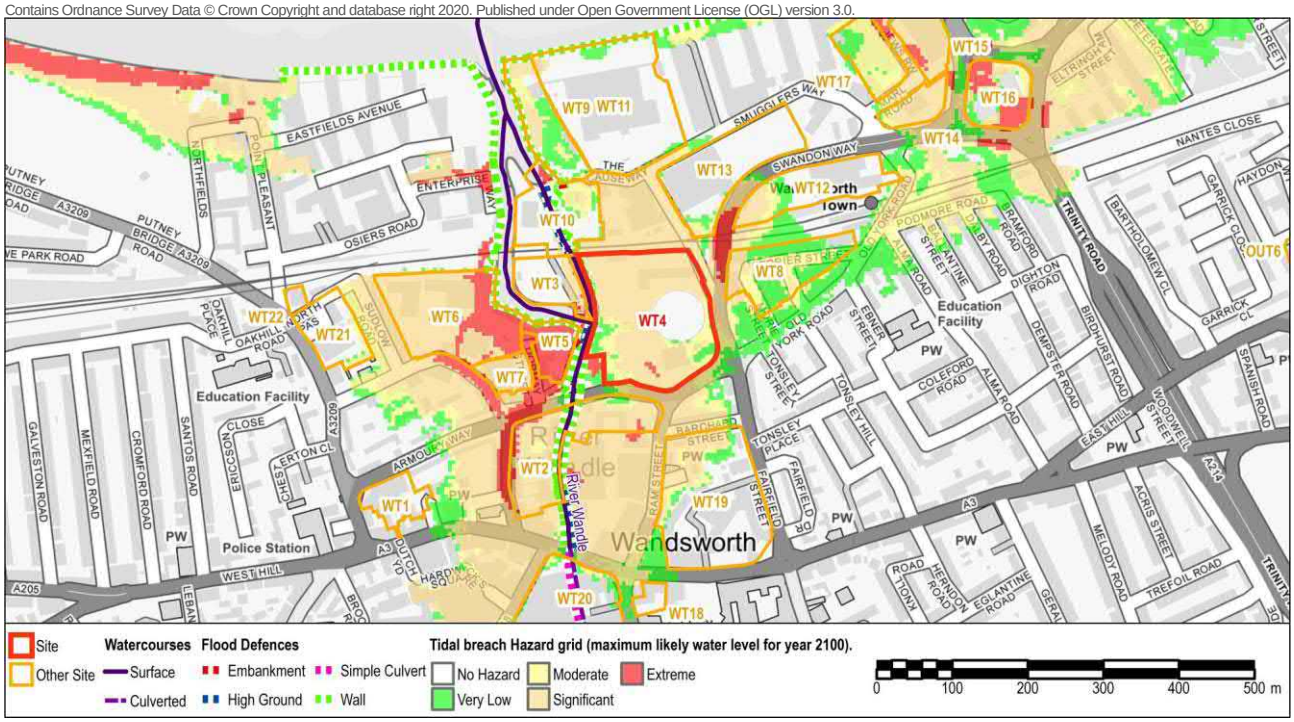

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

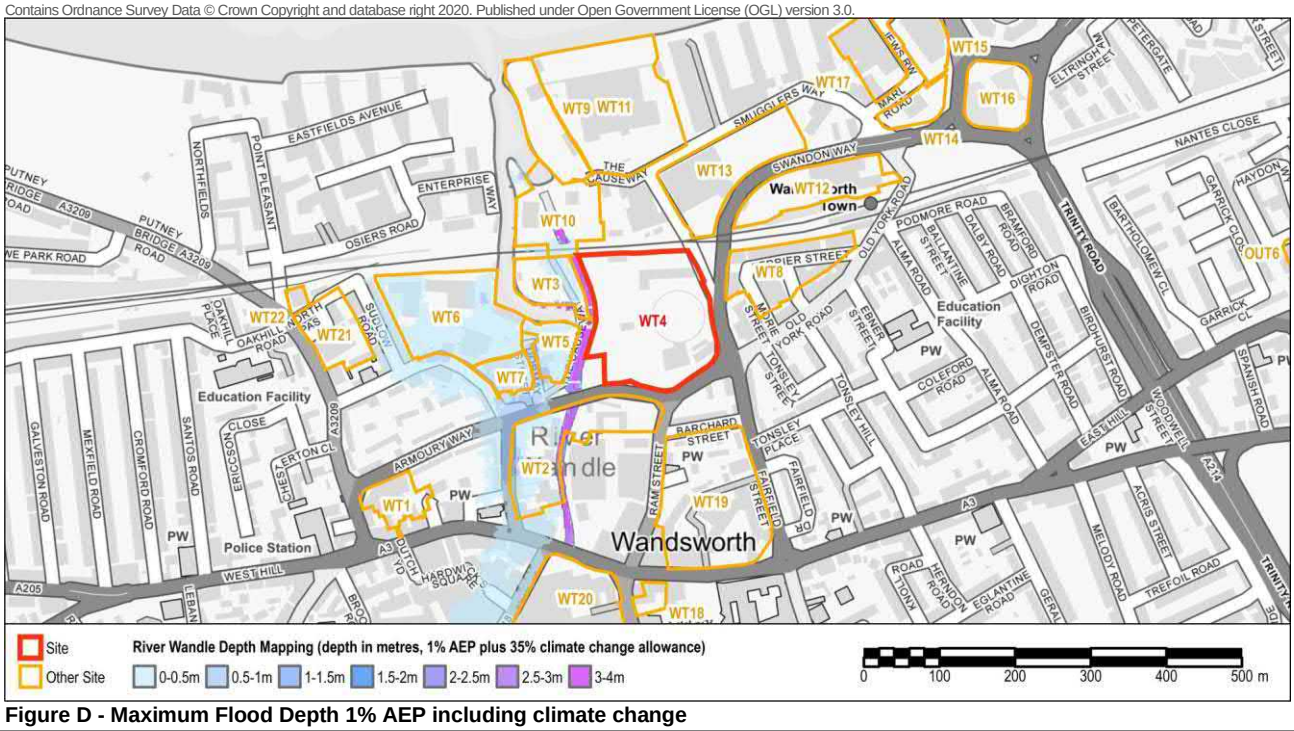

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT4 Hunts Trucks, adjoining sites including Gasholder, Armoury Way, SW18

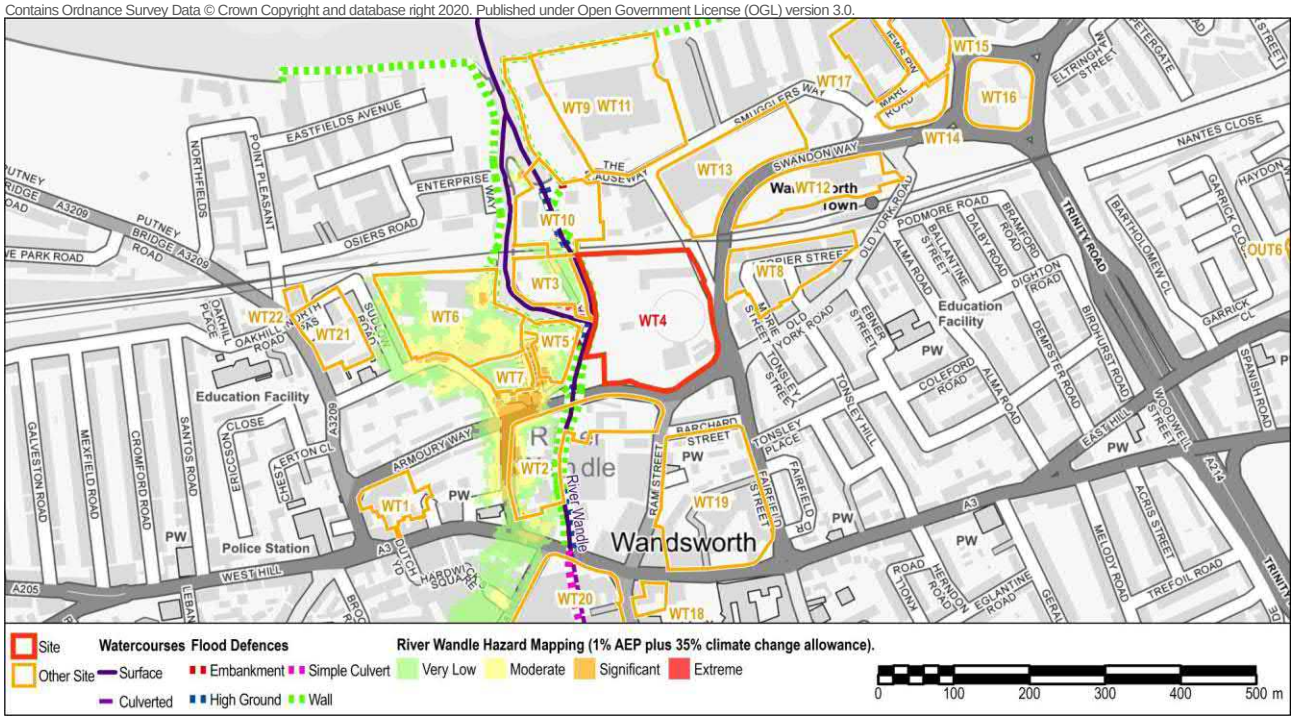

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

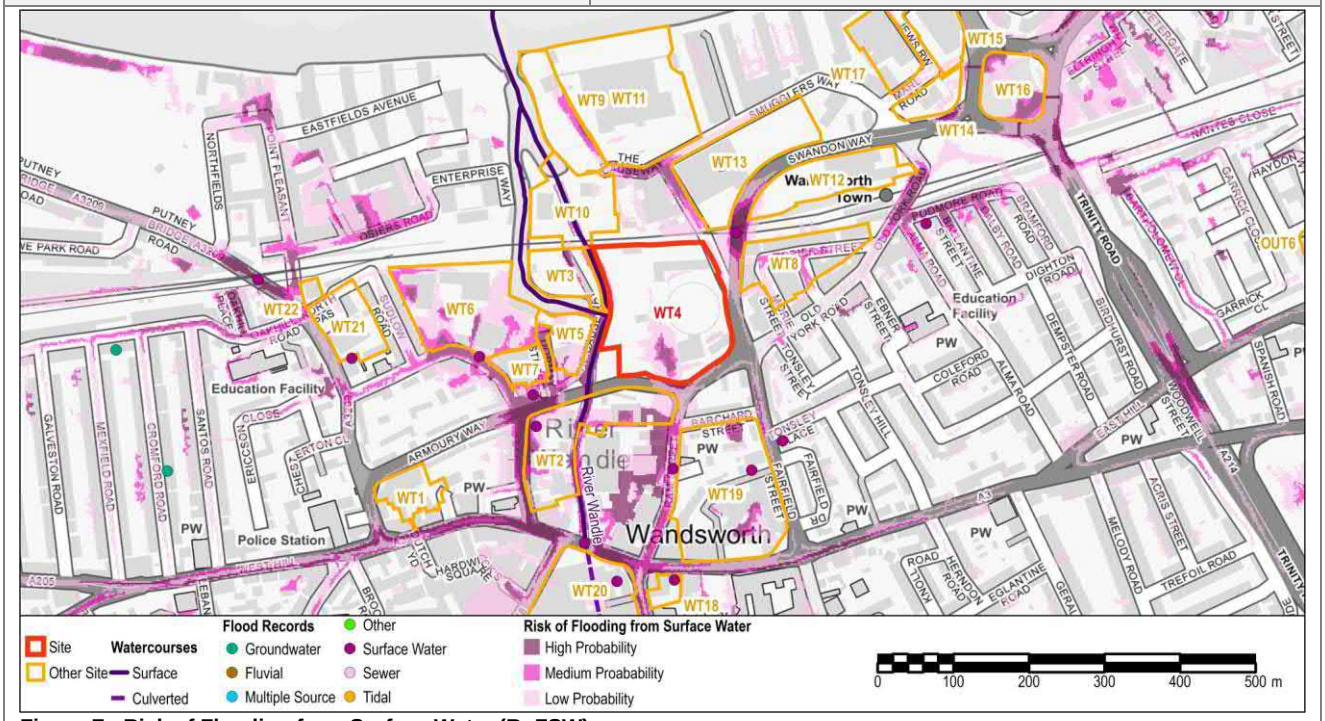

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC3, DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map does not identify the site to be at risk of flooding in the event of a breach or failure of a reservoir.		

Site WT4 Hunts Trucks, adjoining sites including Gasholder, Armoury Way, SW18

Summary

The site is wholly within Flood Zone 3a High probability of flooding. The River Wandle flows north along the western edge of the site and meets the tidal River Thames approximately 300m north of the site.

Modelling of the River Wandle for the 1% AEP event including 35% and 70% allowances for climate change shows that the site is not at risk of flooding. The modelled flood level within the River Wandle adjacent to the site is ~5.02m AOD[1] for both of these modelled events.

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water could inundate the site to a depth of 1.0-1.5m, with a corresponding hazard rating of Extreme ('danger for all'), and 1.5-2m depth, Significant hazard rating on Armoury Way ('danger for most') for the year 2100. Flood levels for this event vary from ~5.73-5.86m AOD[1] on the site.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond towards at the south of the site, and also on Amoury Way to the south of the site. 15 incidents of surface water flooding have been reported within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (5.02m AOD). Sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~5.73-5.86m AOD (for the year 2100)[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for River Wandle at Wandsworth and Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT5 Keltbray site, Wentworth House and adjacent land at Dormay Street, SW18

Site ID:	WT5	**Area (ha):**	0.39
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 6%

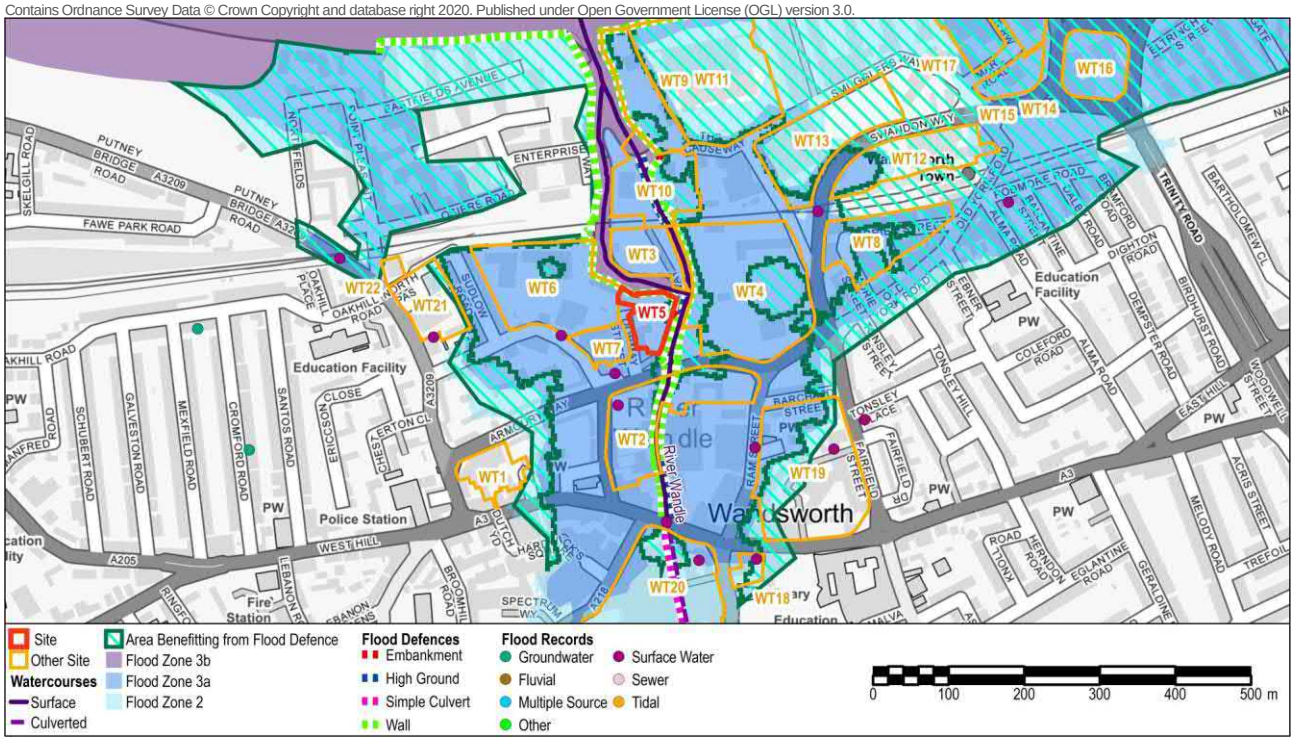

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 15; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

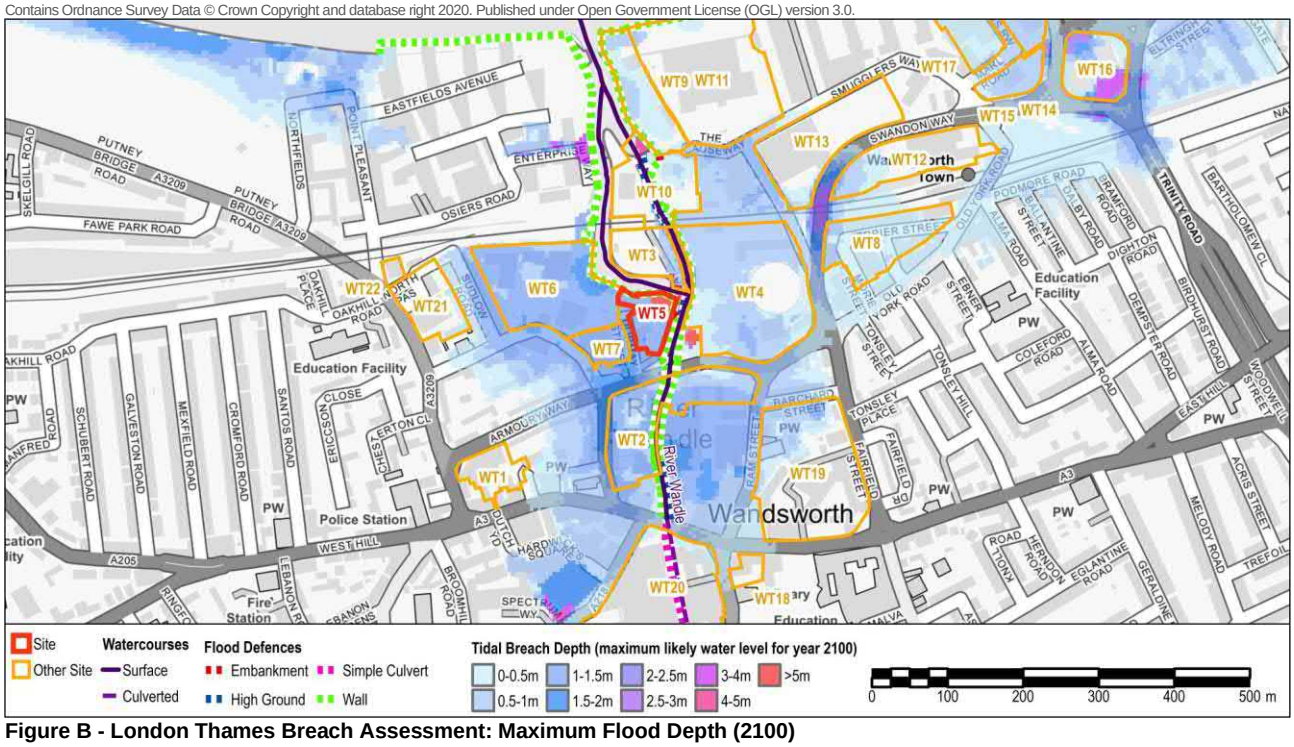

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT5 Keltbray site, Wentworth House and adjacent land at Dormay Street, SW18

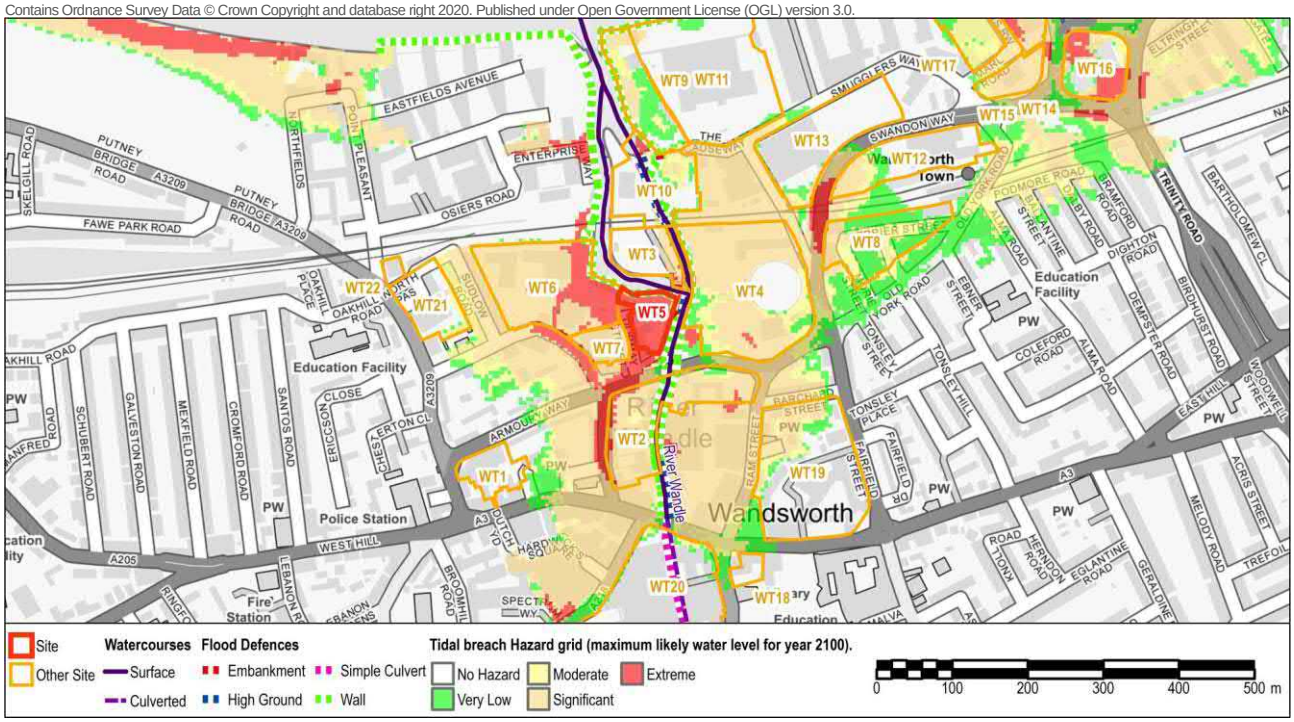

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

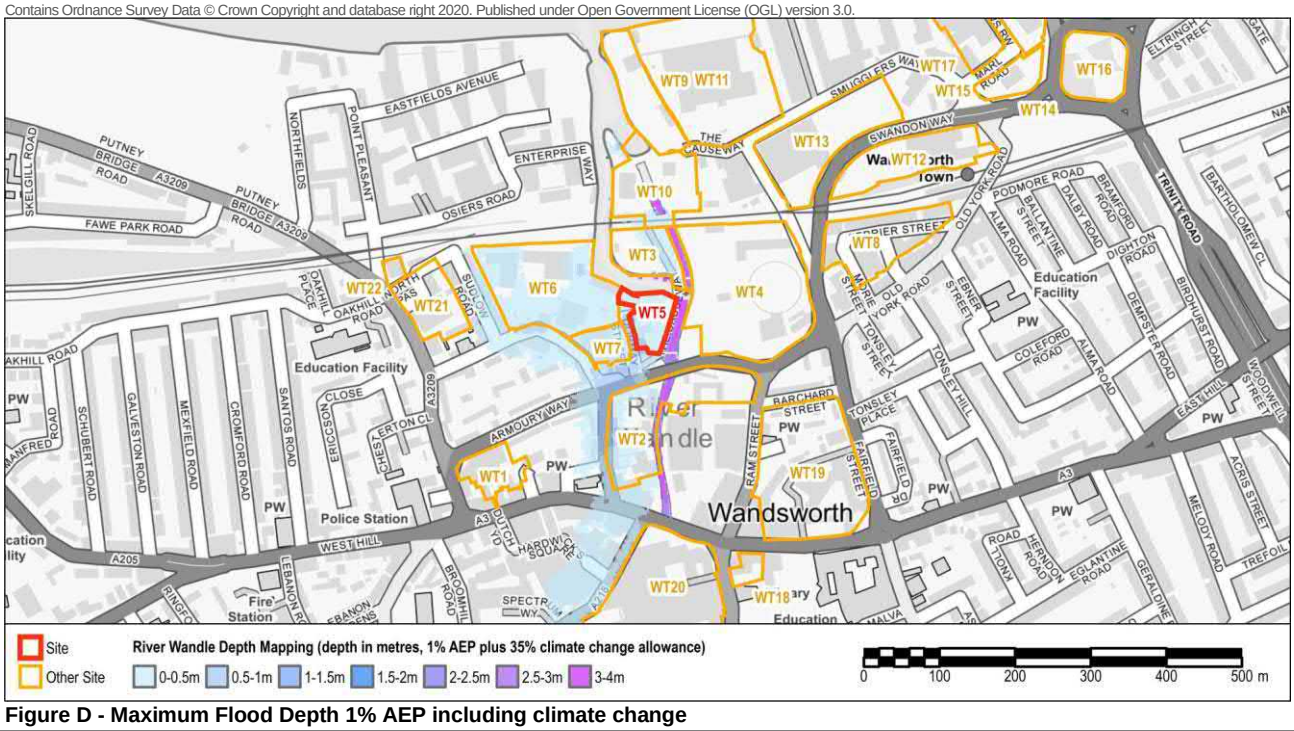

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT5 Keltbray site, Wentworth House and adjacent land at Dormay Street, SW18

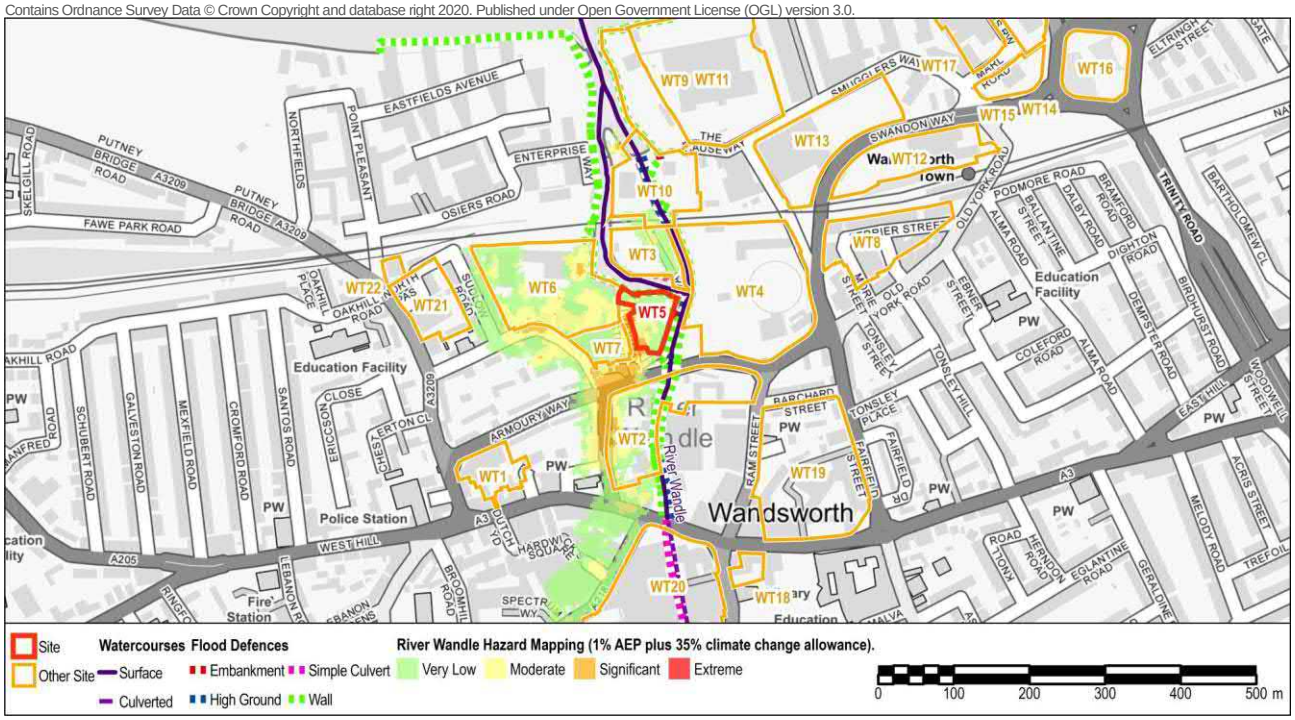

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

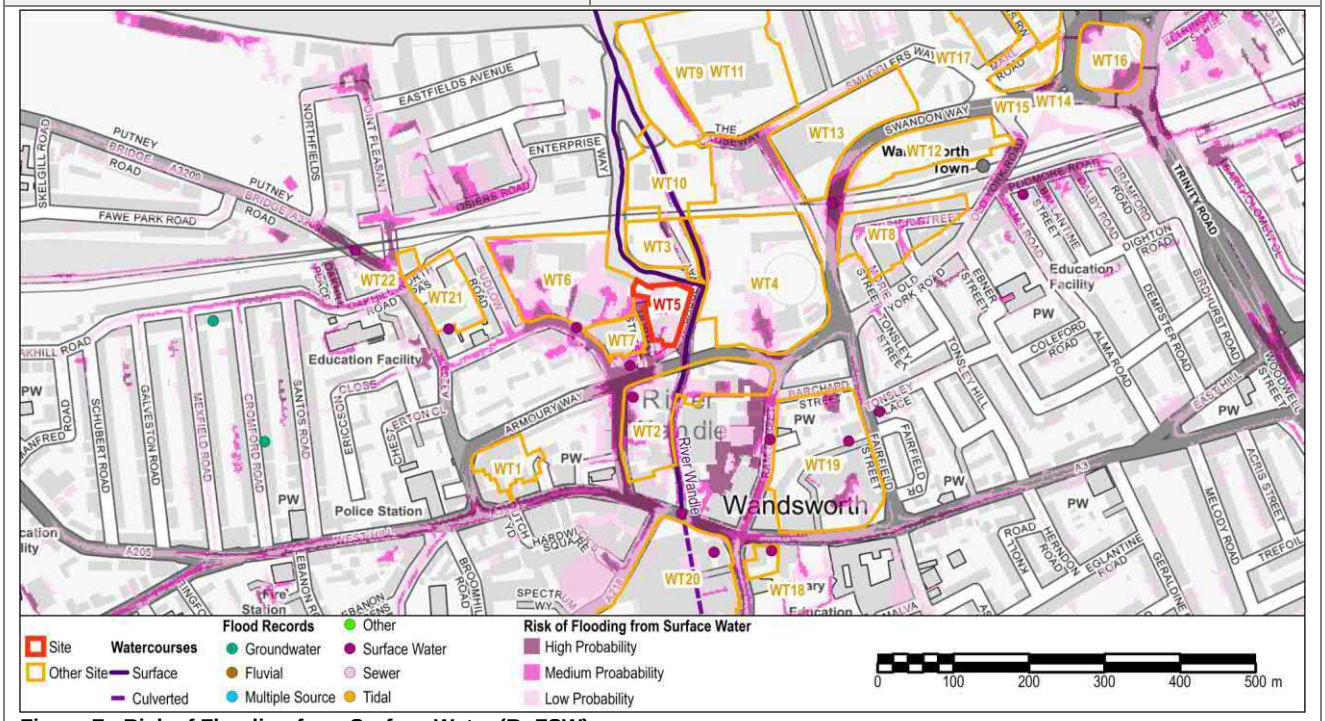

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC6, DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT5 Keltbray site, Wentworth House and adjacent land at Dormay Street, SW18

Summary

The site is located approximately 10m west of the River Wandle and adjacent to the Bell Lane Creek watercourse. The River Wandle meets the tidal River Thames approximately 360m north of the site. The site is defined as Flood Zone 3a High probability of flooding.

The site is modelled to be at increasing risk of flooding from the River Wandle when considering the impact of climate change. During the modelled 1% AEP event including 35%, climate change, 81% of the site is at risk of flooding. The River Wandle Flood Depth Mapping indicates flood water would inundate the site to a depth of 0.5-1.0m[1], with a corresponding hazard rating of Significant ('danger for most'). The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water could inundate the site to depths of 1-1.5m[1], and as much as 5m in the north eastern part of the site, for the year 2100. The hazard rating across the site is Extreme ('danger for all') on the site. Depths of 1.5-2m, and Extreme hazard rating ('danger for all') are modelled to occur on Armoury Way to the south of the site.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond towards at the south of the site, and also on Amoury Way to the south of the site. 15 incidents of surface water flooding have been reported within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding of property below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (4.79m AOD[1] for the 1% AEP including 35% CC[2]).
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2] (5.81-5.96m AOD[1]).
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- The site is located within the Flood Warning Area for Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT6 Frogmore Depot, Dormay Street, SW18

Site ID:	WT6	**Area (ha):**	1.78
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 5%

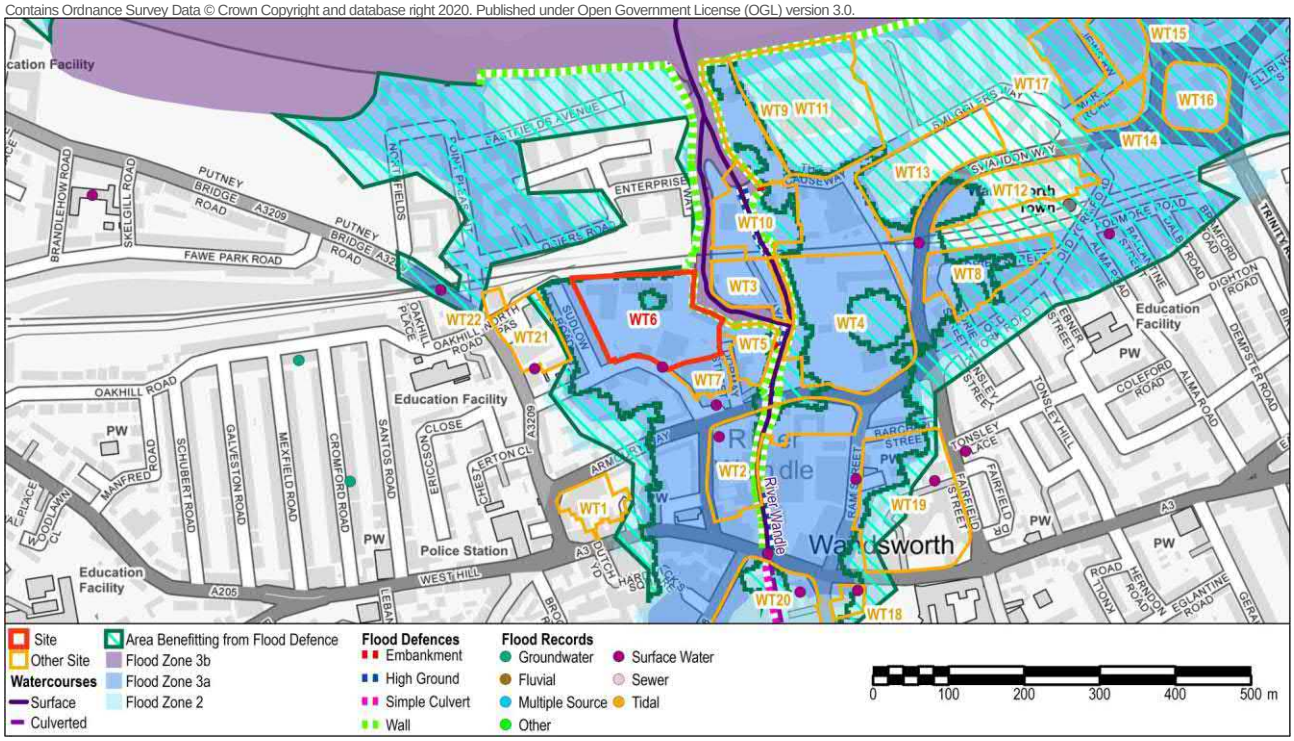

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 14; Groundwater 2; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

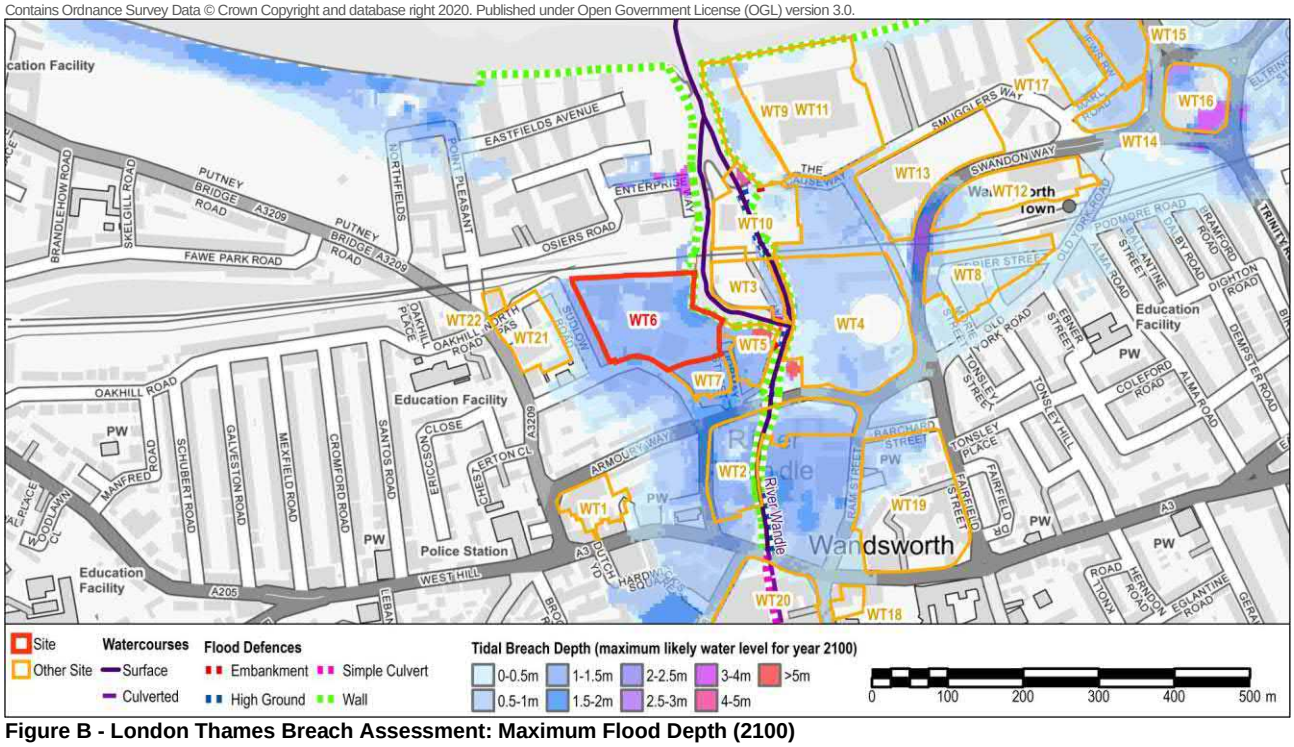

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT6 Frogmore Depot, Dormay Street, SW18

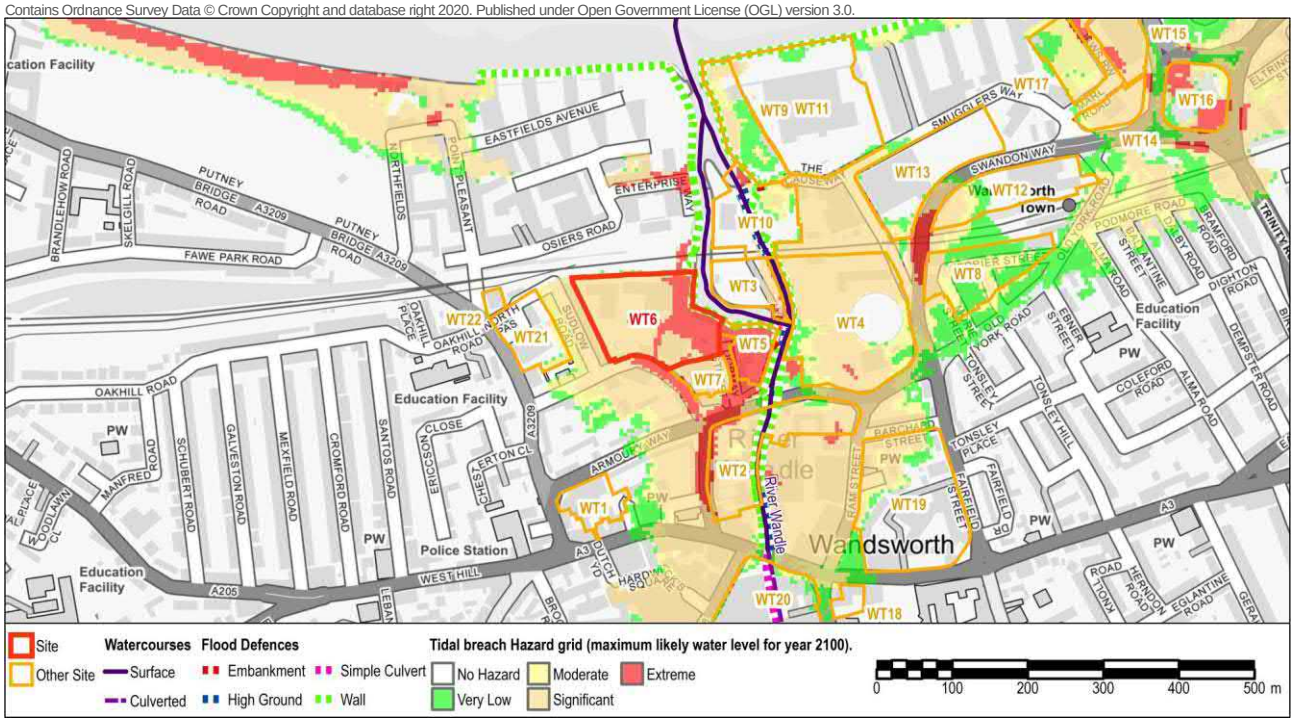

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

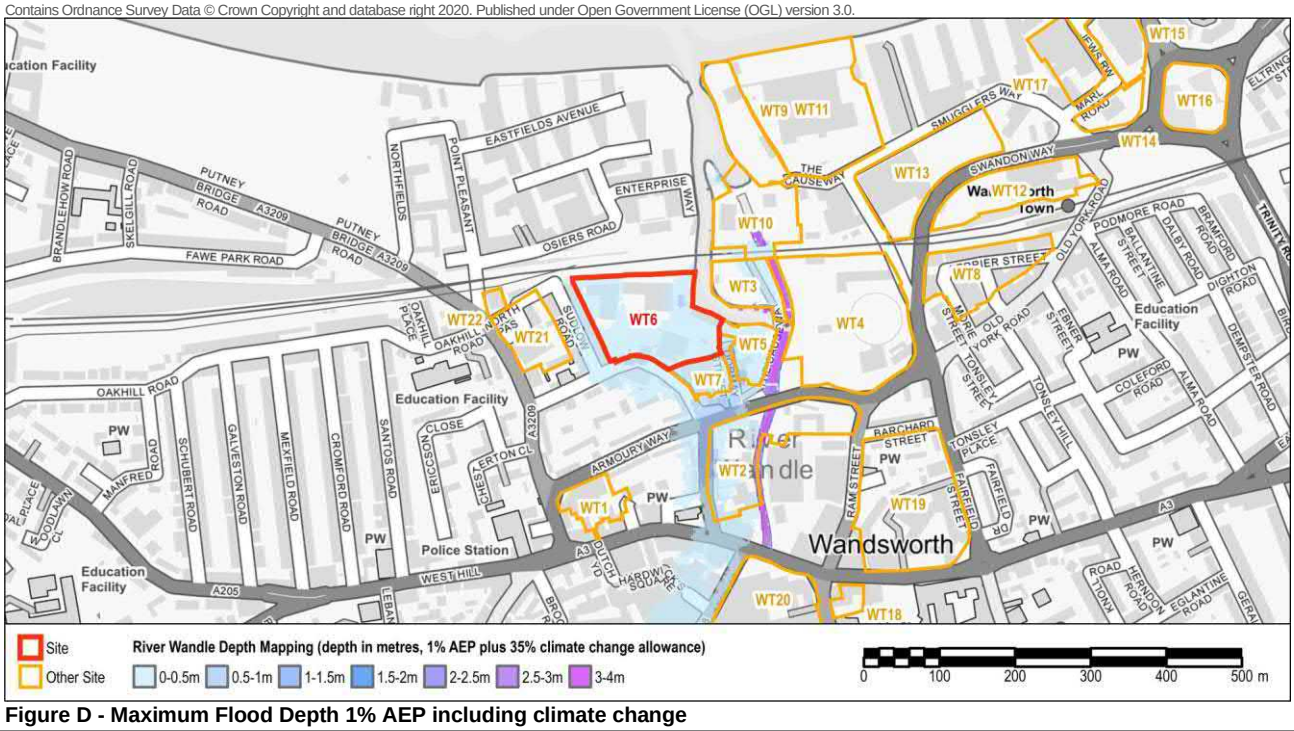

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT6 Frogmore Depot, Dormay Street, SW18

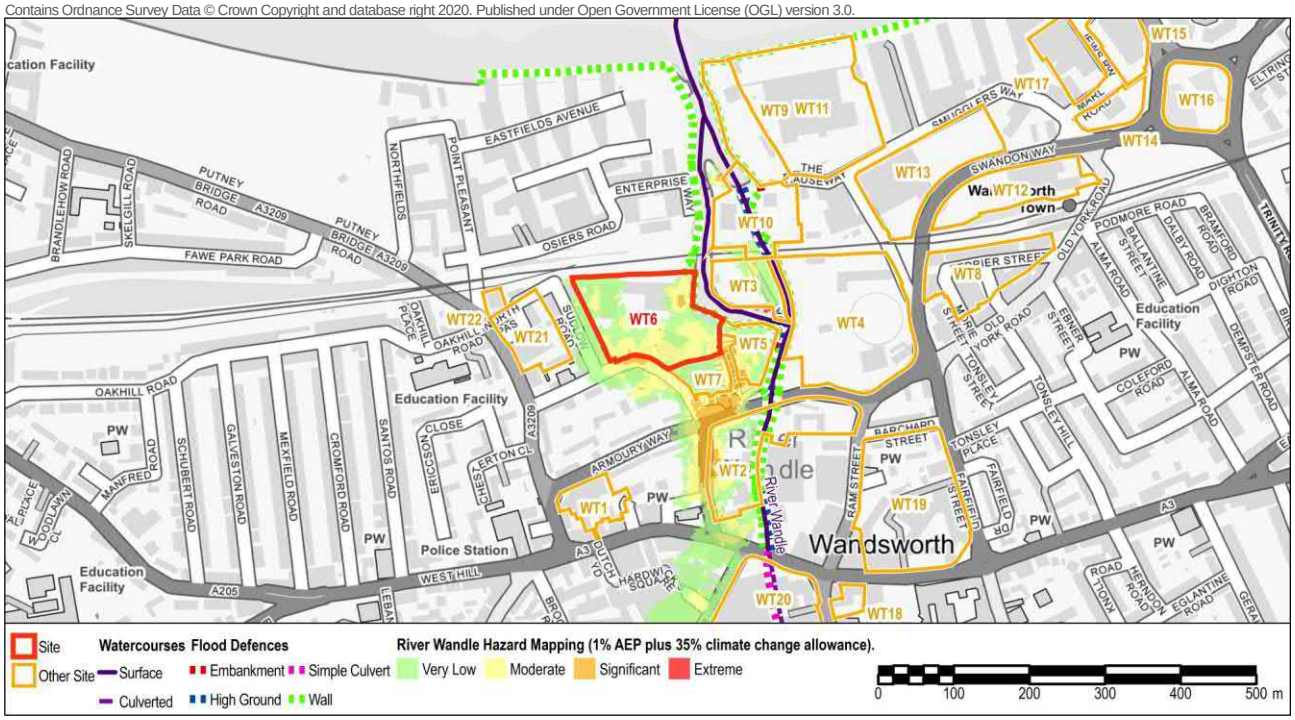

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

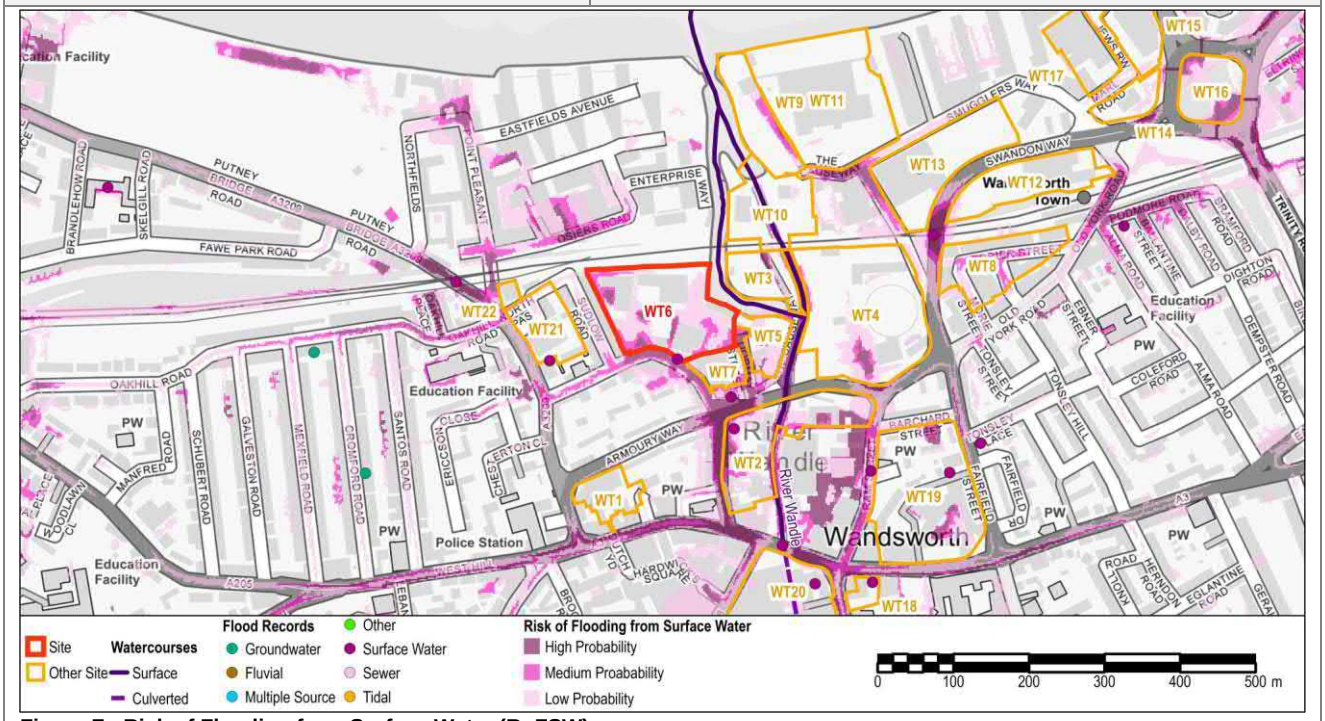

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC6		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT6 Frogmore Depot, Dormay Street, SW18

Summary

The Bell Lane Creek River Wandle flows north along the eastern edge of the site. the east and north of the site. The site is defined as Flood Zone 3a High probability of flooding.

Modelling shows that the site is at risk of flooding from the River Wandle. During the modelled 1% AEP event including 35%, climate change, 75% of the site is at risk of flooding. The depth mapping indicates flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most'). The flood levels on the site are ~4.79m AOD[1] for the 1% AEP event including 35% allowance for climate change, increasing to ~5.80m AOD[1] for the 1% AEP event including 70% allowance for climate change.

The River Wandle meets the tidal River Thames approximately 280m north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1.5-2.0m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 1.5-2.0m depth, Extreme hazard rating on Frogmore and Armoury Way ('danger for all') for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site, and also on Frogmore located south to the site. Broadscale mapping suggests there are 14 reported incidents of surface water flooding within 500m of the site.

There are 2 reported incidents of groundwater flooding within 500m of the site.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (4.79m AOD[1] for the 1% AEP including 35% climate change allowance[2]).
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change (5.81-5.96m AOD).
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change[2]. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- The site is located within the Flood Warning Area for Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT7 Panorama Antennas, 61 Frogmore, SW18

Site ID:	WT7	**Area (ha):**	0.29
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 0%

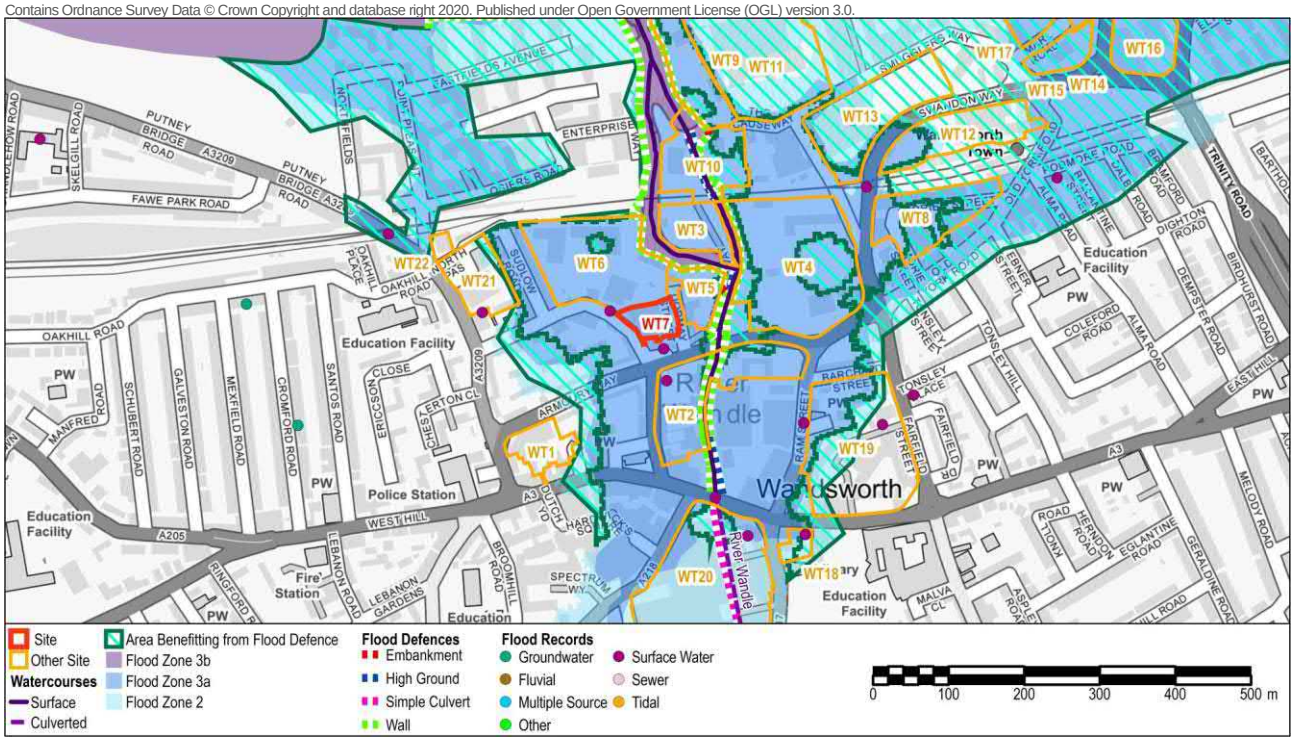

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 14; Groundwater 2; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

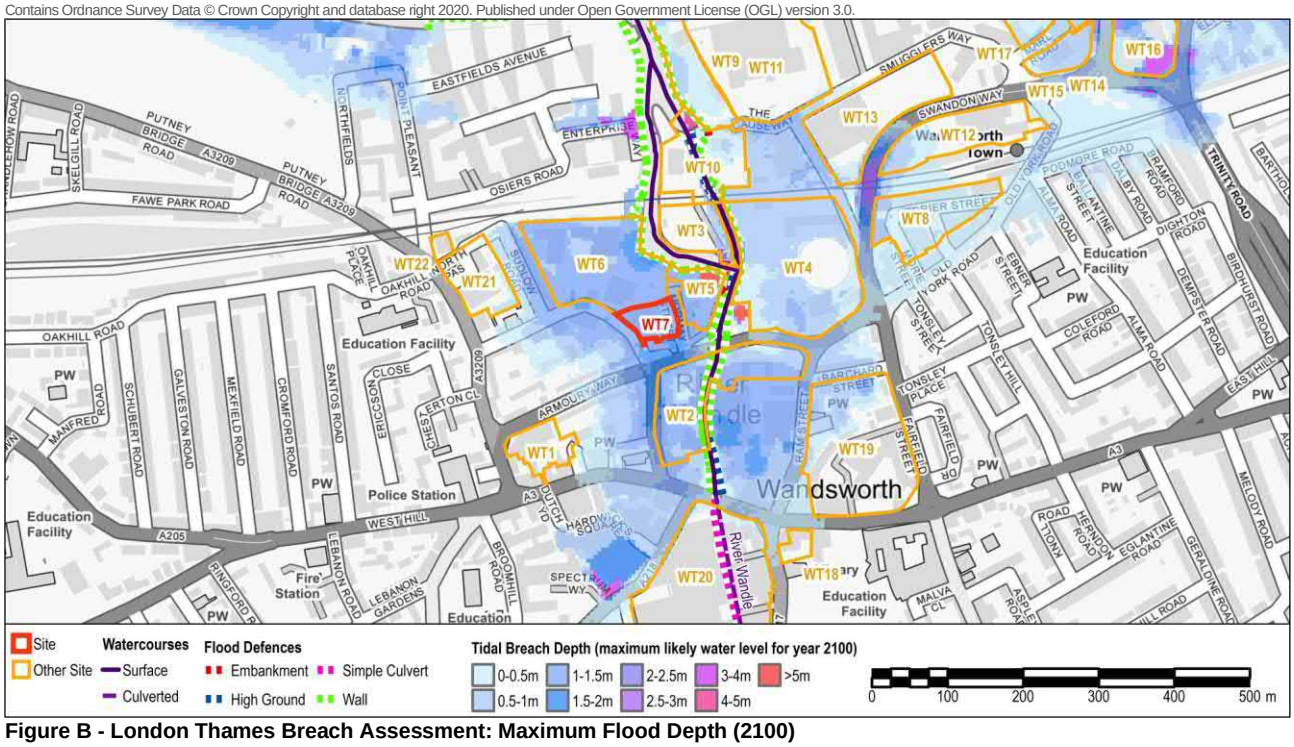

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT7 Panorama Antennas, 61 Frogmore, SW18

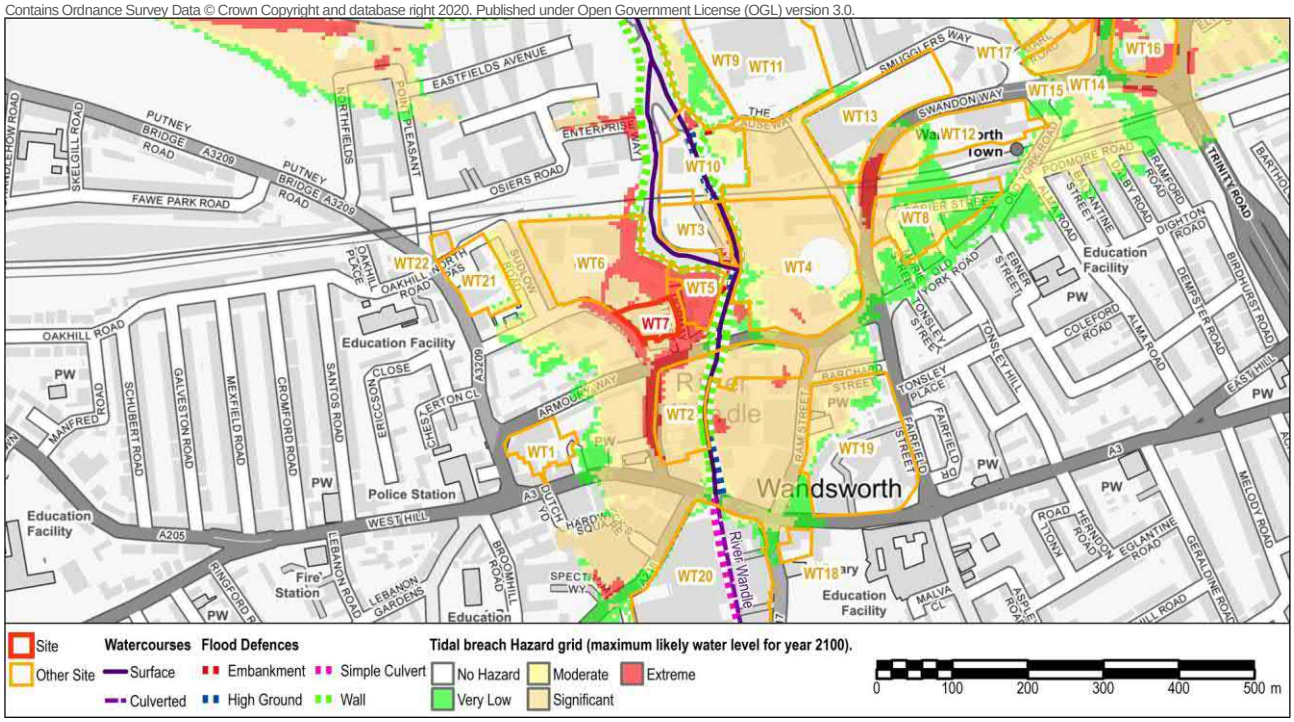

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

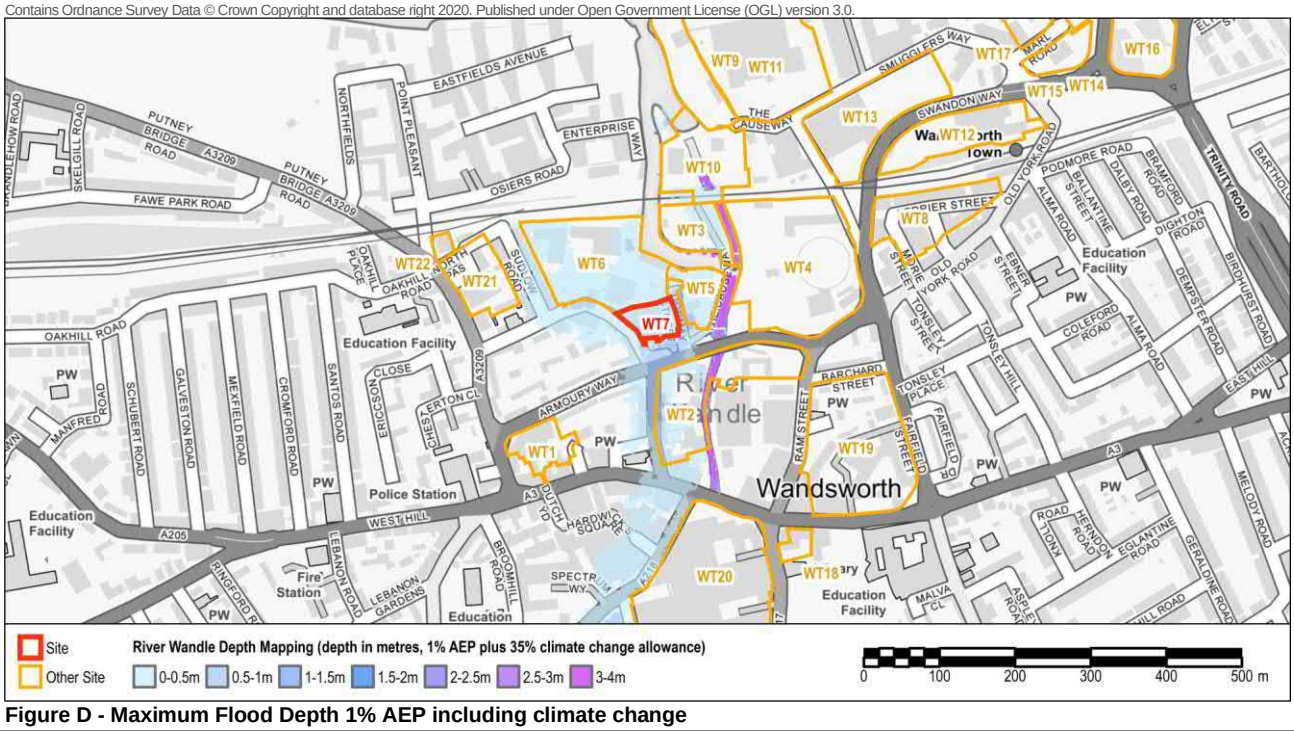

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT7 Panorama Antennas, 61 Frogmore, SW18

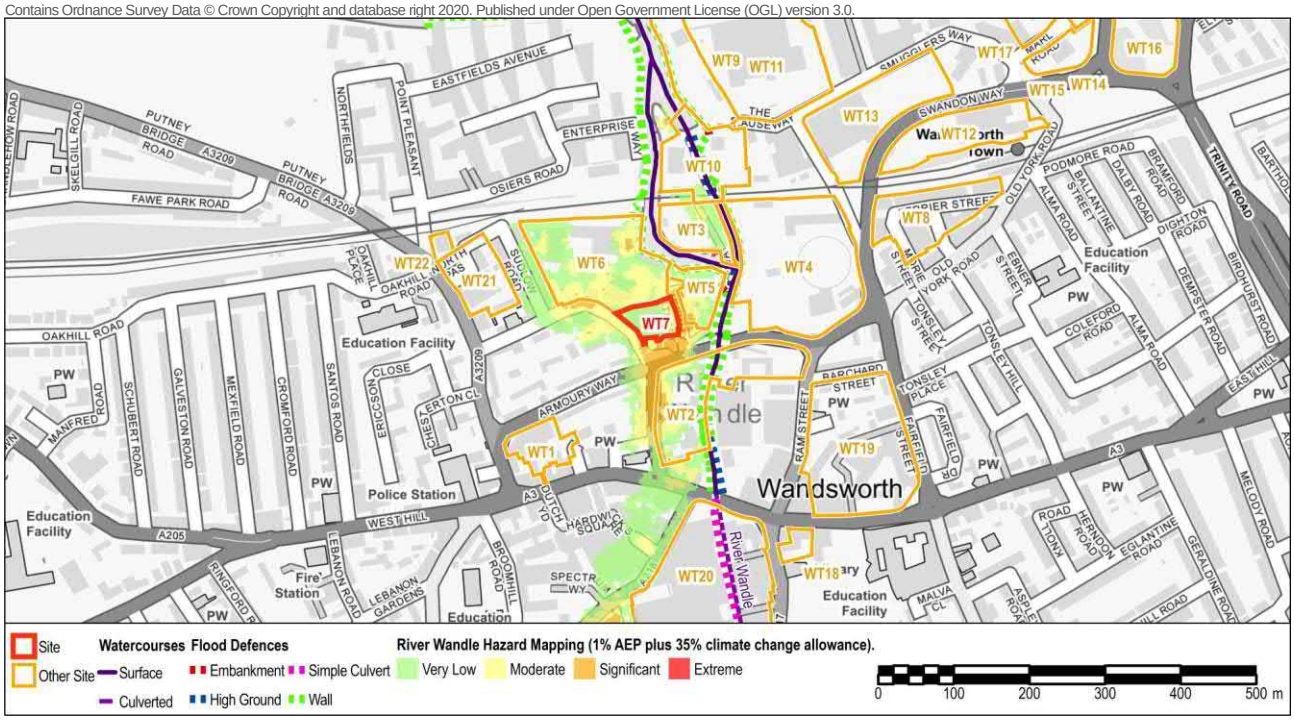

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

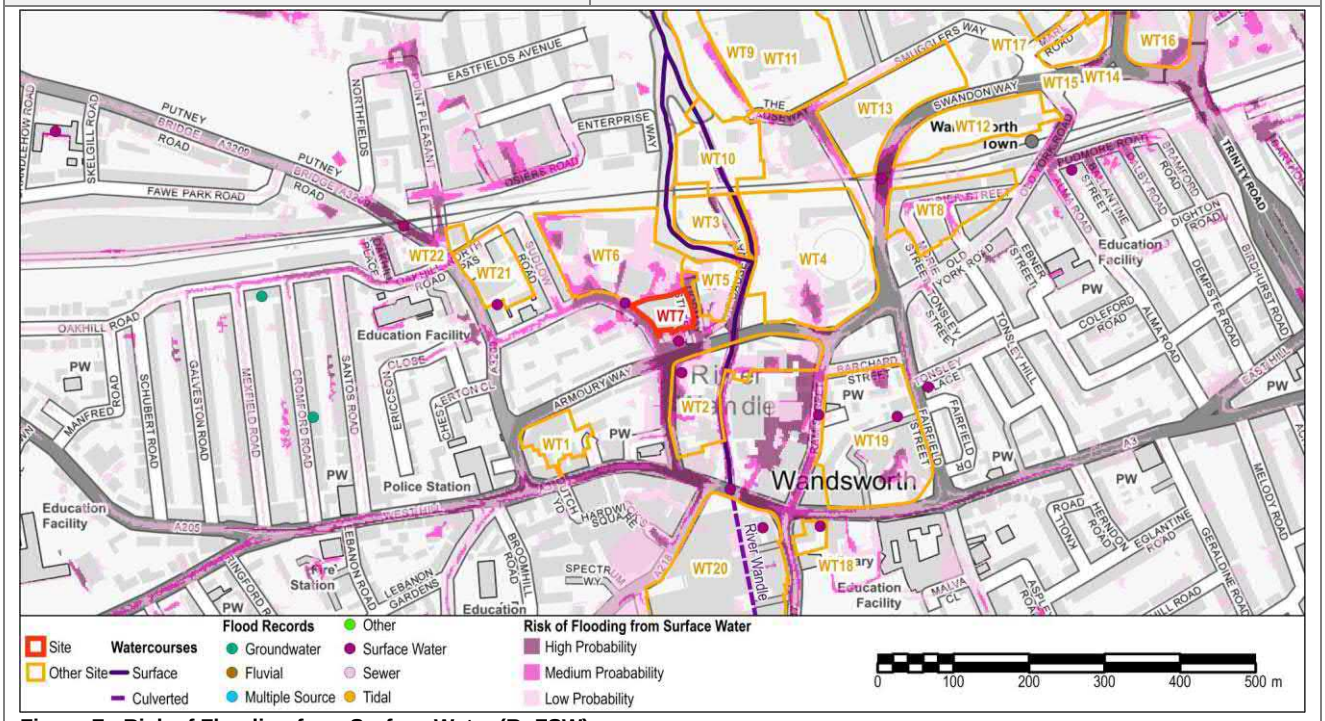

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC6		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Limited potential for groundwater flooding to occur.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		No	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT7 Panorama Antennas, 61 Frogmore, SW18

Summary

The River Wandle is located approximately 120m east of the site and flows north where it divides into the Wandle and Bell Lane Creek, which both flow to meet the tidal Thames mately 420m north of the site. The site is wholly within Flood Zone 3a High probability of flooding from river and/or the sea (tidal sources).

Modelling of the River Wandle shows that most of the site (89%) is at risk of flooding during the 1% AEP event including 35% allowance for climate change. The depth mapping indicates flood water would inundate the site to a depth of 0.5m, with a corresponding hazard rating of Moderate ('danger for some'). The flood level on the site for the 1% AEP event including 35% allowance for climate change is ~4.79m AOD[1]. The flood level on the site for the 1% AEP event including 70% allowance for climate change is ~5.80m AOD[1].

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 1.0-1.5m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and 1.5-2.0m depth, Extreme hazard rating on Armoury Way ('danger for all') for the year 2100. The flood level for this event on the site is 5.79m AOD for the year 2100[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond at the south of the site, and also on Frogmore, Dormay Street and Armoury Way adjacent to the site. There are 14 reported incidents of surface water flooding within 500m of the site.

There are 2 reported incidents of groundwater flooding within 500m of the site.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (4.79m AOD[1] for the 1% AEP including 35% CC[2]).
- Finished floor levels for sleeping accommodation should be set above the extreme tidal water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~5.79m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme tidal water level including an allowance for climate change[2].
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- The site is located within the Flood Warning Area for River Wandle at Wandsworth and Tidal Thames From Wandsworth Bridge To Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT8 Ferrier Street Industrial Estate, Ferrier Street, SW18

Site ID:	WT8	**Area (ha):**	1.01
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 1%	**Flood Zone 3 (1% AEP):** 99%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 58%

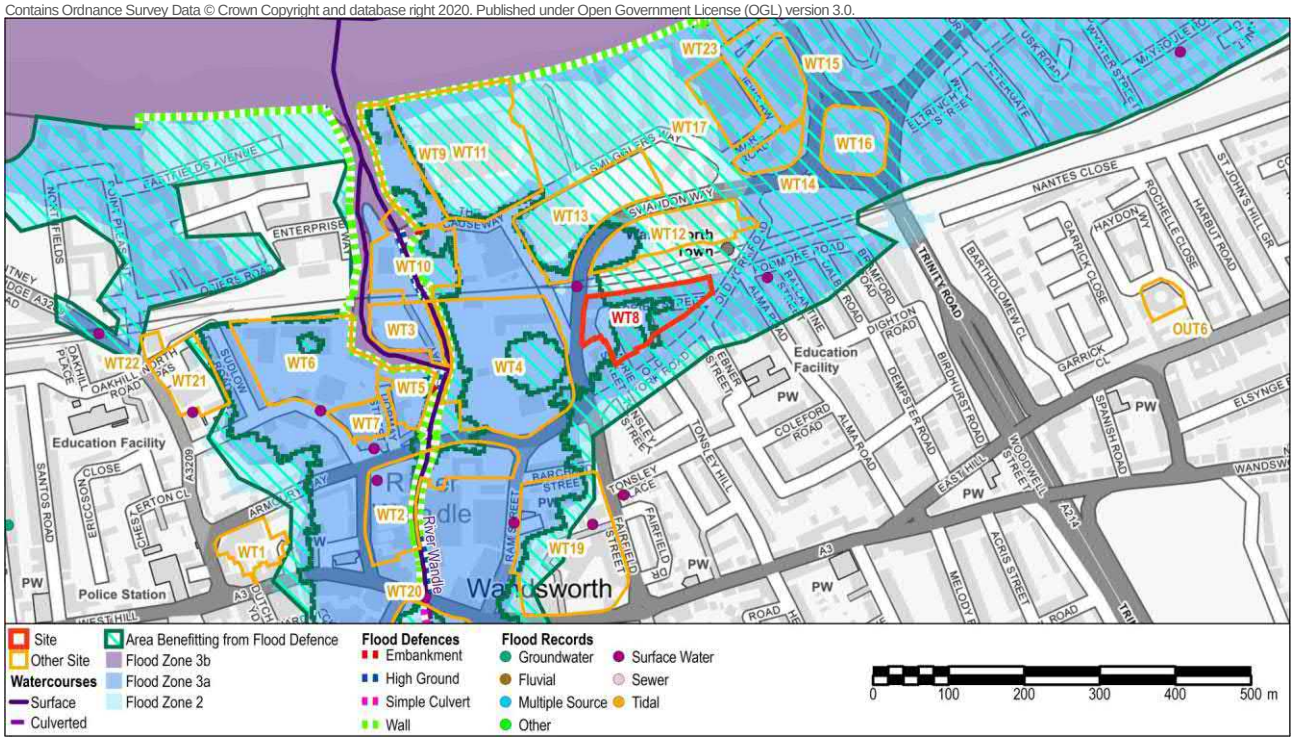

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 13; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

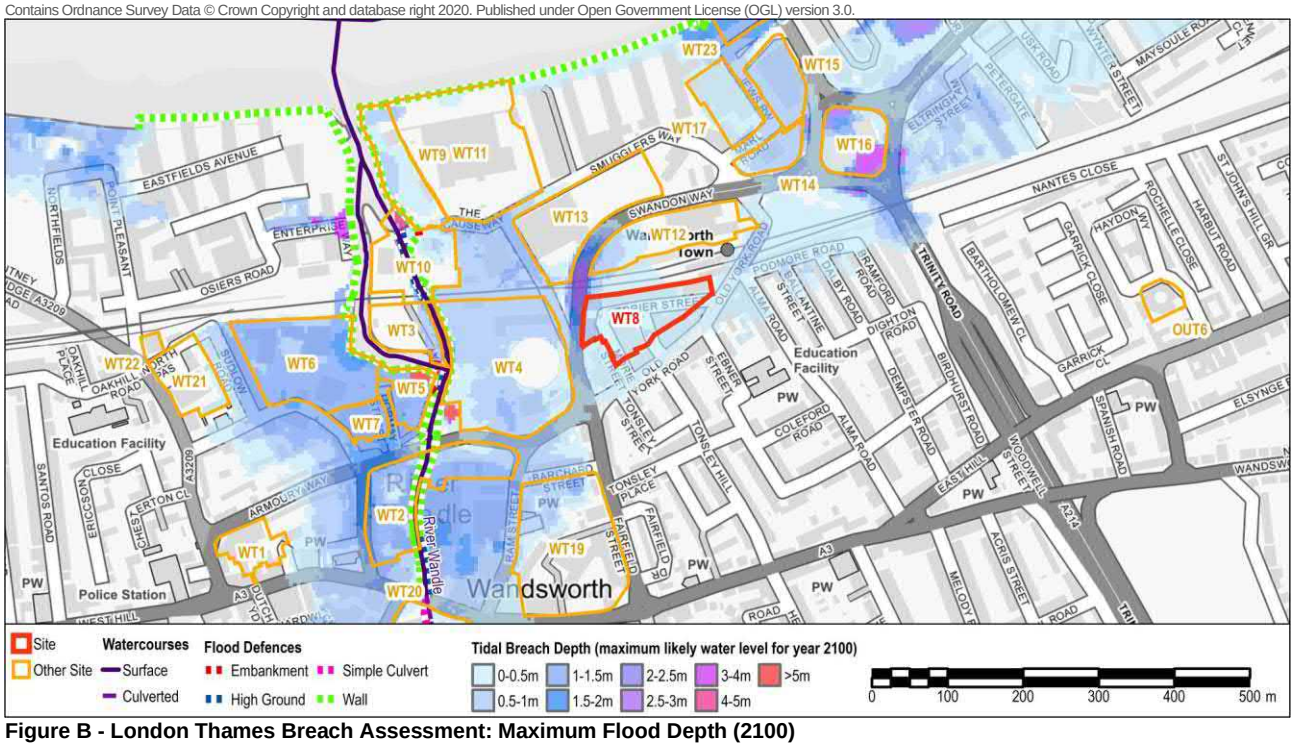

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT8 Ferrier Street Industrial Estate, Ferrier Street, SW18

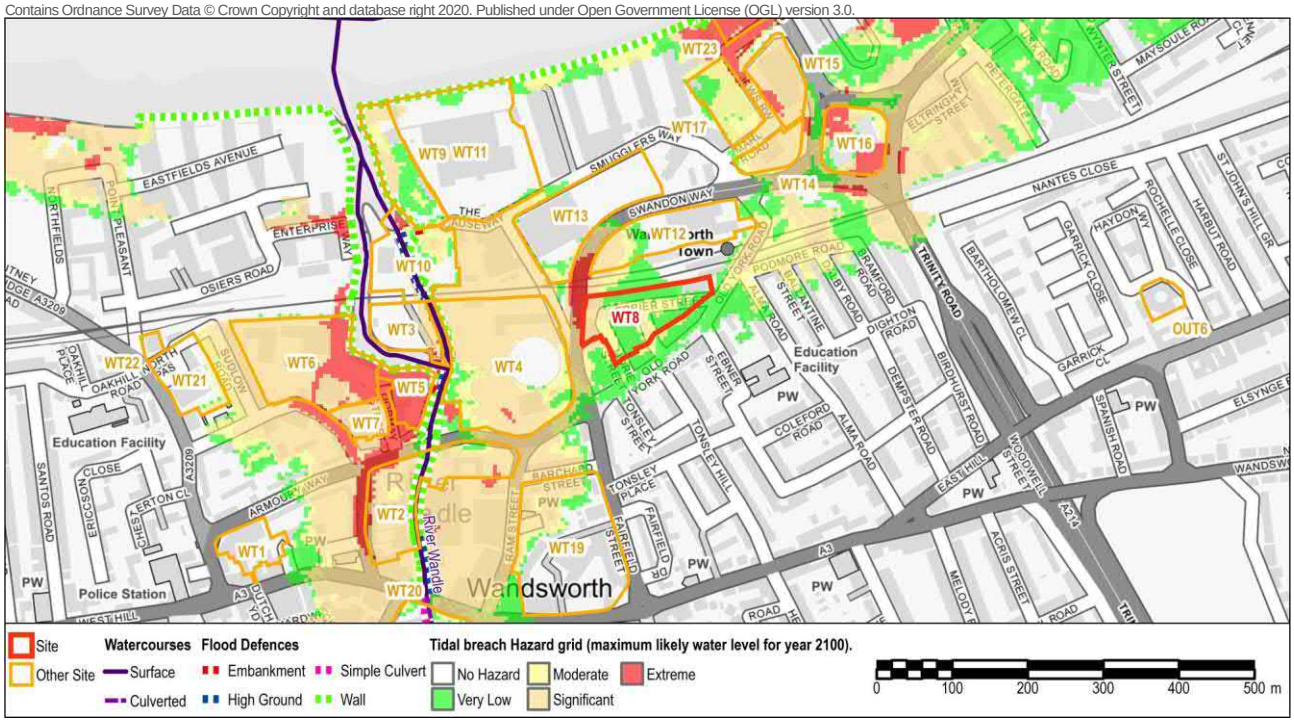

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

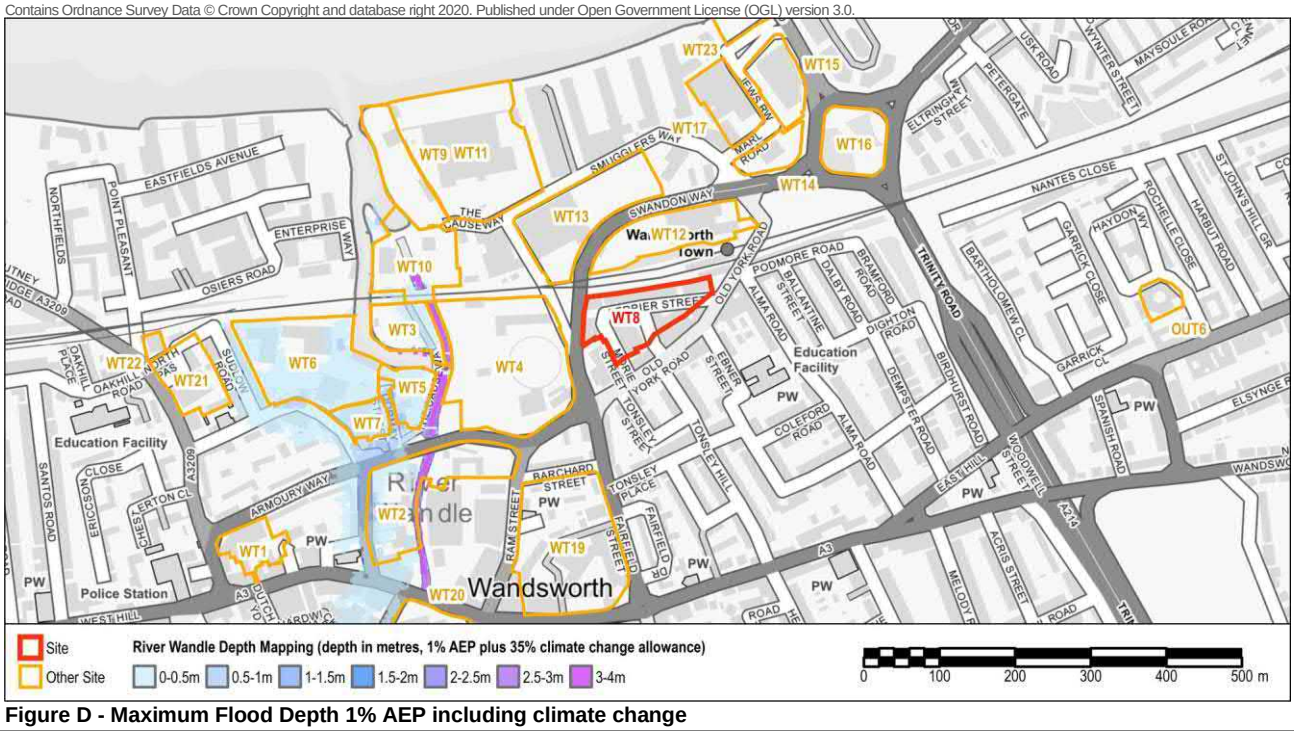

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT8 Ferrier Street Industrial Estate, Ferrier Street, SW18

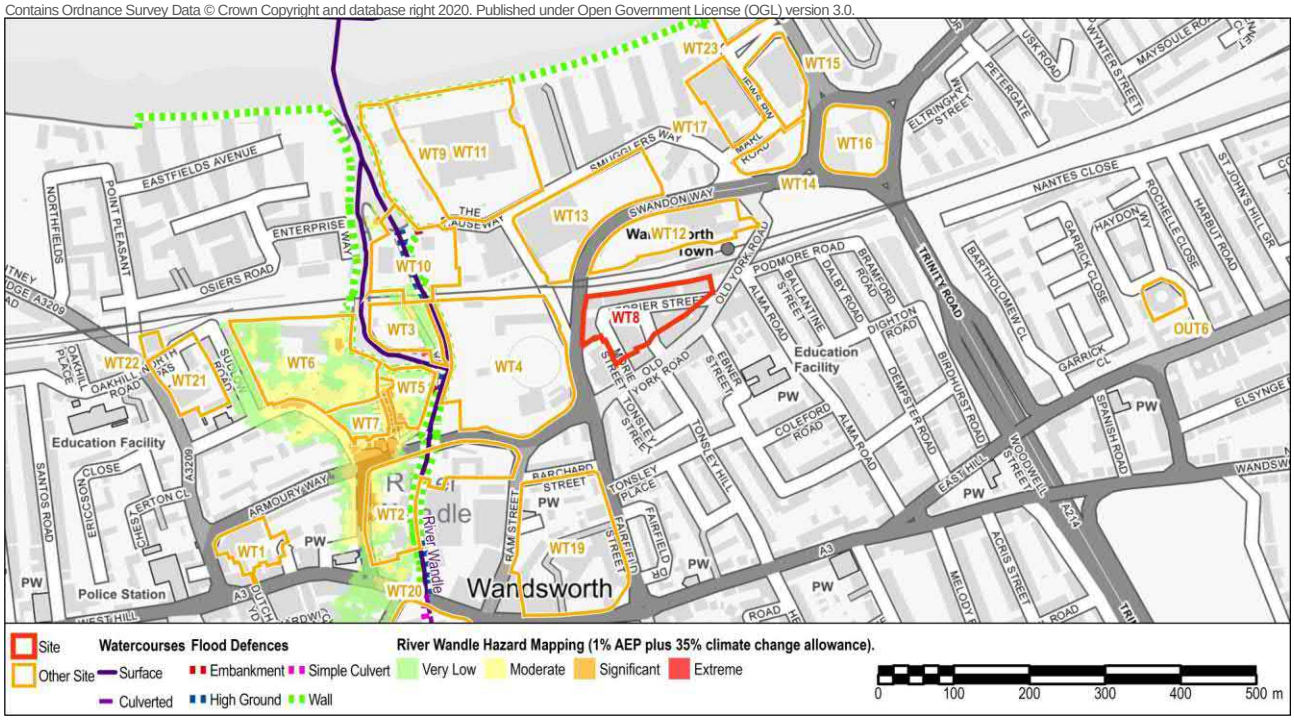

Figure E - Maximum Flood Hazard 1% AEP including climate change

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

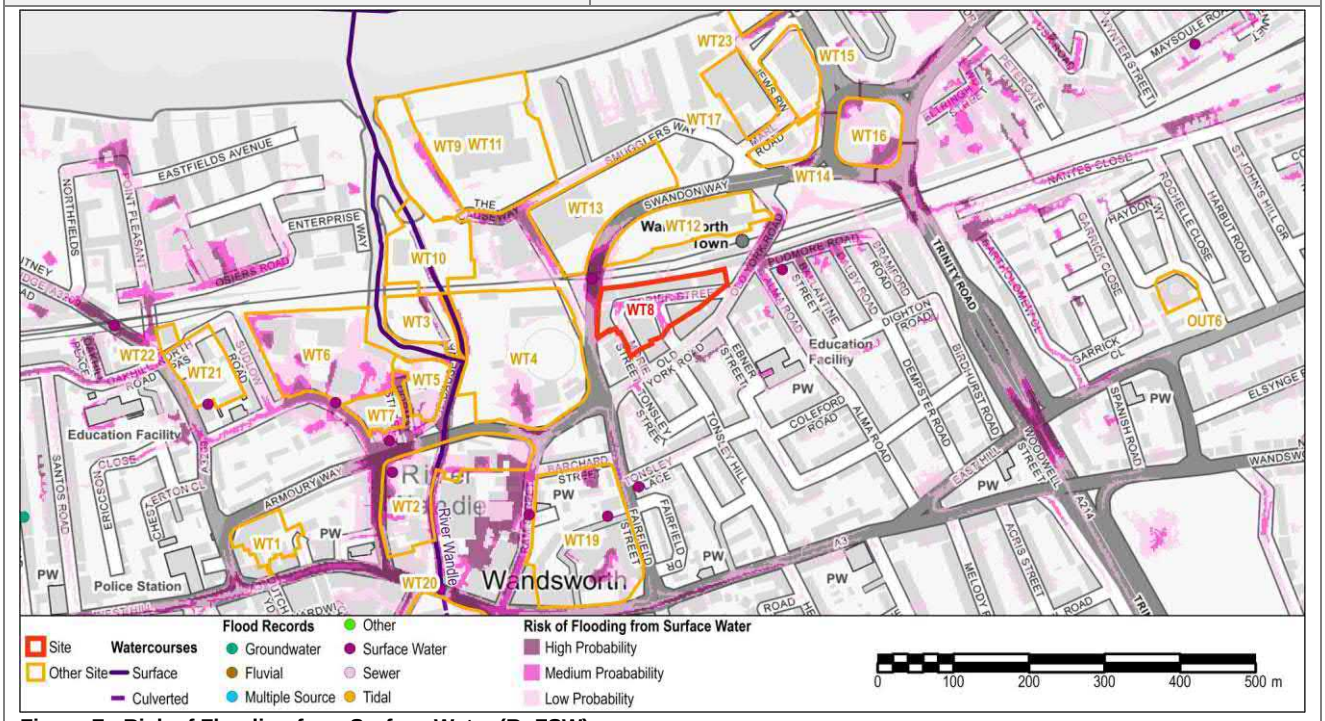

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]		
Drainage Catchment	DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT8 Ferrier Street Industrial Estate, Ferrier Street, SW18

Summary

The River Wandle is located approximately 280m west to the site and the River Thames flows west to east approximately 340m to the north of the site. The site is defined as Flood Zone 3a High probability of flooding from rivers or the sea (tidal sources).

Modelling outputs show that the site is not at risk of flooding from the River Wandle, either now or in the future as a result of climate change.

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 3.0-4.0m depth, Extreme hazard rating on Swandon Way ('danger for all') for the year 2100. Old York Road has a hazard rating of Very Low ('caution') and 0.5m depth for the year 2100. Flood levels recorded on the site vary from ~5.49-5.73m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond at Ferrier Street within the site boundary, and also on Swandon Way adjacent to the site. There are 13 reported incidents of surface water flooding within 500m of the site, and it is located within a Critical Drainage Area (CDA 016 Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~5.49-5.73m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for the Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT9 Feather's Wharf, The Causeway, SW18

Site ID:	WT9	**Area (ha):**	0.79
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 20%

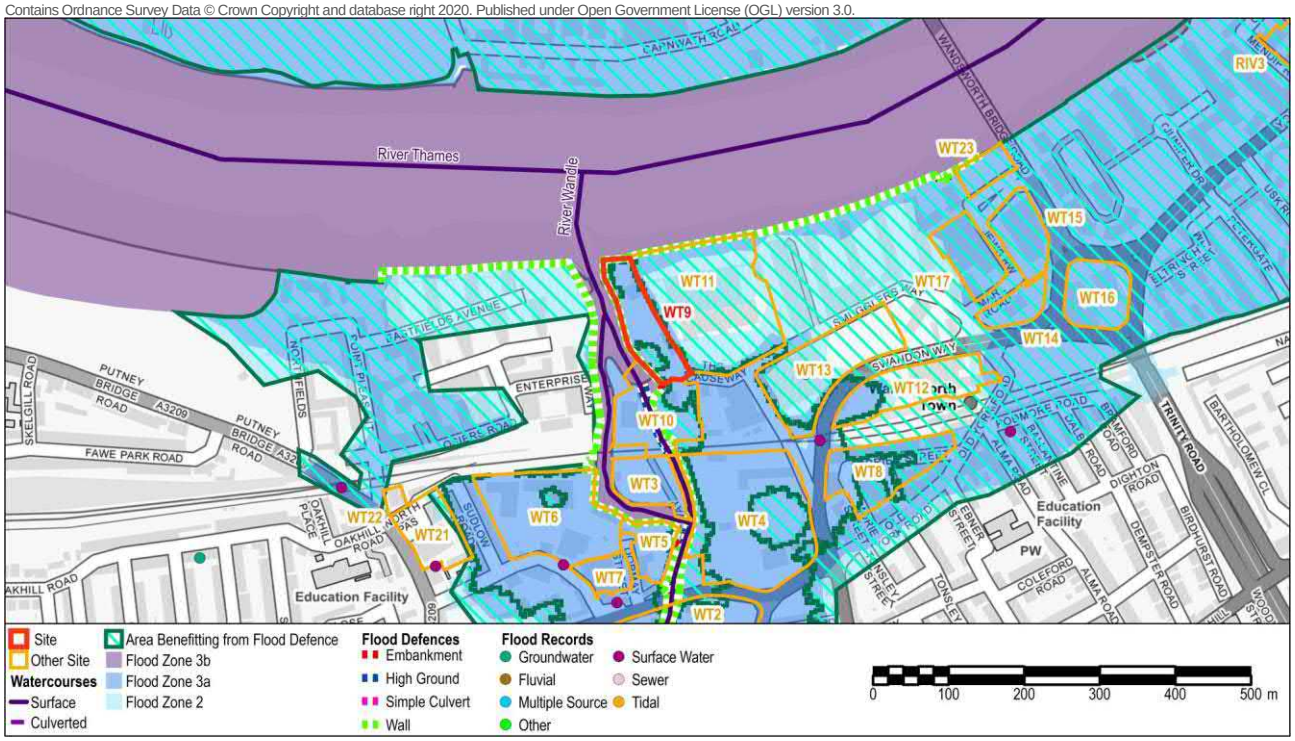

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 13; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

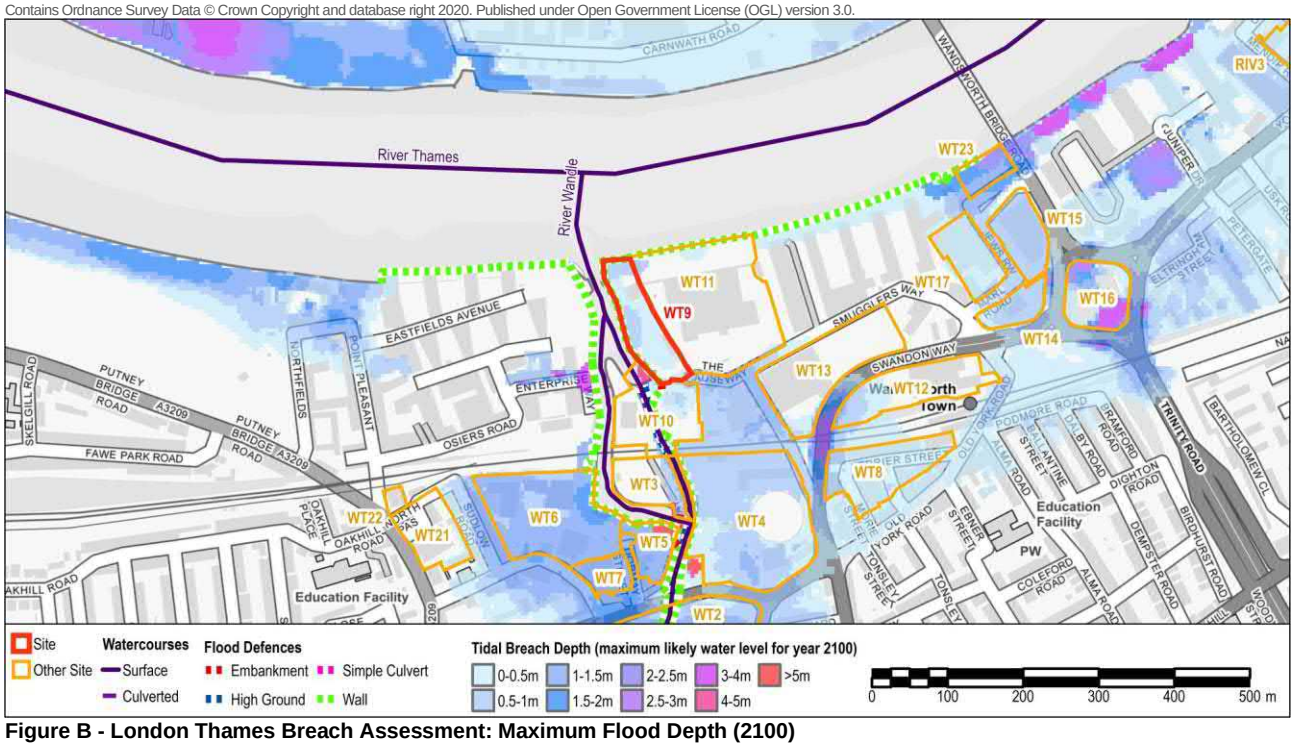

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT9 Feather's Wharf, The Causeway, SW18

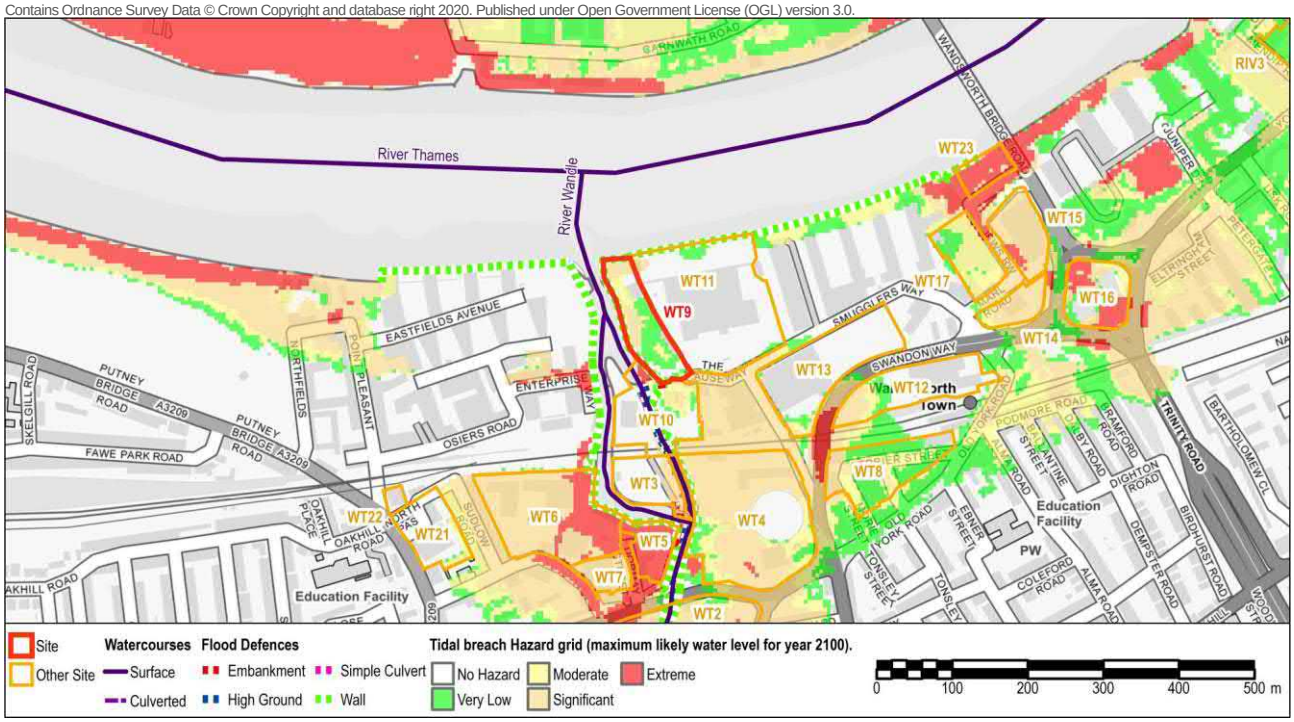

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

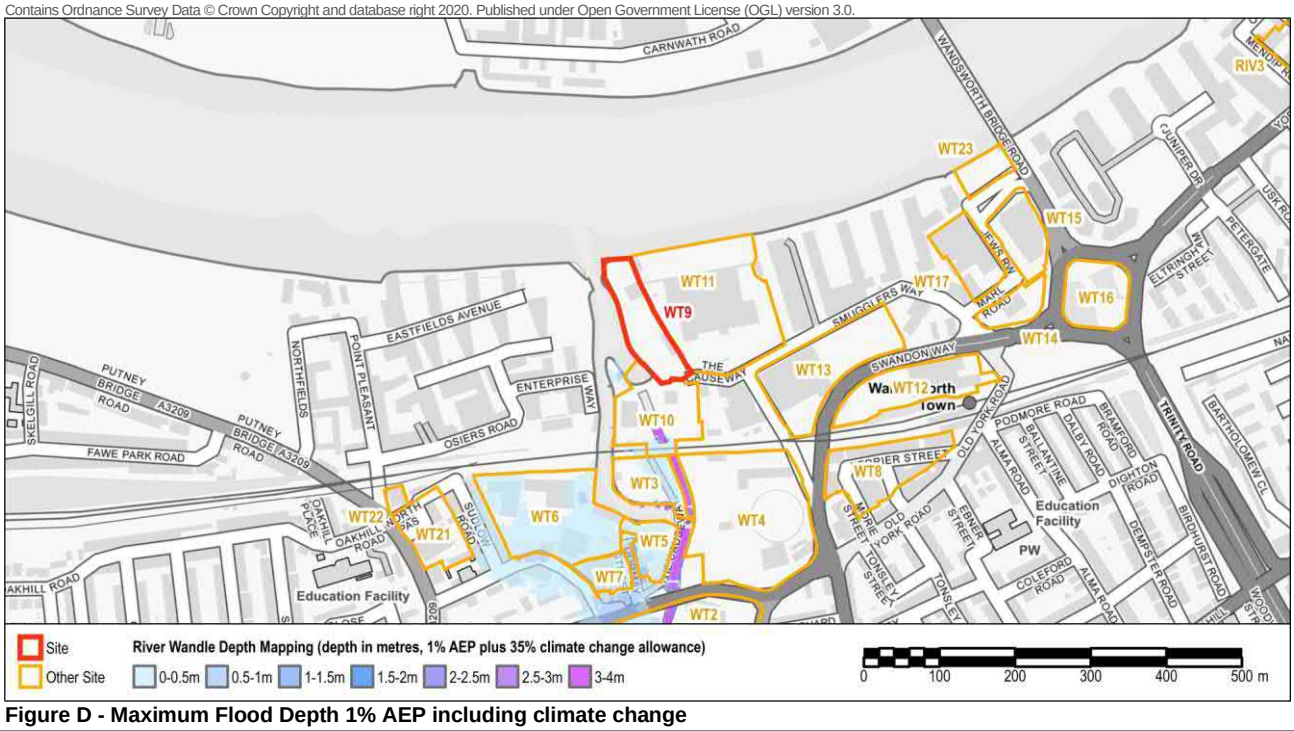

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT9 Feather's Wharf, The Causeway, SW18

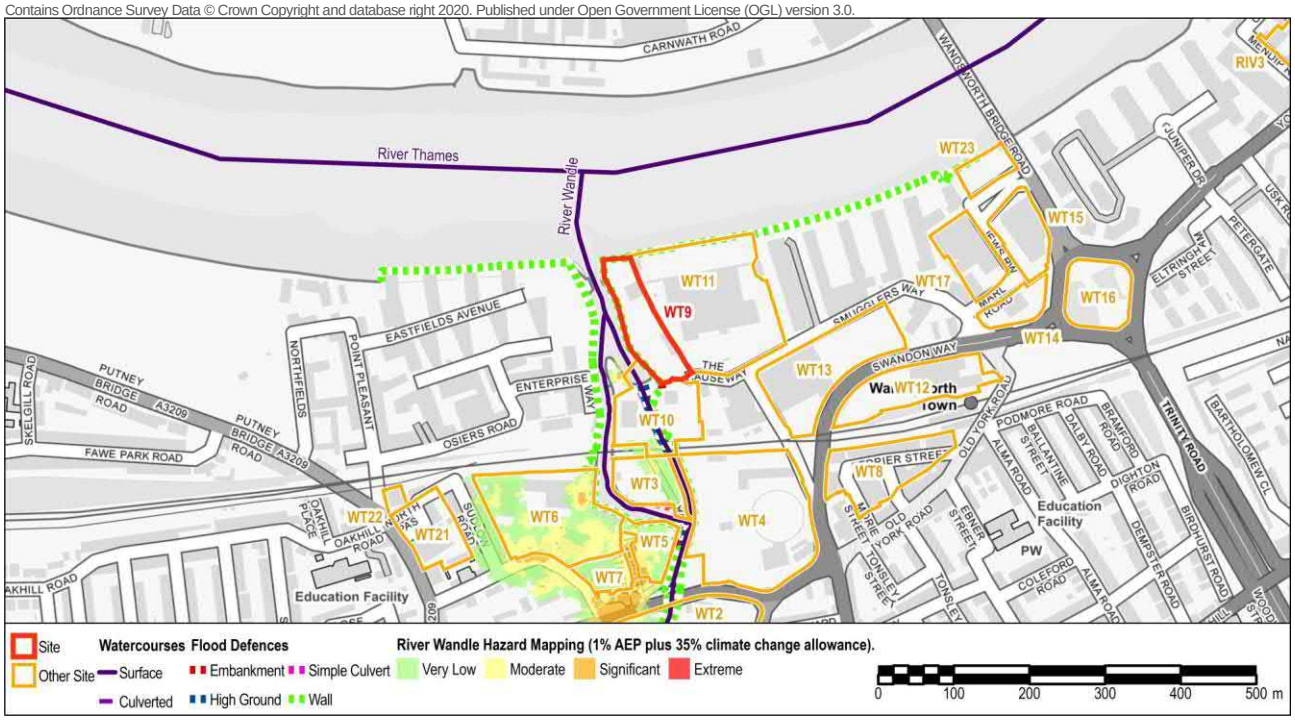

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

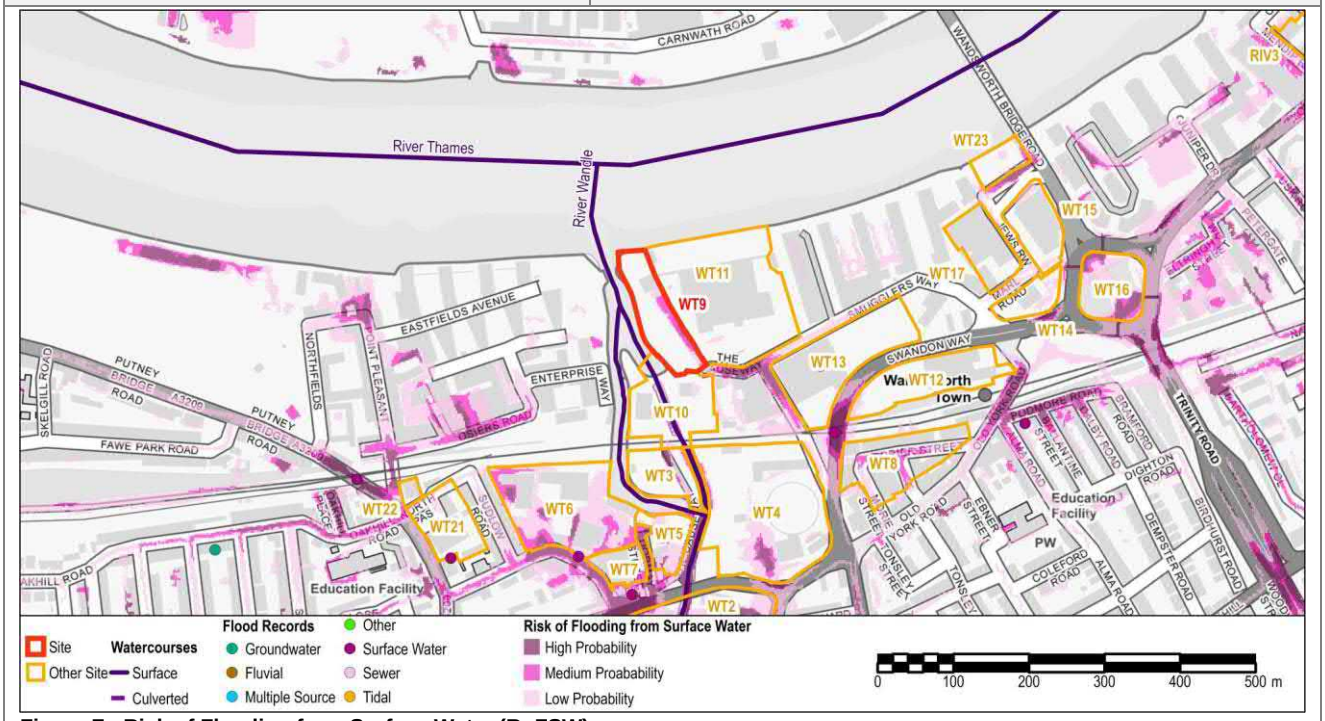

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC2		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand, Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the eastern edge of the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT9 Feather's Wharf, The Causeway, SW18

Summary

The site is located adjacent to the River Wandle, where the River Wandle meets the River Thames. The site is defined as Flood Zone 3a High probability of flooding.

Modelling shows that the site is not at risk of flooding from the fluvial River Wandle.

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 1-1.5m depth, Significant hazard rating on Smuggler's Way ('danger for most') for the year 2100. The flood level across the site varies from ~5.47-5.85m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond at the east of the site and also on Smugglers Way to the south east of the site. 13 incidents of surface water flooding have been reported within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface and also susceptible to groundwater below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Sleeping accommodation should be set above the extreme water level including an allowance for climate change, which is 5.47-5.85m AOD[1] on the site for the year 2100[2].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT10 Land at the Causeway, SW18

Site ID:	WT10	**Area (ha):**	1.02
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 96%	**Flood Zone 3b (5% AEP):** 4%	**Area Benefiting from Defences:** 28%

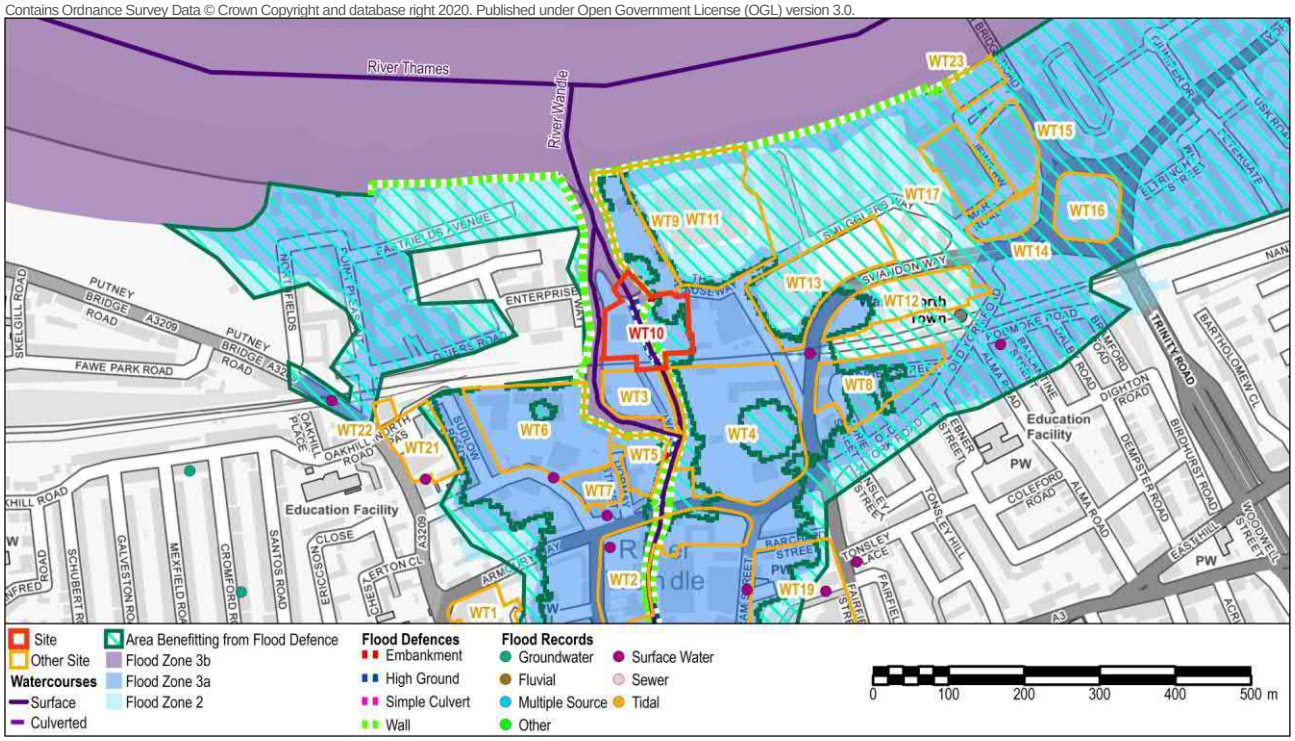

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 15; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

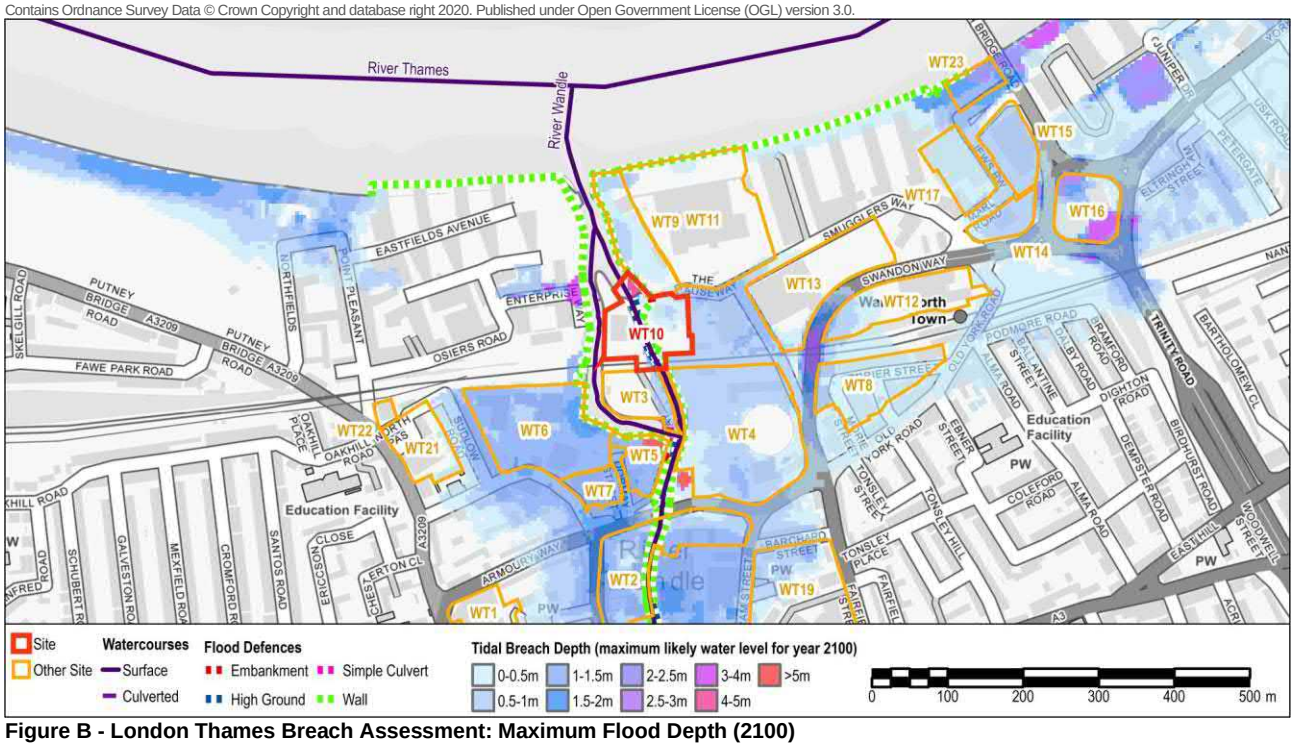

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT10 Land at the Causeway, SW18

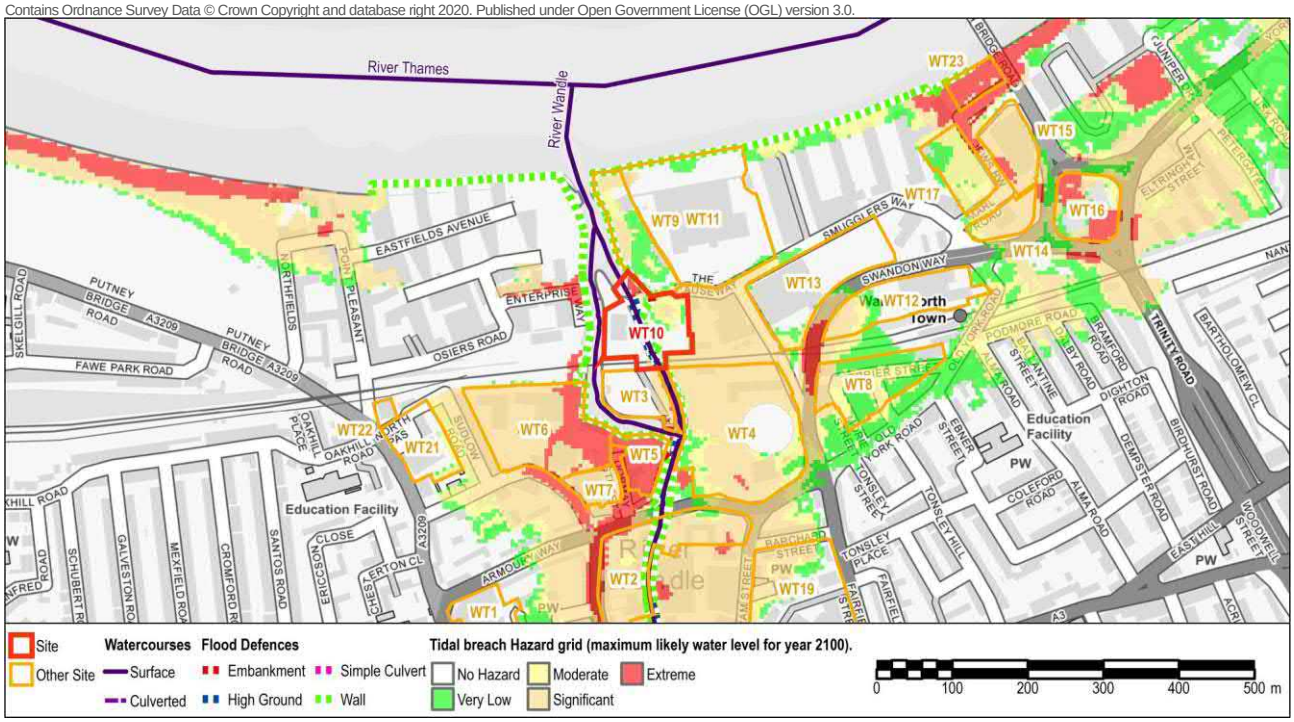

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

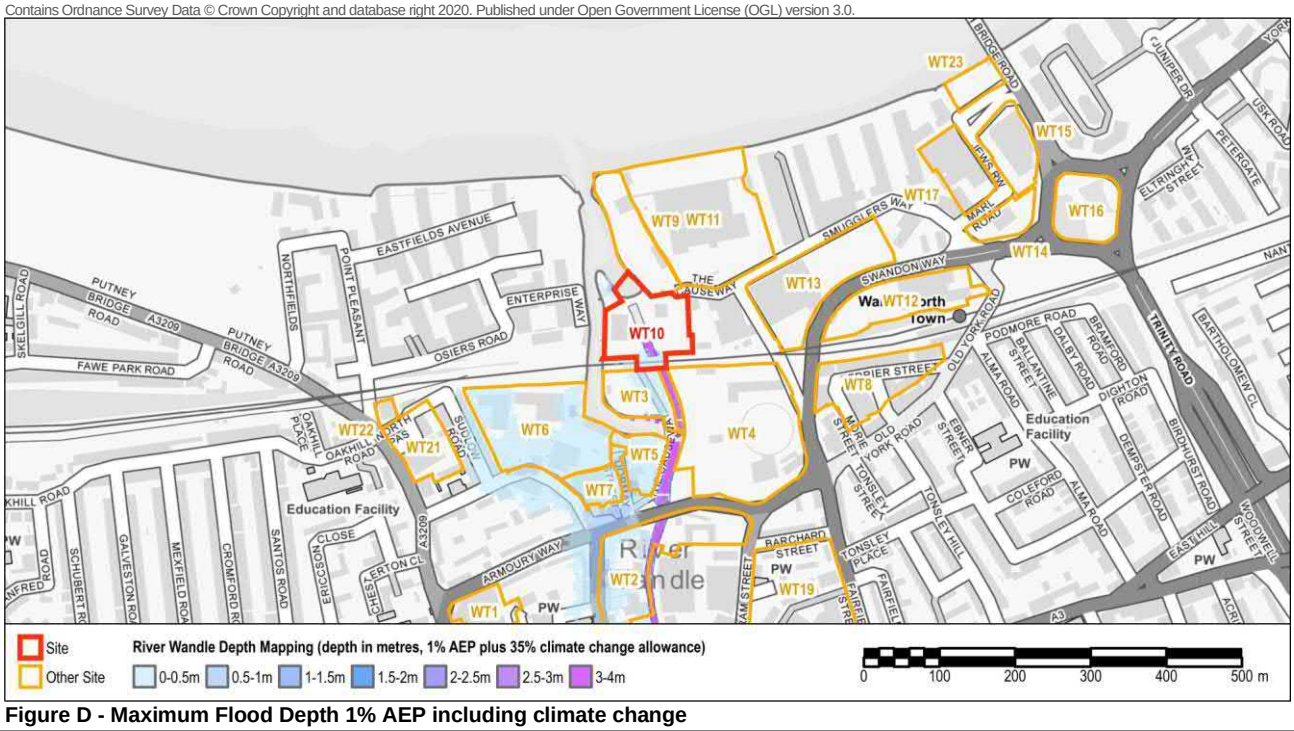

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT10 Land at the Causeway, SW18

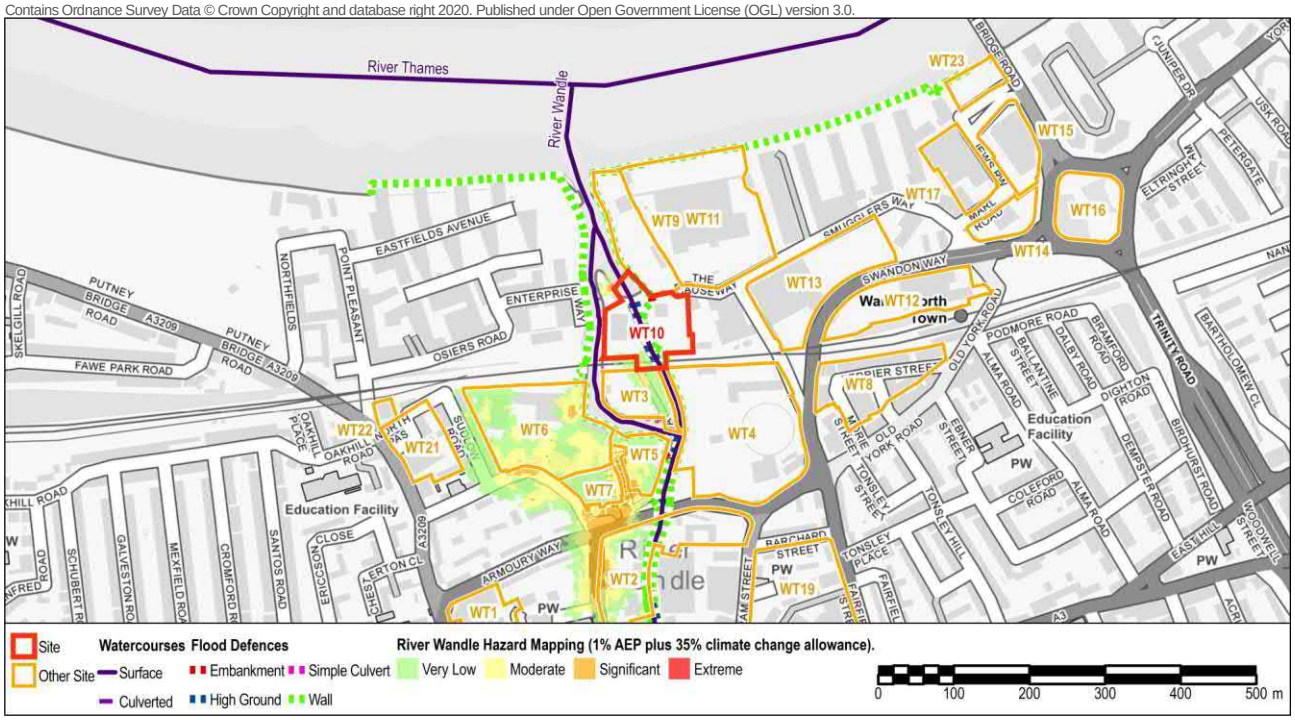

Figure E - Maximum Flood Hazard 1% AEP including climate change

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

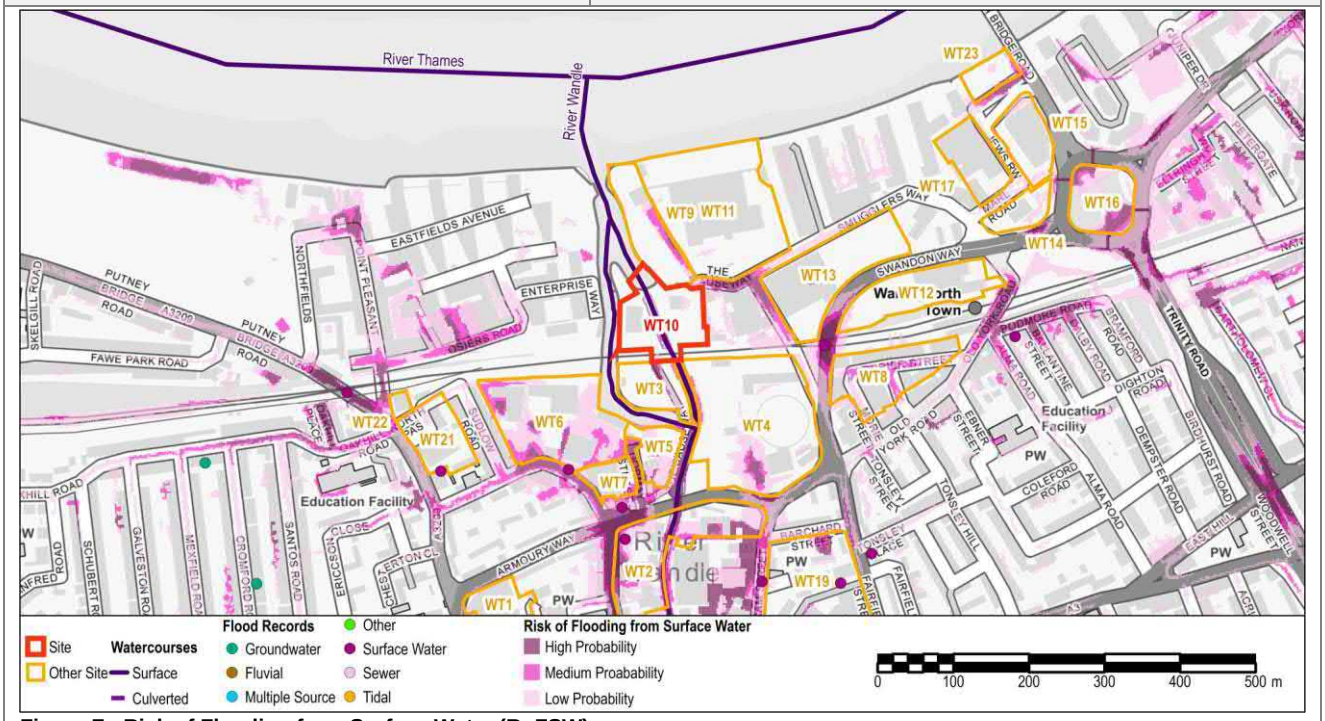

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC2, DC3, DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).		

Site WT10 Land at the Causeway, SW18

Summary

The River Wandle passes through the centre of the site, flowing north to meet the River Thames. The majority of the site (96%) is defined as Flood Zone 3a High probability of flooding, and the remainder of the site is defined as Flood Zone 3b, Functional Floodplain.

Modelling of the River Wandle shows that during the 1% AEP event including 35% climate change, the southern part of the site adjacent to the railway line is at risk of flooding, with depths of 0-0.5m, and a corresponding hazard rating of Moderate ('danger for some'). The flood levels in this area are ~4.7-5.0m AOD1.

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water could inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Significant (danger for some), with a smaller area of deeper flooding and Extreme hazard rating ('danger for all') in the north of the site. Depths of 1-1.5m depth, and Significant hazard rating ('danger for most') are shown on Smuggler's Way, for the year 2100. Flood levels on the site vary from 5.64-5.74m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on at the site, and on Smugglers Way to the east of the site. 15 incidents of surface water flooding have been reported within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface and also susceptible to groundwater below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 16m from the tidal river.
- Development of this site will need to allow for the flood defences to be raised in line with the TE2100 Plan. Depending on the ownership of the defence, it may be beneficial for the site and wider Borough if raising of the defences was incorporated into the re-development of the site, which could potentially supplement to a wider riverside strategy.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (4.7-5.0m AOD[1] for the 1% AEP plus 35% climate change event[2]). Sleeping accommodation should be set above the extreme water level including an allowance for climate change[2] (5.64-5.74m AOD[1]).
  • In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for River Wandle at Wandsworth and Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- Developments are not appropriate within the functional floodplain 3b unless it is water compatible.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT12 Homebase, Swandon Way, SW18

Site ID:	WT12	**Area (ha):**	0.96
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 54%	**Flood Zone 2 (0.1% AEP):** 16%	**Flood Zone 3 (1% AEP):** 30%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 79%

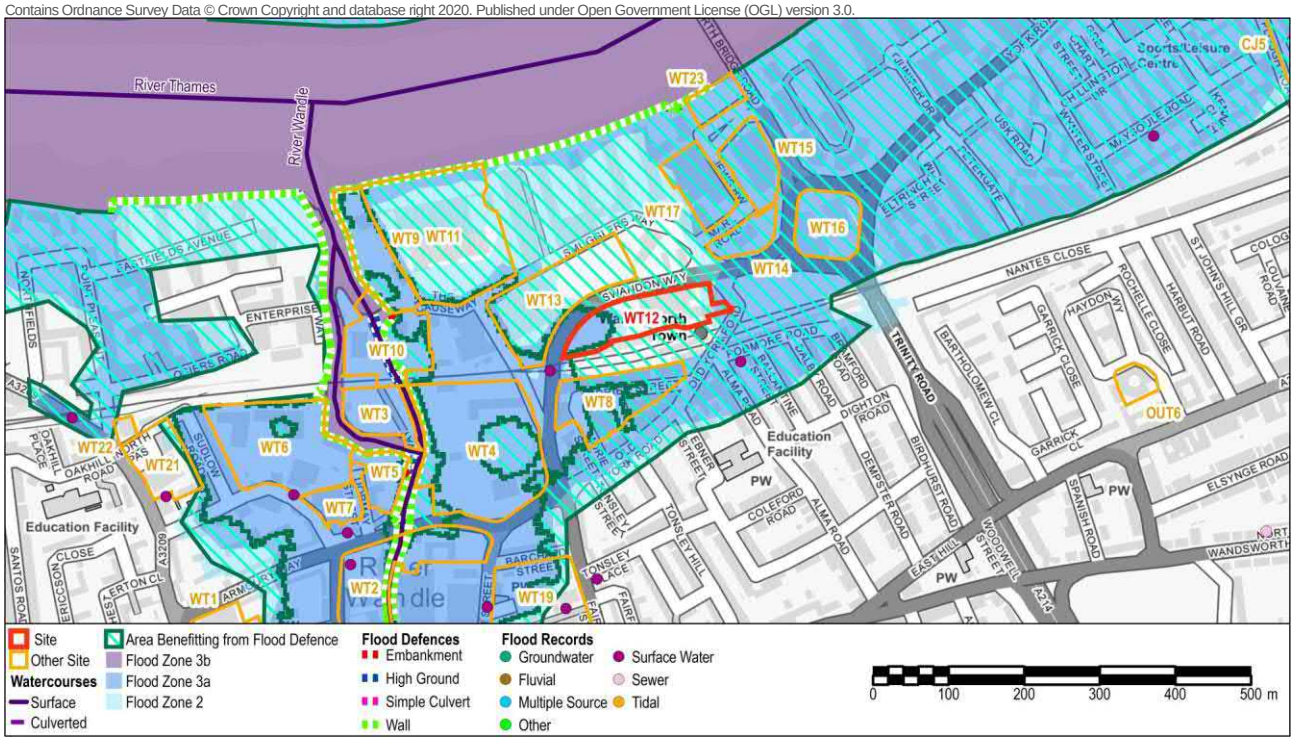

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 12; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

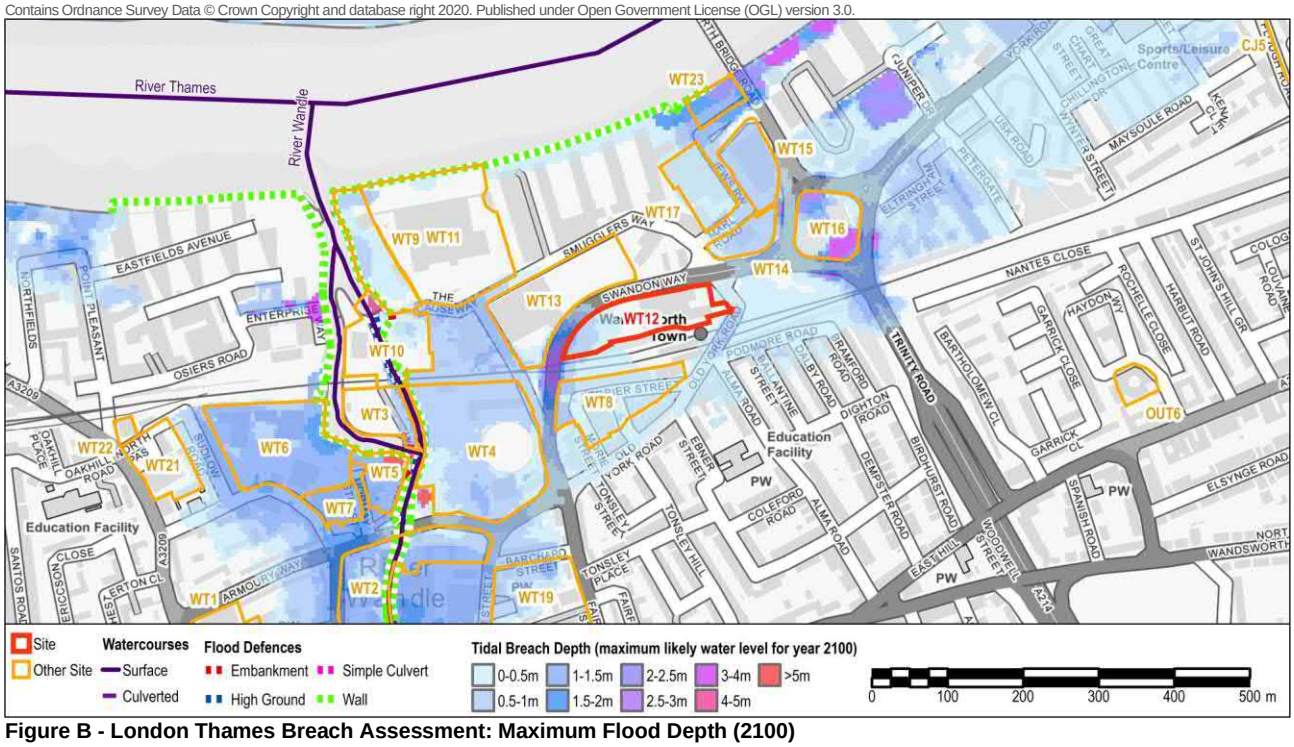

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT12 Homebase, Swandon Way, SW18

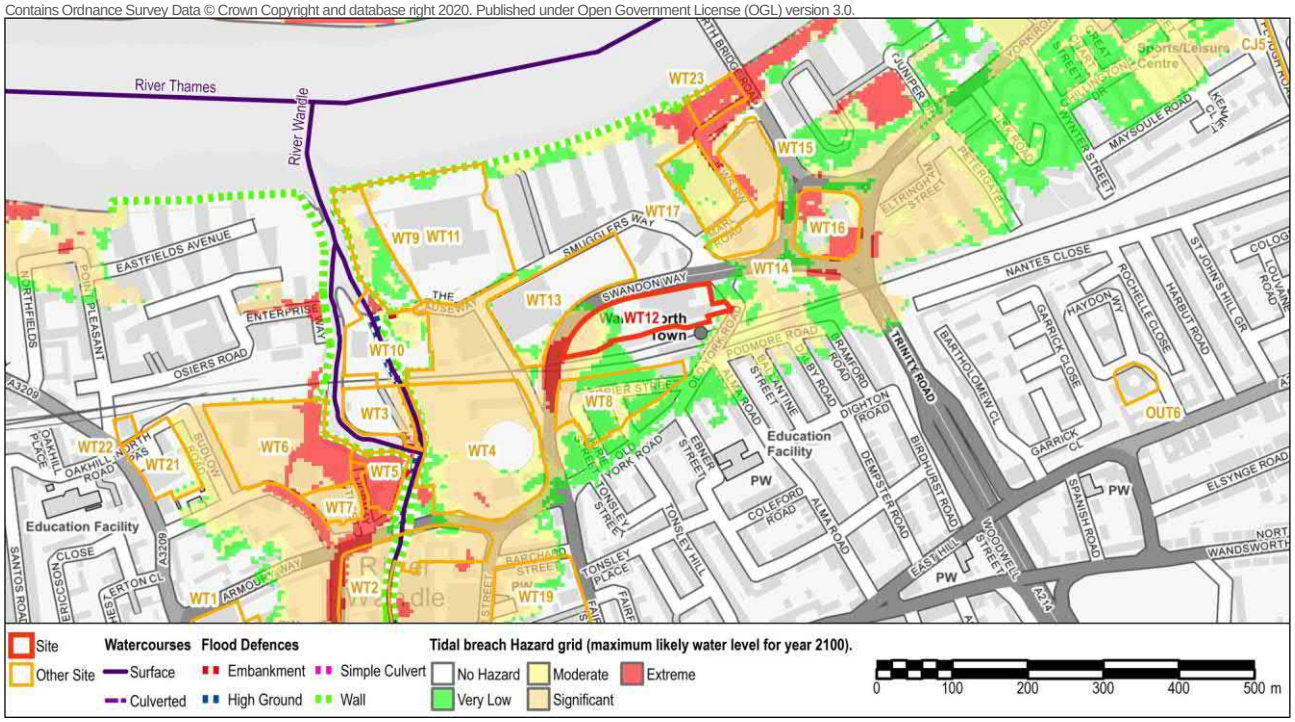

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

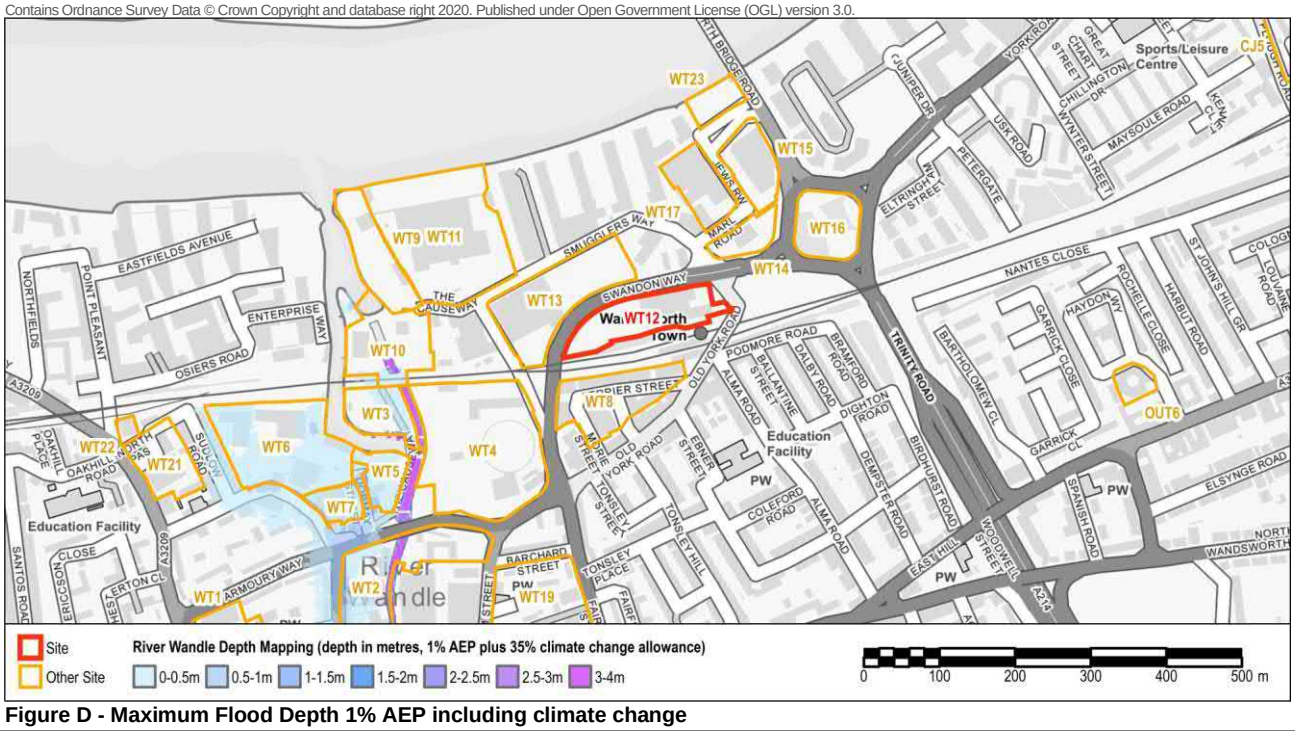

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT12 Homebase, Swandon Way, SW18

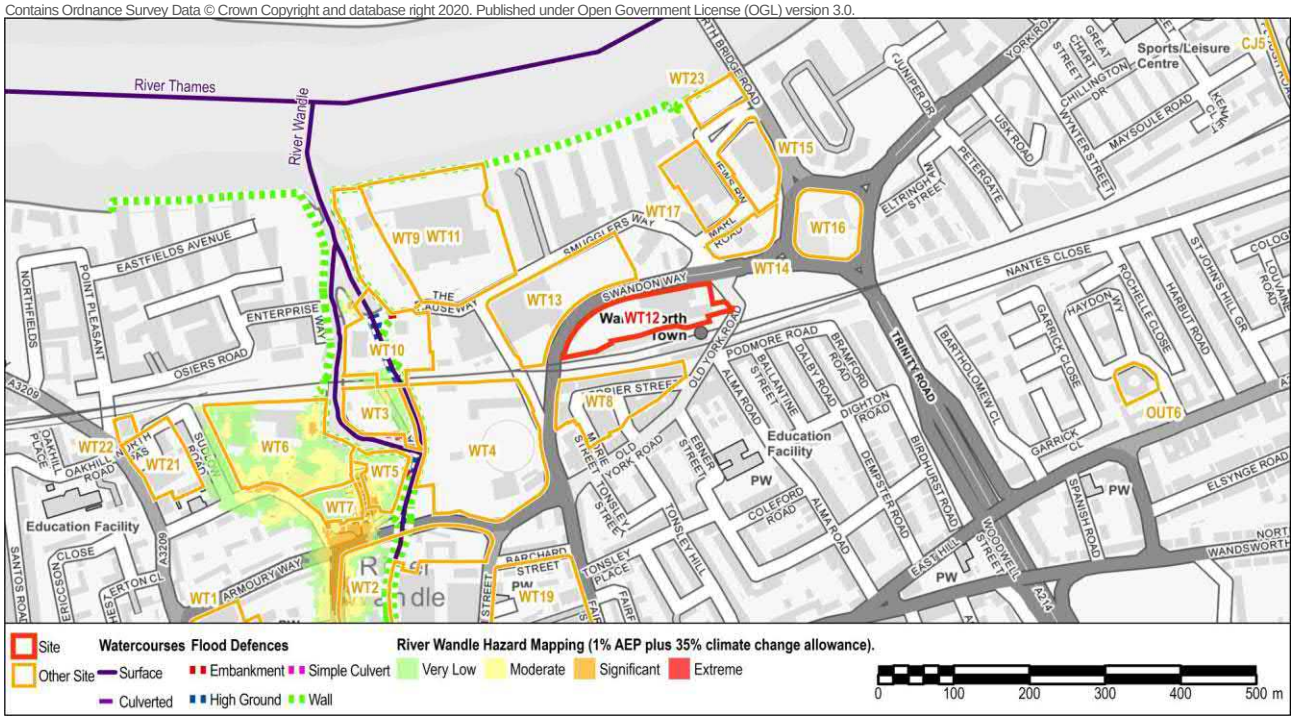

Figure E - Maximum Flood Hazard 1% AEP including climate change

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

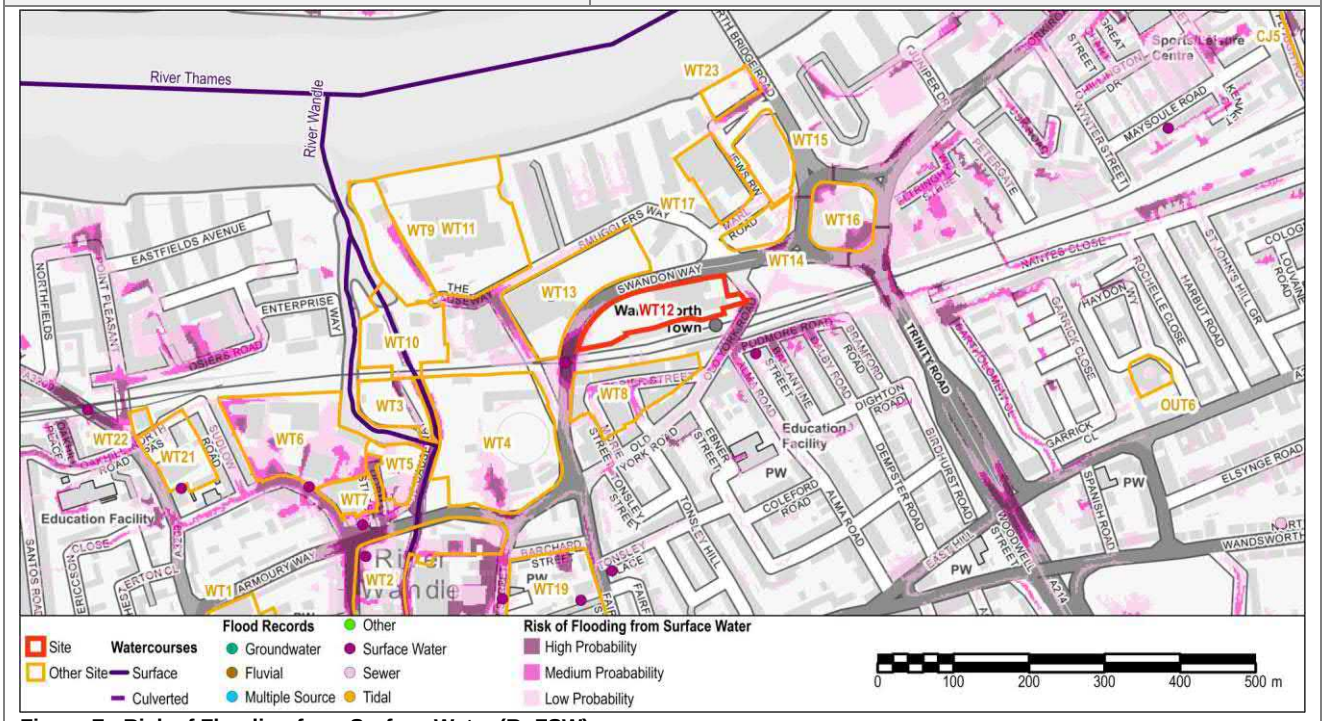

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]		
Drainage Catchment	DC2		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT12 Homebase, Swandon Way, SW18

Summary

54% of the site is defined as Flood Zone 1, Low probability of flooding from rivers or the sea. 30% of the site is defined as Flood Zone 3a High probability of flooding, and 16% Flood Zone 2 Medium probability. The site is located 250m south of the tidal River Thames and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the western part of the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water could inundate the site to a depth of 1-1.5m, with a corresponding hazard rating of Significant ('danger for most') on the site, and up to 2.5-3m depth, Extreme hazard rating on parts of Swandon Way ('danger for all') for the year 2100. Flood levels on the site are ~5.72m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond at the west edge of the site and also on Swandon Way located adjacent to the site. 14 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 016, Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~5.72m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for the Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT13 B & Q, Smugglers Way, SW18

Site ID:	WT13	**Area (ha):**	1.42
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 40%	**Flood Zone 2 (0.1% AEP):** 43%	**Flood Zone 3 (1% AEP):** 17%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 94%

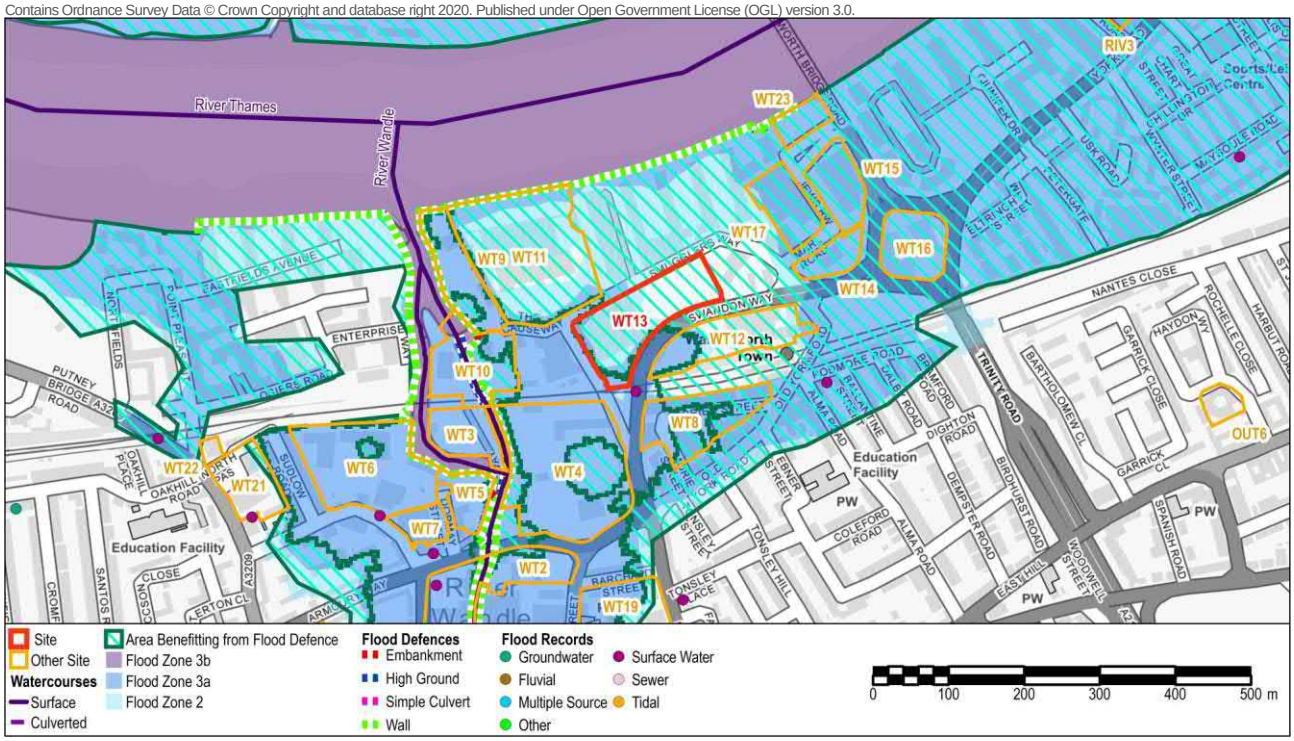

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 14; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

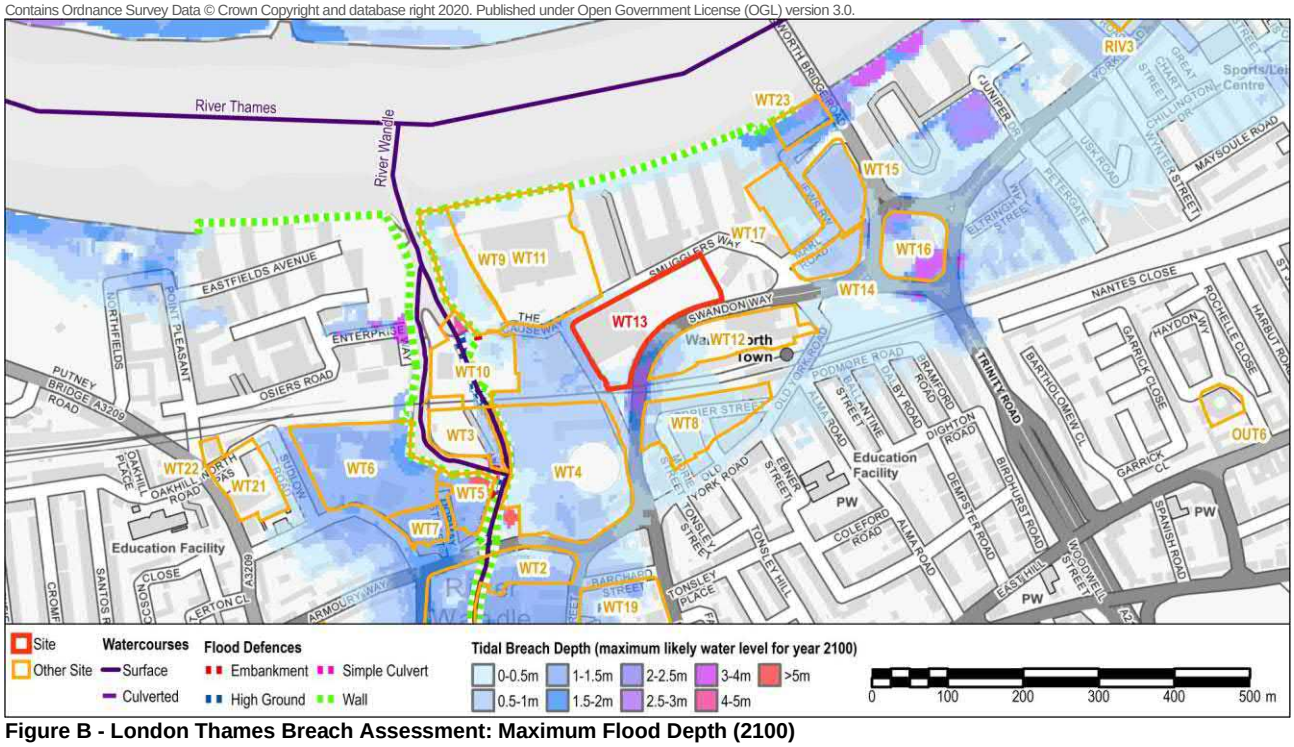

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT13 B & Q, Smugglers Way, SW18

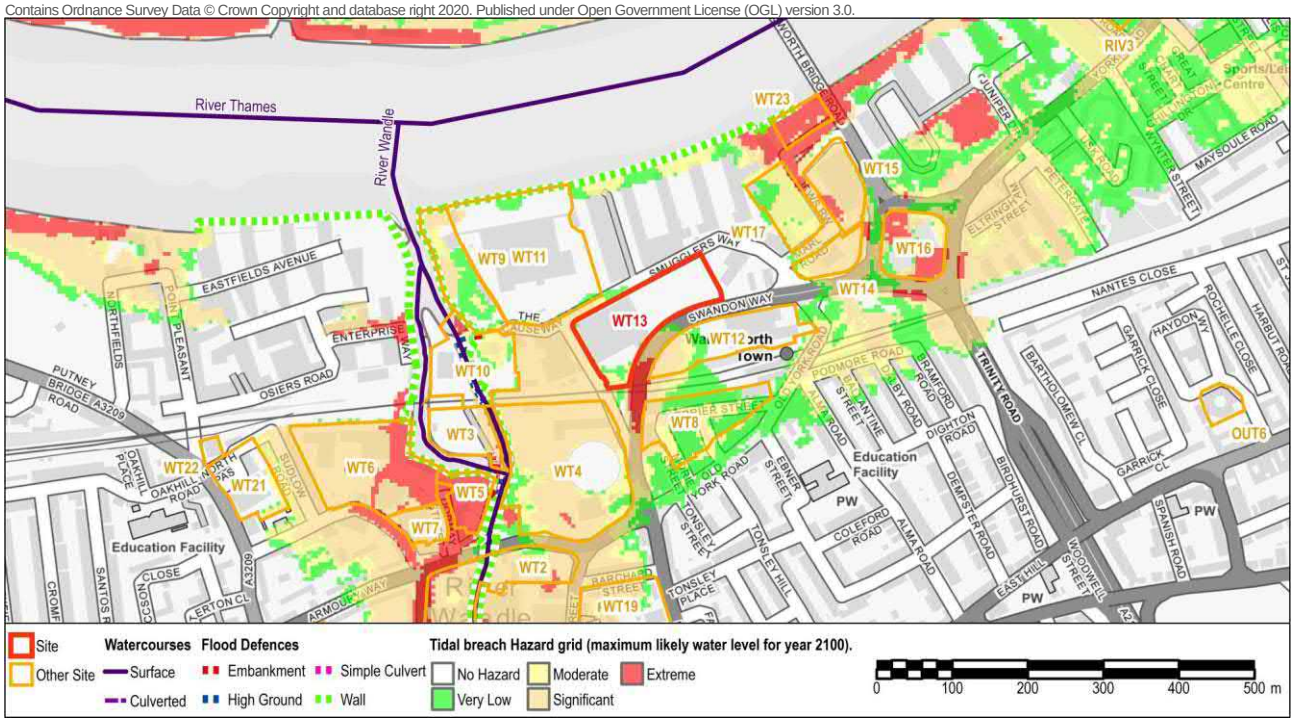

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

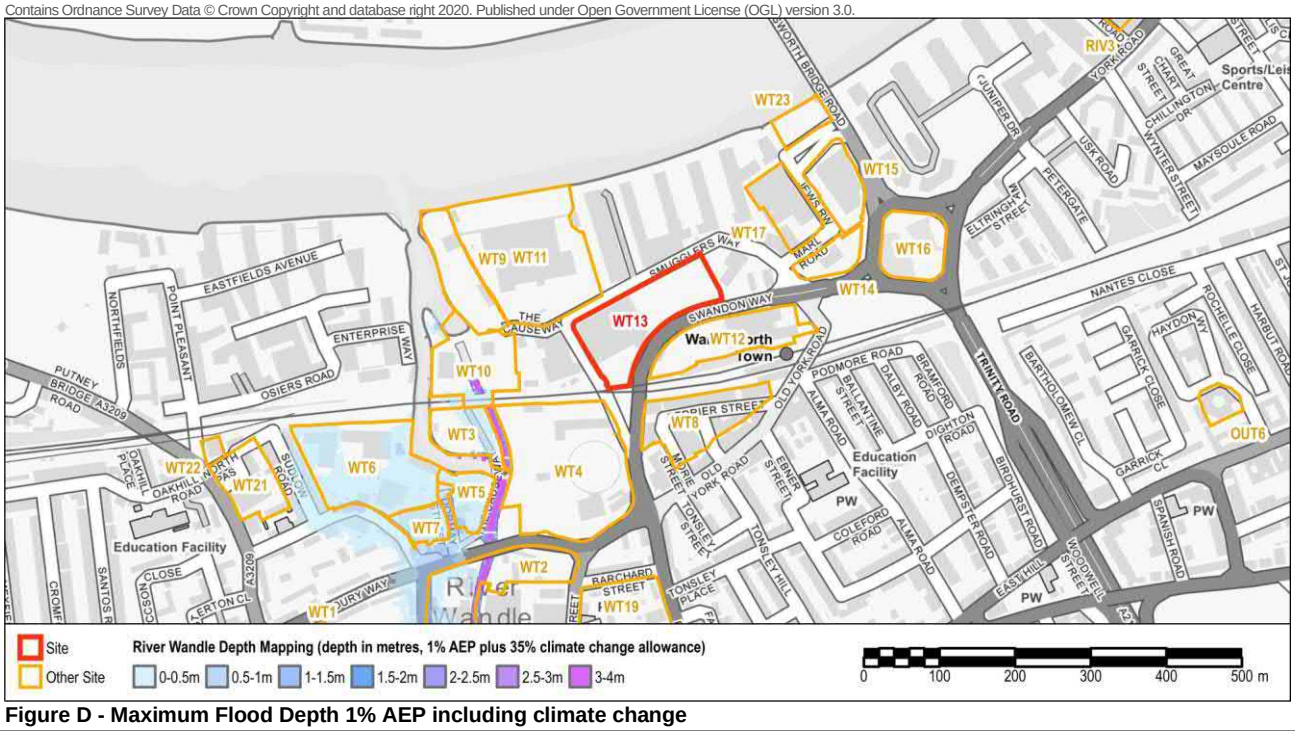

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT13 B & Q, Smugglers Way, SW18

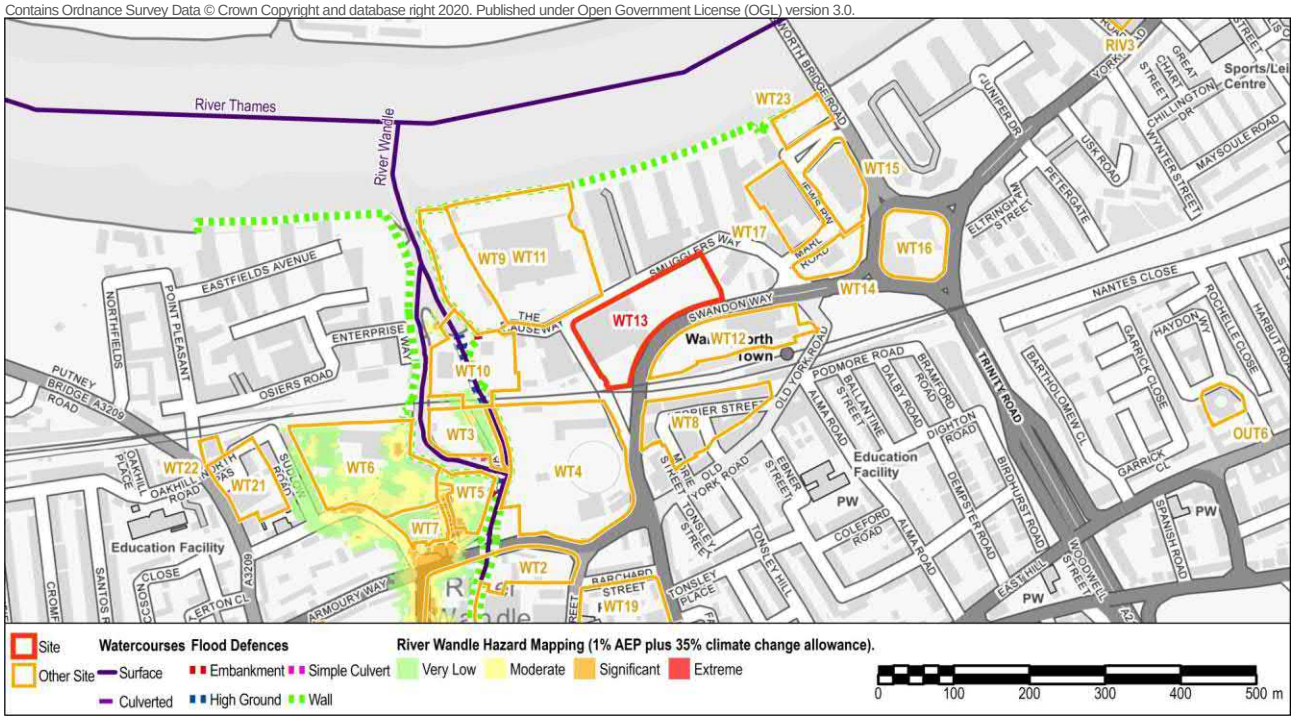

Figure E - Maximum Flood Hazard 1% AEP including climate change

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

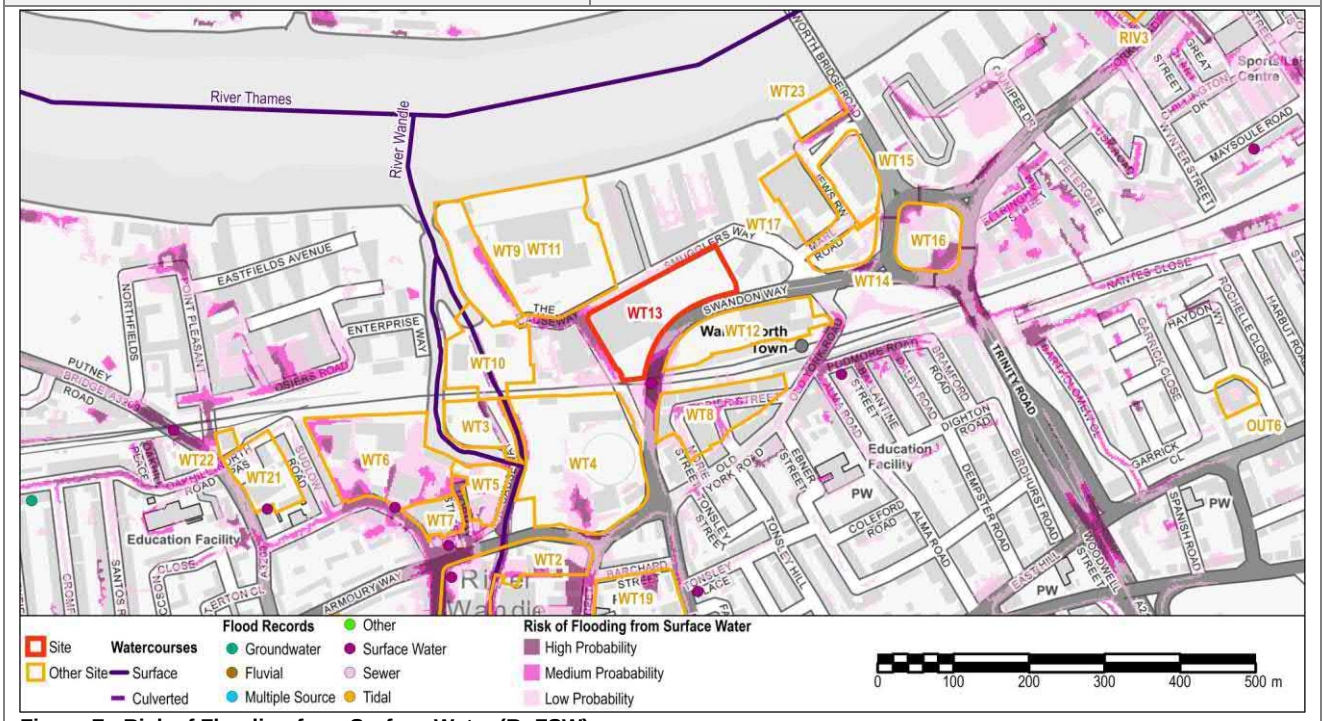

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]		
Drainage Catchment	DC2		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT13 B & Q, Smugglers Way, SW18

Summary

40% of the site is defined as Flood Zone 1, Low probability of flooding from rivers or the sea; 43% of the site is defined as Flood Zone 2 Medium probability of flooding, and 17% Flood Zone 3 High probability. The site is located 160m south of the tidal River Thames and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most') on the site, and up to 2.5-3m depth, Extreme hazard rating on parts of Swandon Way ('danger for all') for the year 2100. Flood levels on the site are ~5.73m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Swandon Way located south of the site. 14 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 016, Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~5.73m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for the Wandsworth Bridge to Putney Bridge and the River Wandle at Wandsworth. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT14 McDonalds, Swandon Way, SW18

Site ID:	WT14	**Area (ha):**	0.34
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

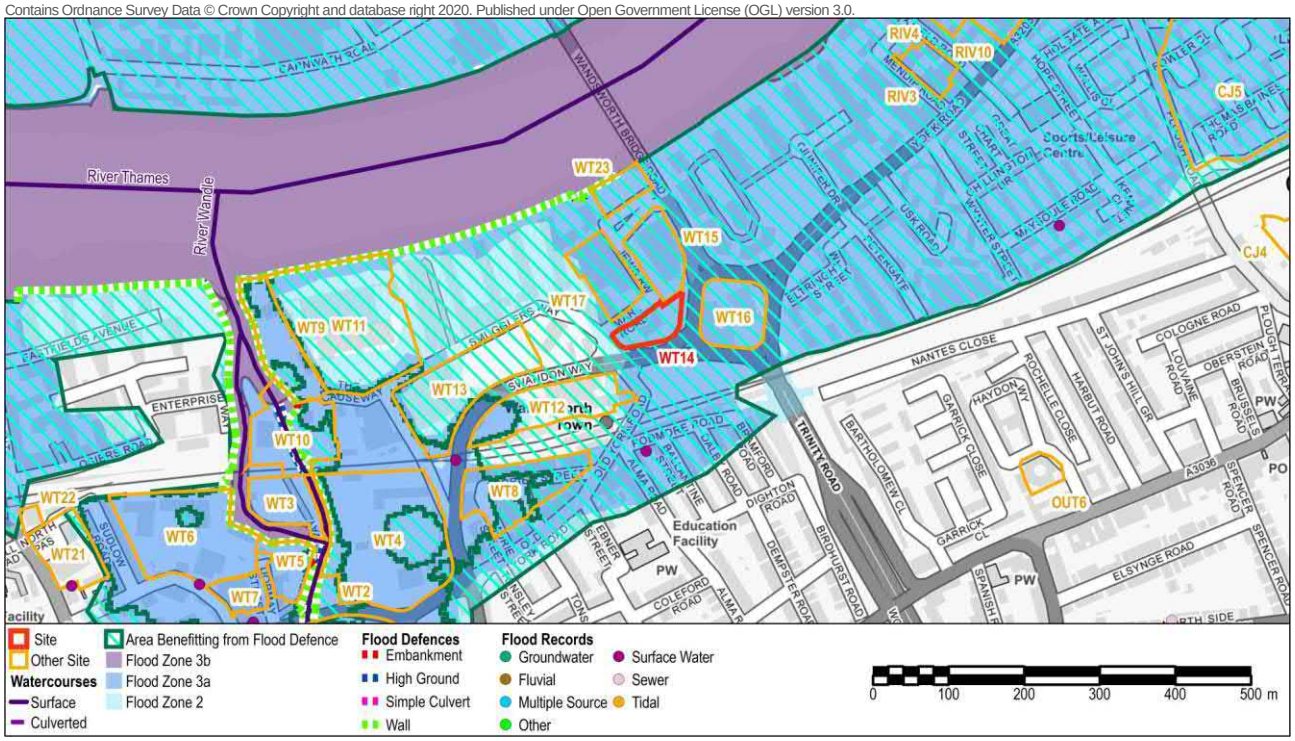

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 4; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

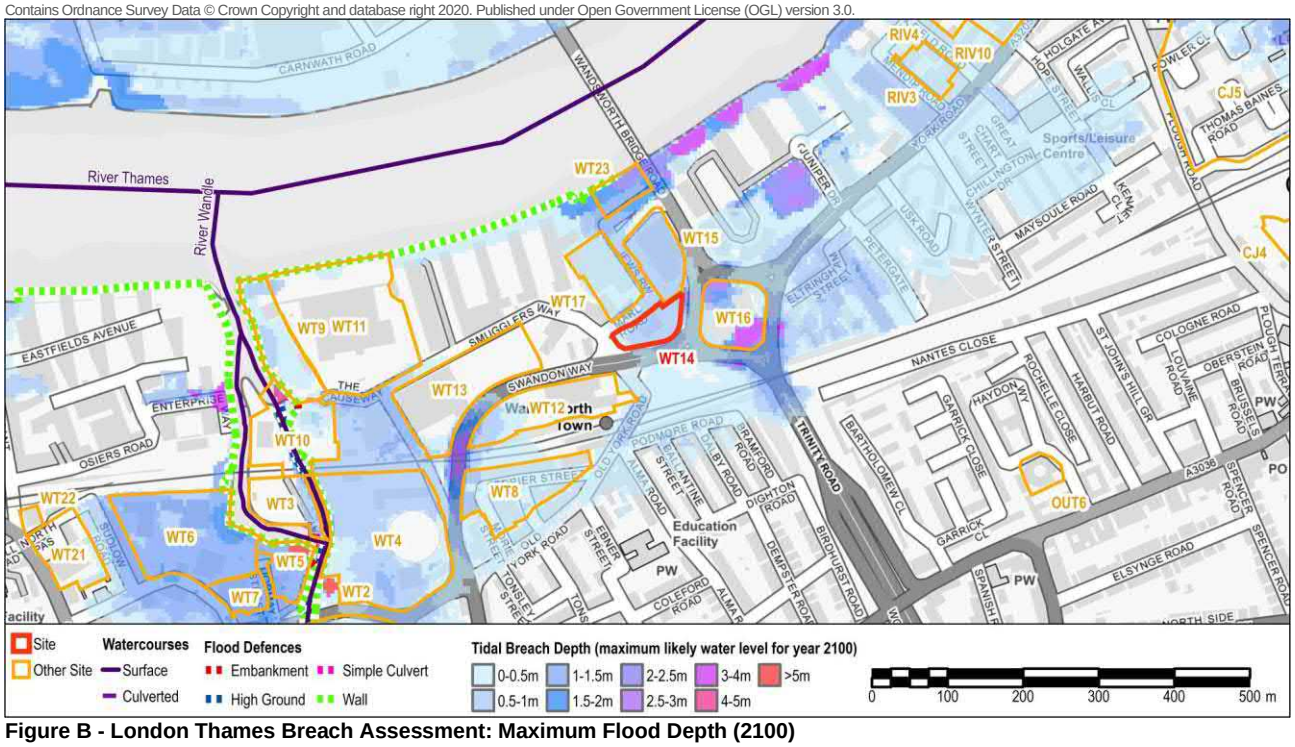

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT14 McDonalds, Swandon Way, SW18

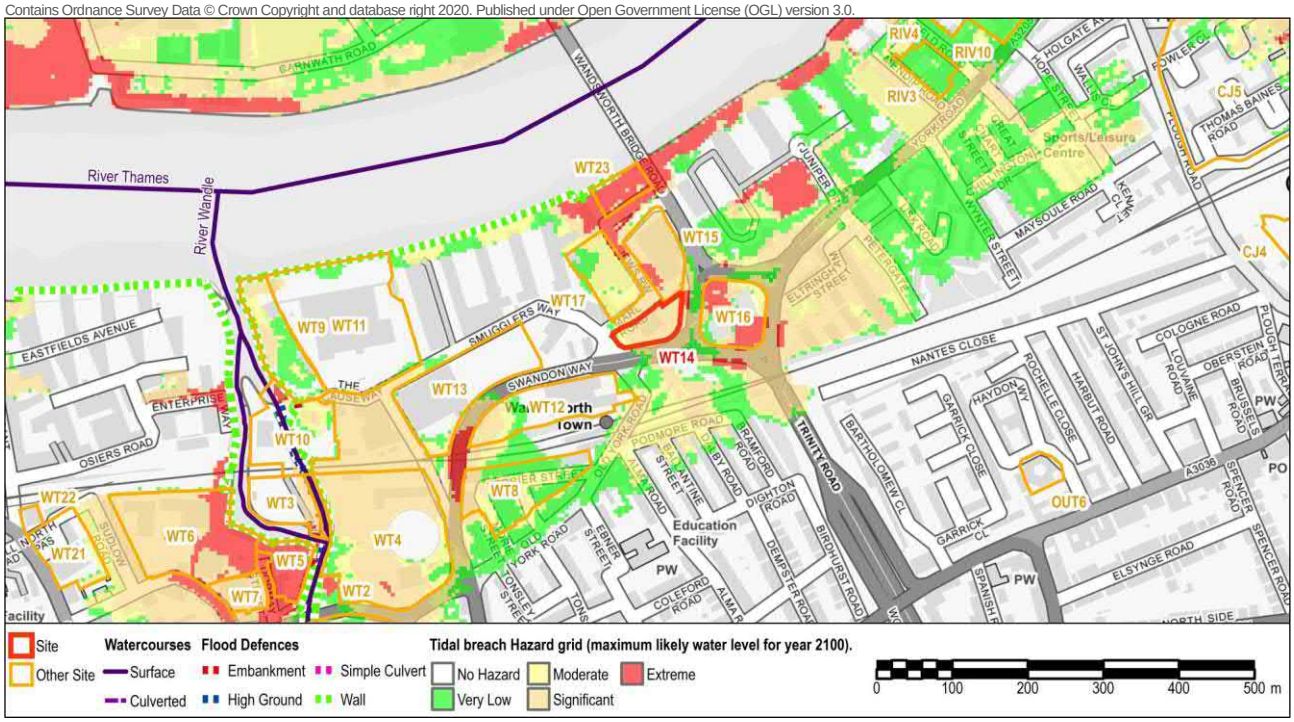

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

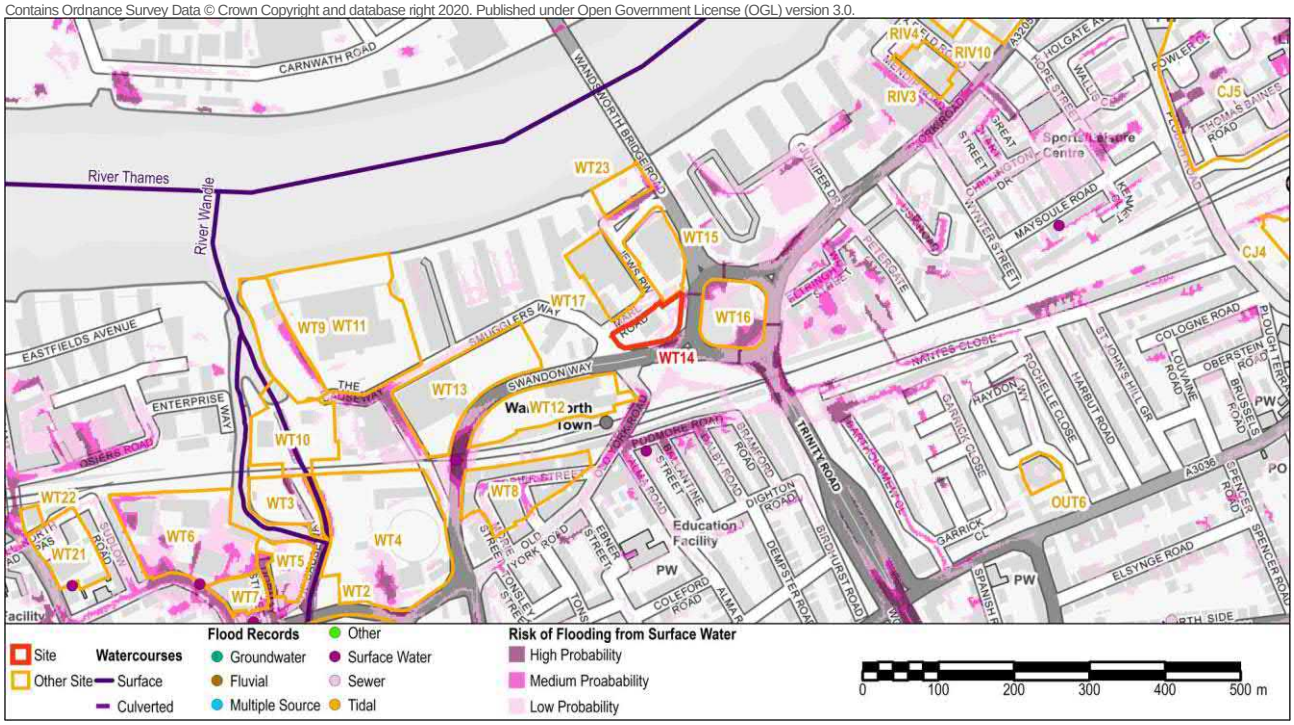

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]		
Drainage Catchment	DC2		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT14 McDonalds, Swandon Way, SW18

Summary

The site is defined as Flood Zone 3a High probability of flooding. The site is located 200m south of the tidal River Thames and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most') on the site, and up to 0.5-1m depth, Significant hazard rating on parts of Swandon Way ('danger for most') for the year 2100. Flood levels on the site are ~5.73m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond at the east and southern parts of the site, and also on Swandon Way. 4 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 016, Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.73m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT15 Mercedes Benz and Bemco, Bridgend Road, SW18

Site ID:	WT15	**Area (ha):**	0.58
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More 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):** 100%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

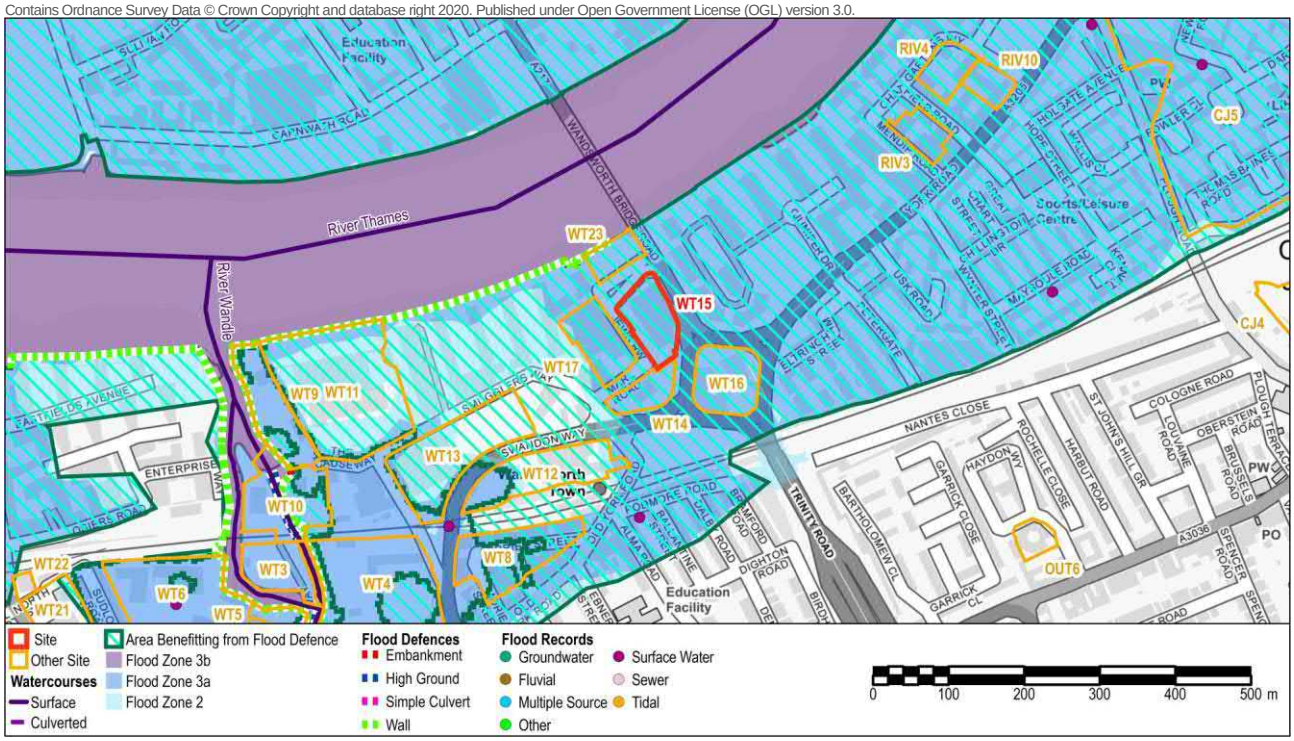

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 4; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

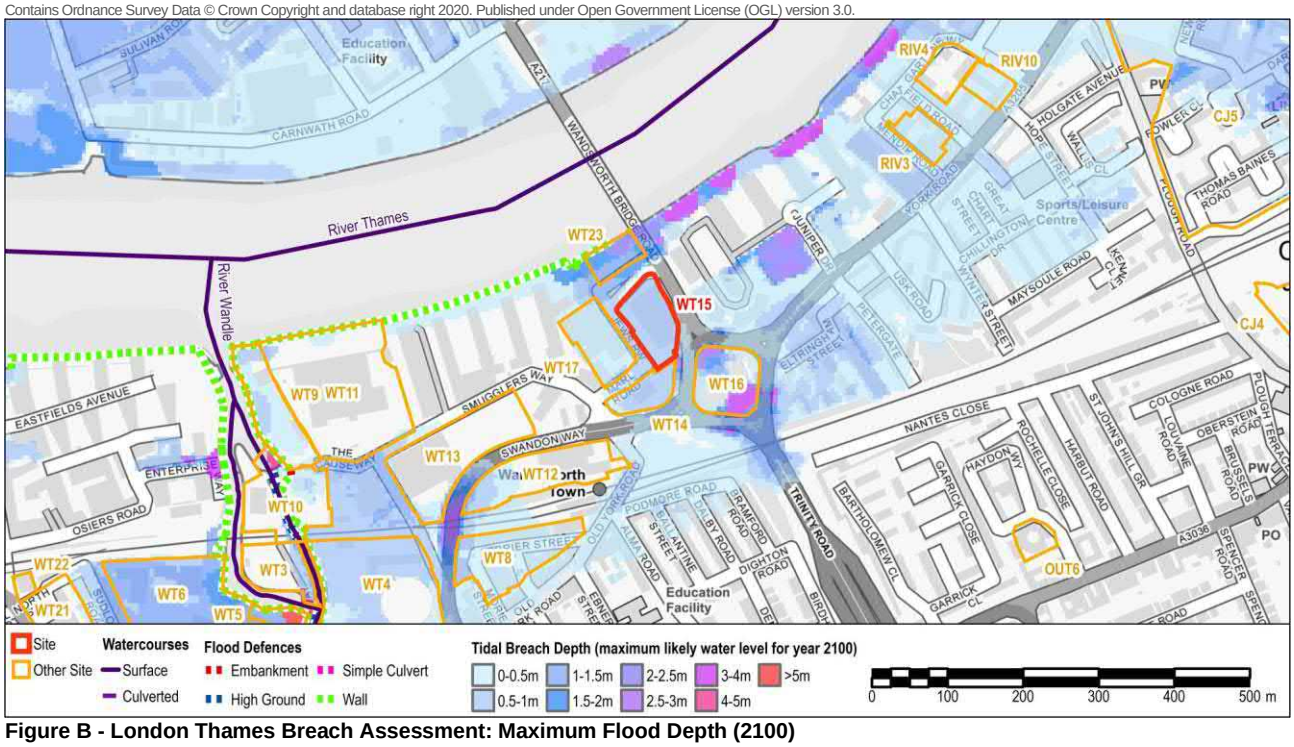

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT15 Mercedes Benz and Bemco, Bridgend Road, SW18

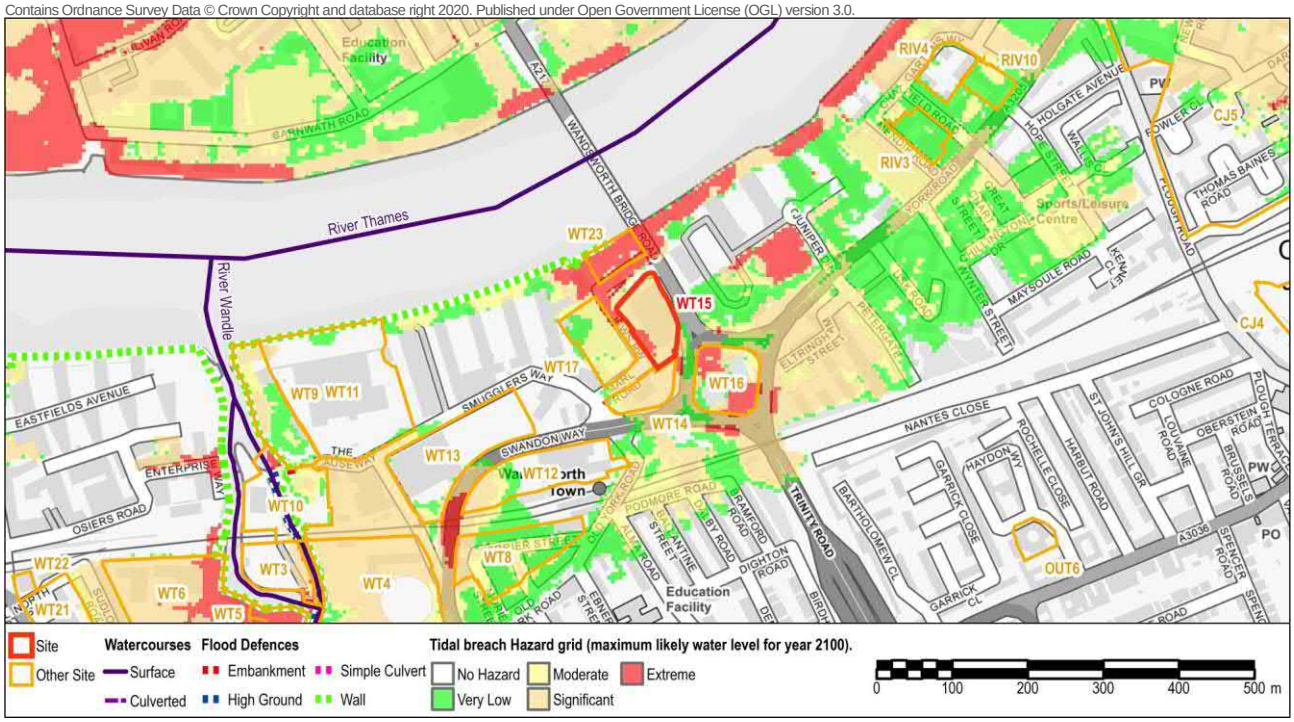

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

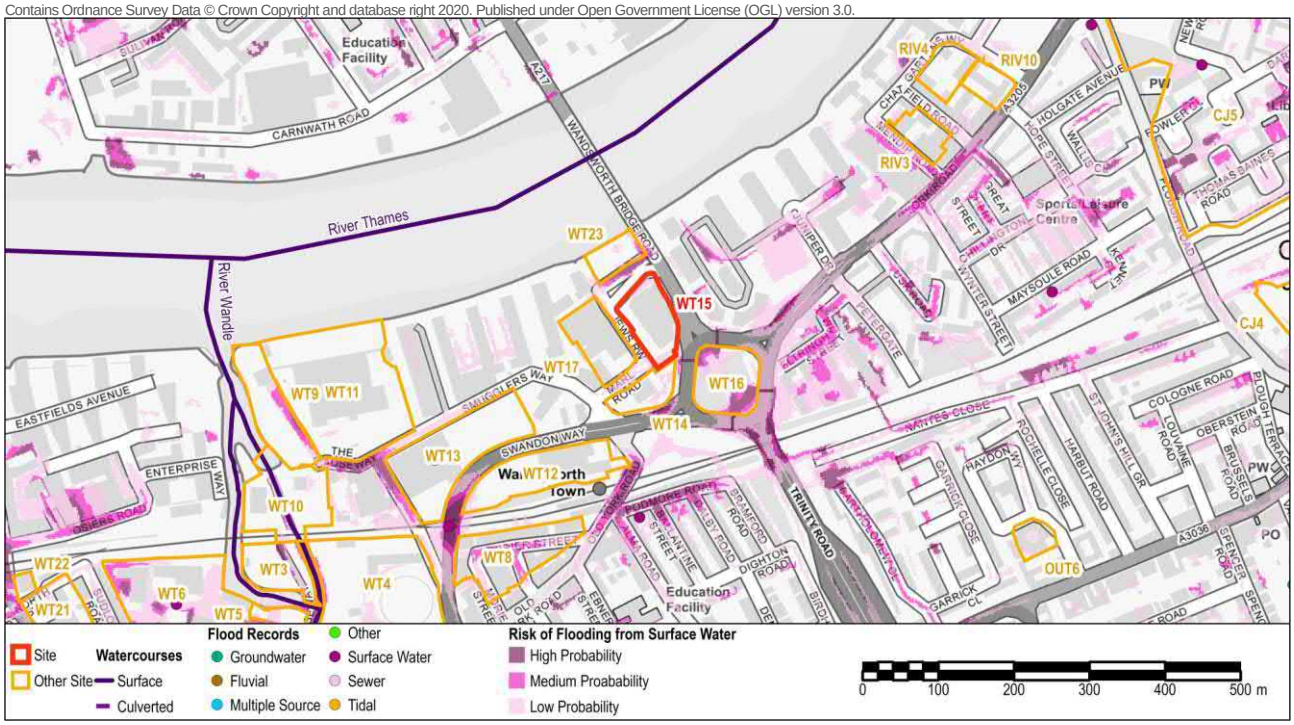

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site WT15 Mercedes Benz and Bemco, Bridgend Road, SW18

Summary

The site is defined as Flood Zone 3a High probability of flooding. The site is located 80m south of the tidal River Thames and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Extreme ('danger for most') on the site, and up to 1-1.5m depth, Extreme hazard rating on Jews Row ('danger for most') for the year 2100. Flood levels on the site are ~5.74-5.77m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond to the north and south of the site, and also on Jews Row and Bridgend Road. 4 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 016, Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface and also susceptible to groundwater below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.77m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT16 Wandsworth Bridge Roundabout, SW18

Site ID:	WT16	**Area (ha):**	0.7
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 3%	**Flood Zone 3 (1% AEP):** 97%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

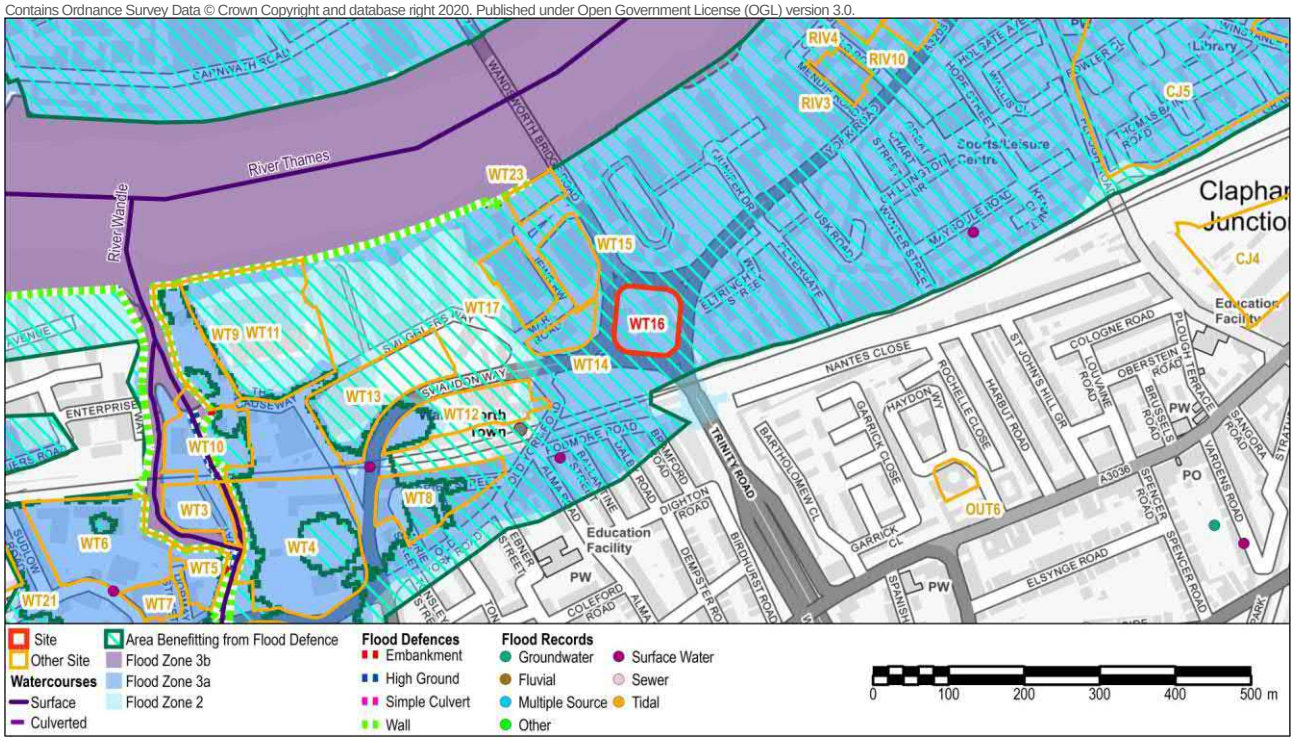

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Battersea Bridge To Wandsworth Bridge, Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 4; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

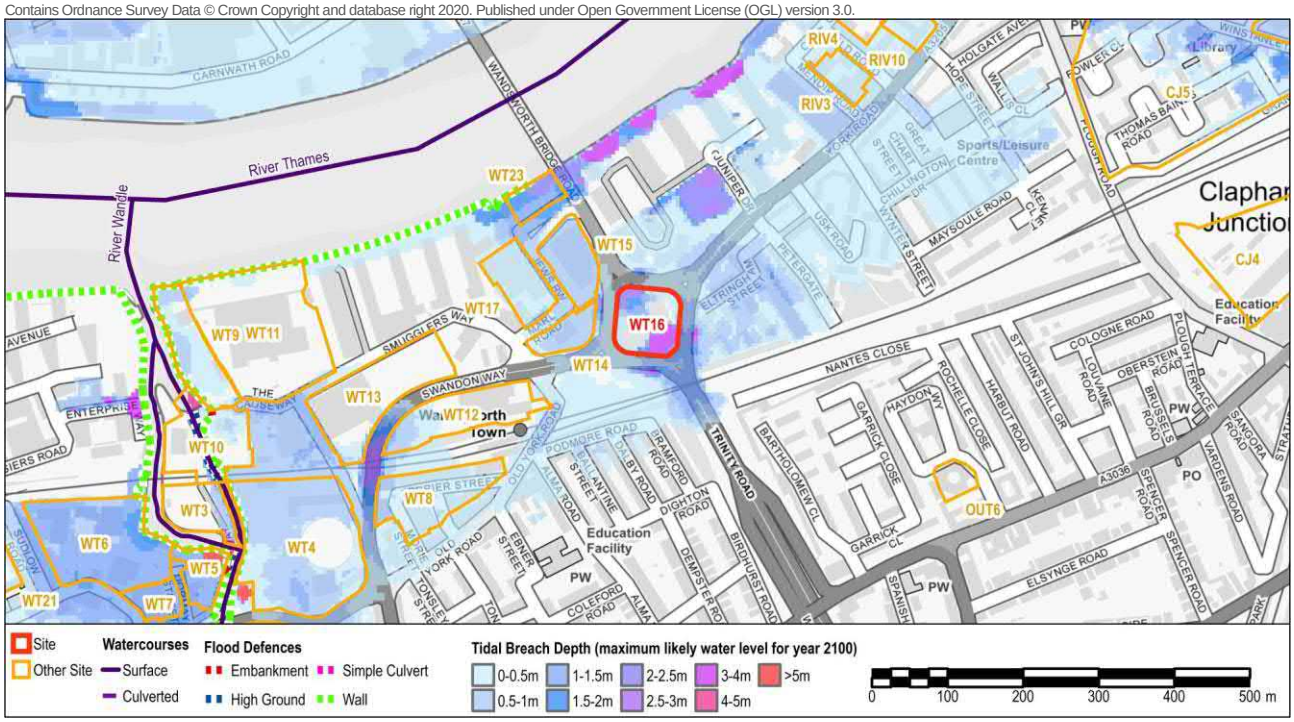

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT16 Wandsworth Bridge Roundabout, SW18

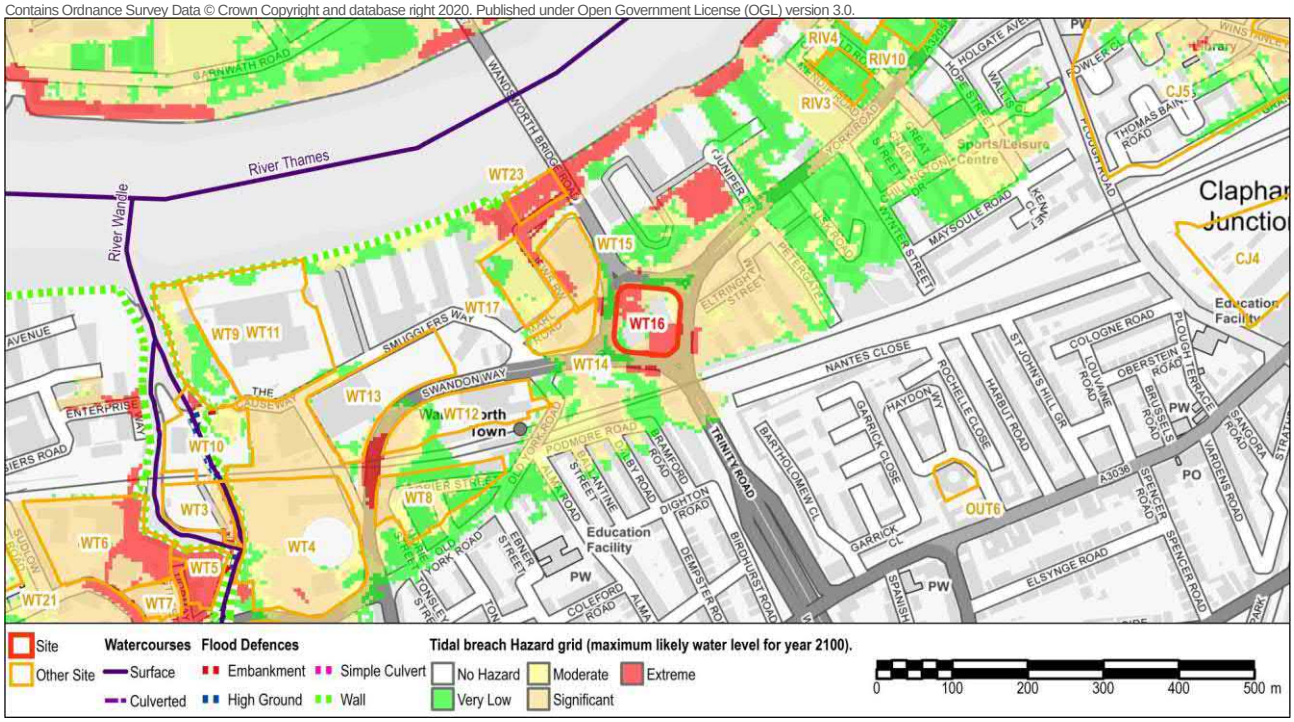

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

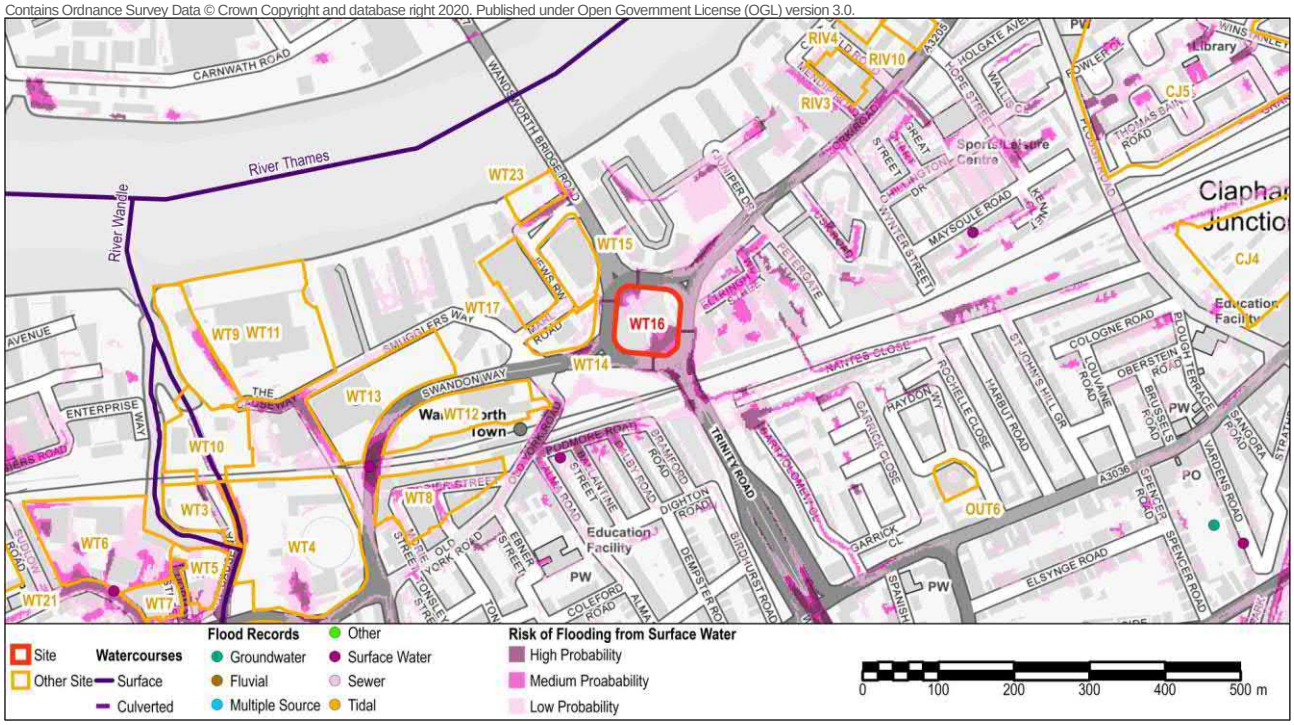

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site WT16 Wandsworth Bridge Roundabout, SW18

Summary

The majority of the site (97%) is defined as Flood Zone 3a High probability of flooding. The site is located 180m south of the tidal River Thames and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 3-4m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and up to 1.5-2m depth, Extreme hazard rating on the surrounding roads at the roundabout ('danger for all') for the year 2100. Flood levels across the majority of the site are ~5.18m AOD and ~5.70m AOD[1] on Swandon Way.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the roundabout. 4 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 016, Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.18m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge, Tidal Thames From Wandsworth Bridge To Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT17 Wandsworth Bus Garage, Jews Row, SW18

Site ID:	WT17	**Area (ha):**	0.6
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 5%	**Flood Zone 3 (1% AEP):** 95%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 100%

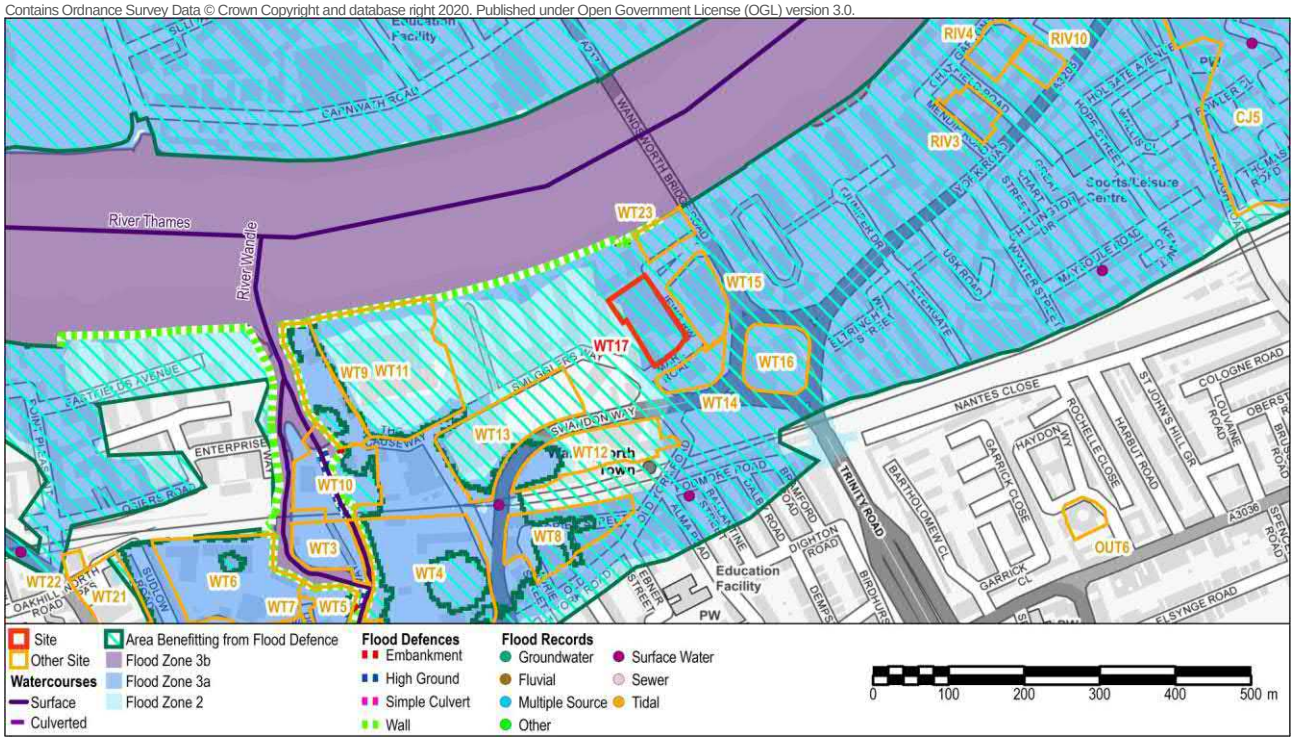

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 4; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

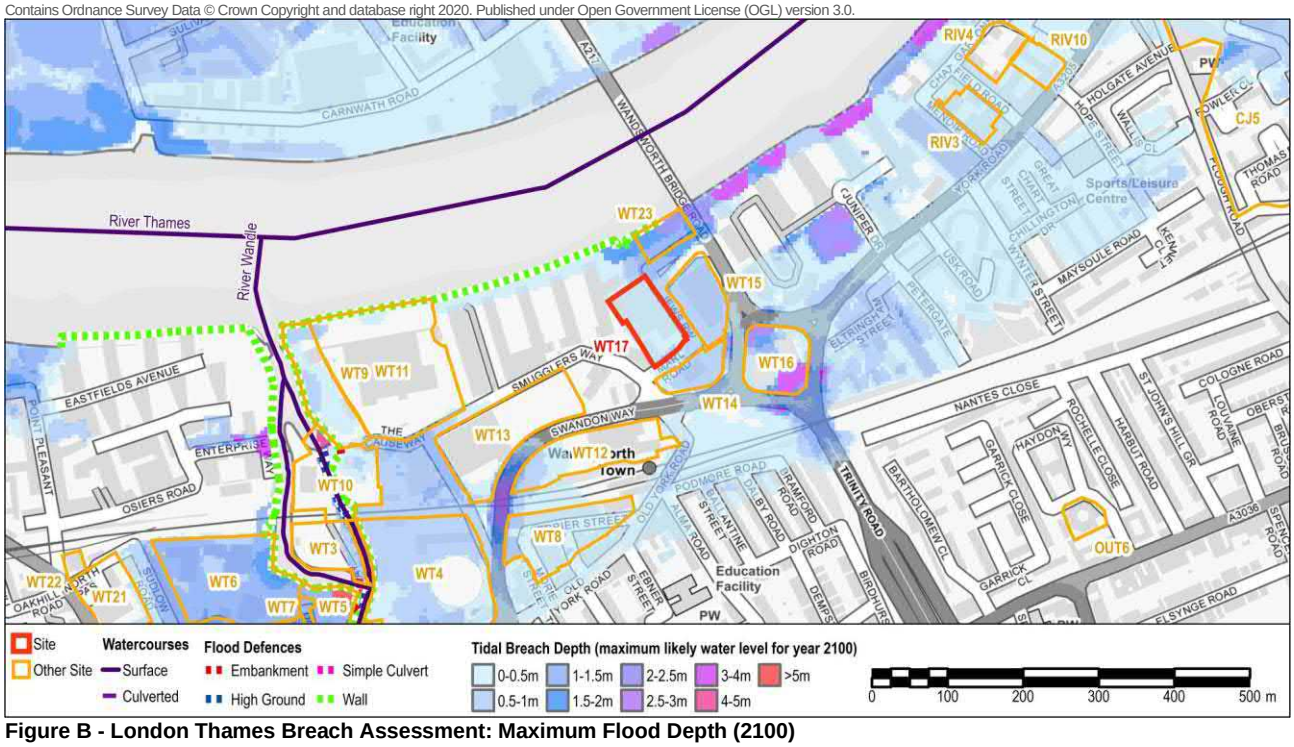

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT17 Wandsworth Bus Garage, Jews Row, SW18

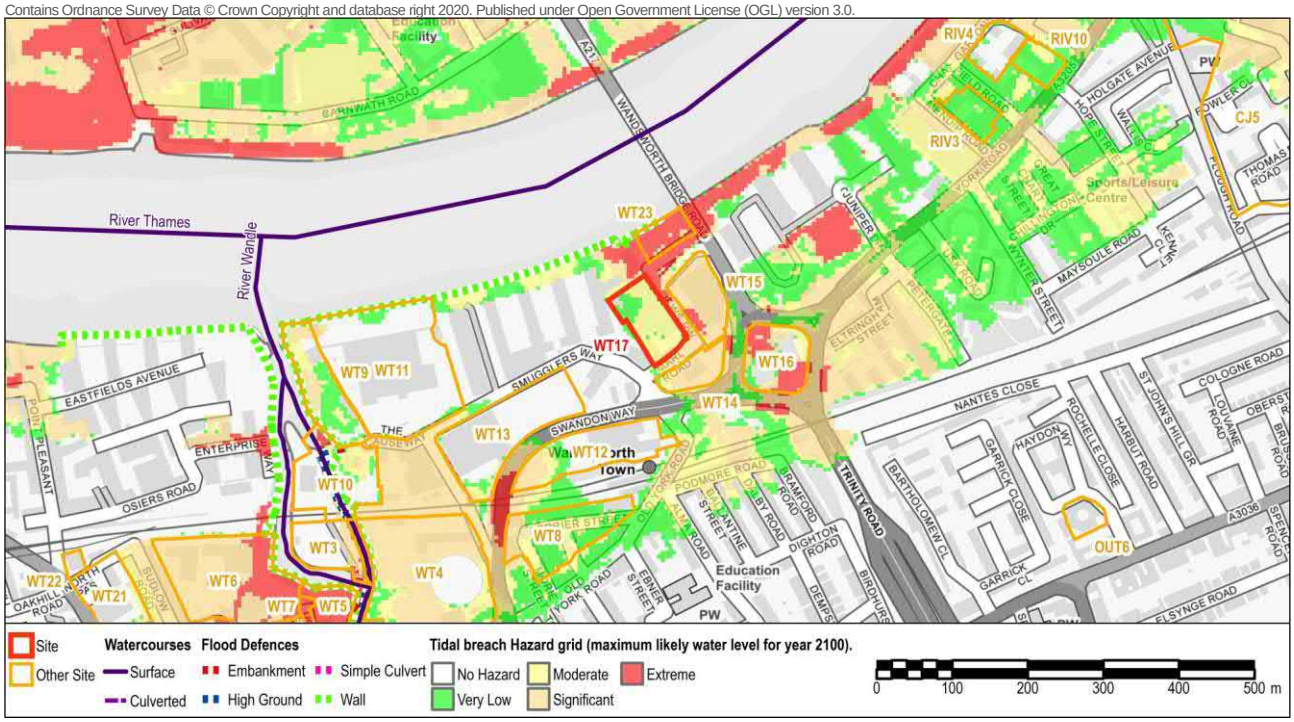

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

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

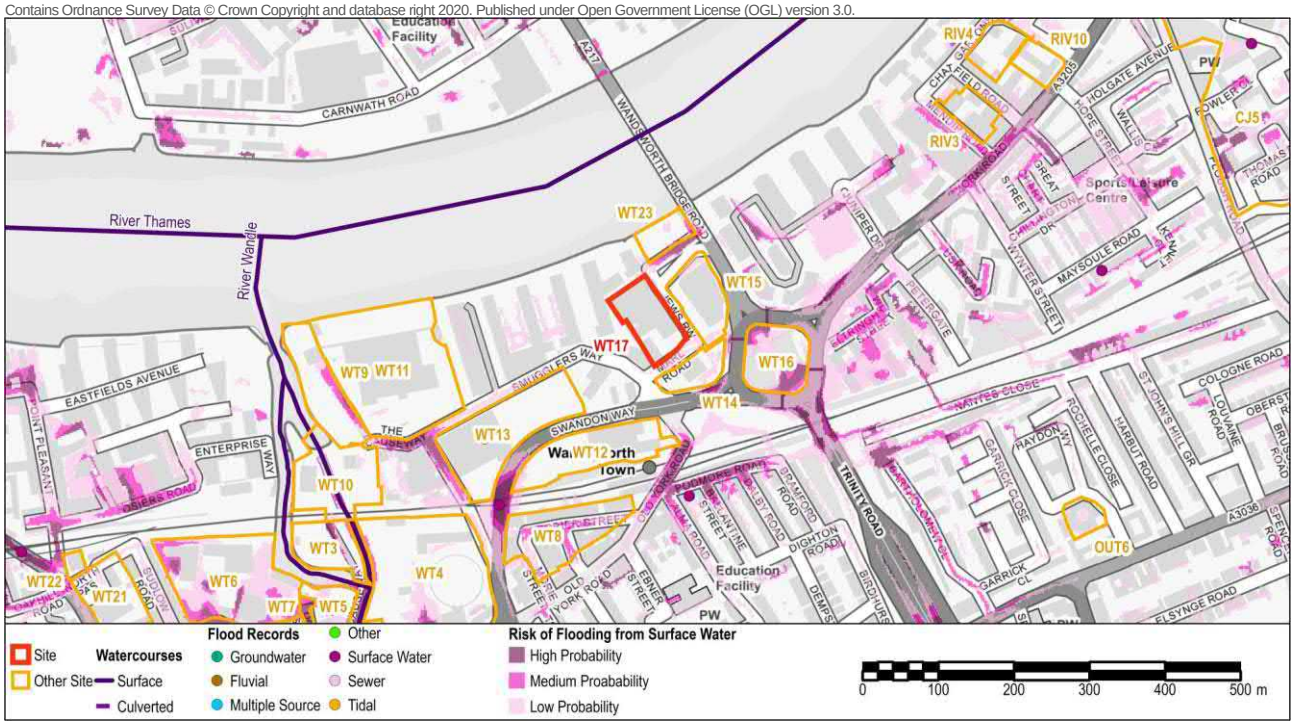

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_016 Trinity Road [Wandsworth]
Drainage Catchment	DC2

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding of property situated below ground level. Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site WT17 Wandsworth Bus Garage, Jews Row, SW18

Summary

The majority of the site (95%) is defined as Flood Zone 3a High probability of flooding. The site is located 70m south of the tidal River Thames and is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream.

The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate the site to a depth of 0.5-1m, with a corresponding hazard rating of Extreme ('danger for all') on the site, and up to 1-1.5m depth, Extreme hazard rating on Jews Row ('danger for most') for the year 2100. Flood levels in this area are ~5.75m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Jews Road and Marl Road located adjacent to the site. 4 incidents of surface water flooding have been reported within 500m of the site, and it is located within a Critical Drainage Area (CDA 016, Trinity Road).

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater at the surface and also susceptible to groundwater below ground level.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change[2]. The modelled flood level from the London Thames Breach Assessment in this location is ~5.75m AOD[1].
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change.
- The site is located within the Flood Warning Area for the Tidal Thames From Wandsworth Bridge To Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT18 65-71 Wandsworth High Street incl. Spread Eagle Public House; Wandsworth High Street and 5 Garratt Lane, SW18

Site ID:	WT18	**Area (ha):**	0.14
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 84%	**Flood Zone 3 (1% AEP):** 16%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 34%

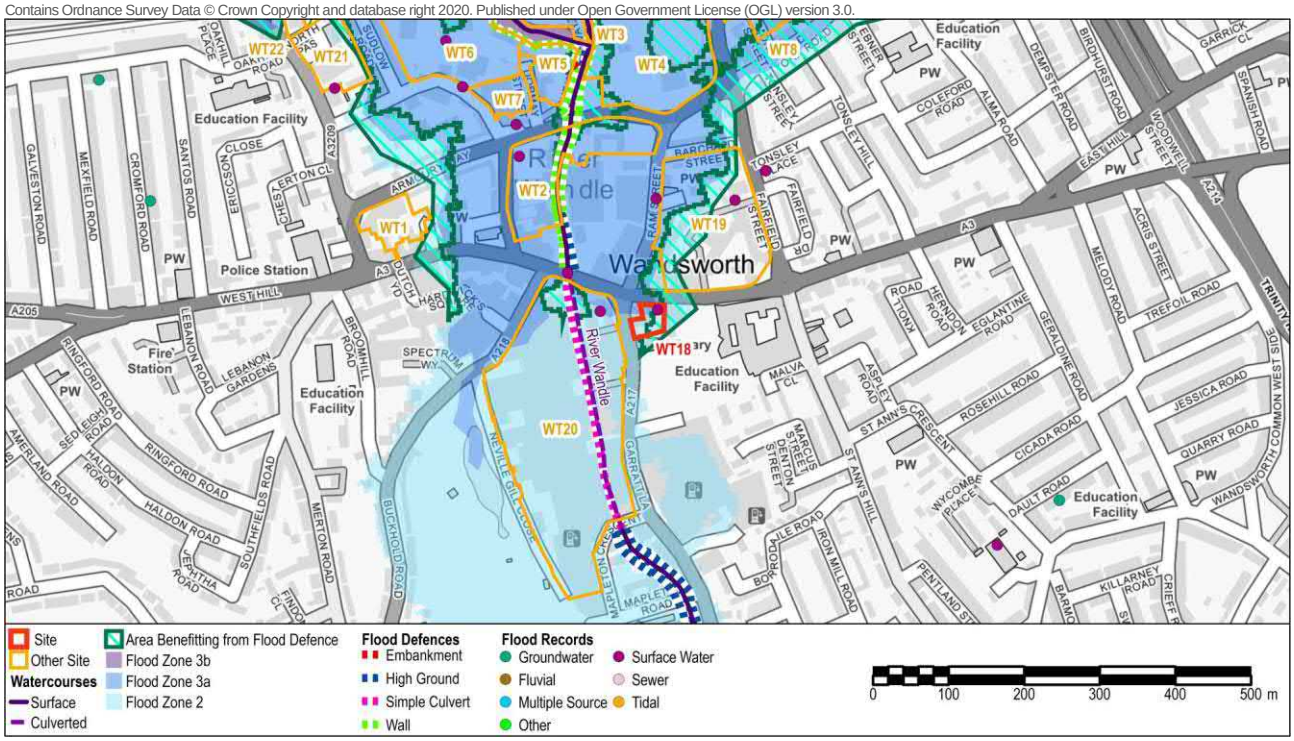

Figure A - Flood Zones and Flood Records

Flood Warning Area	River Wandle At Wandsworth, Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 12; Groundwater 0; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

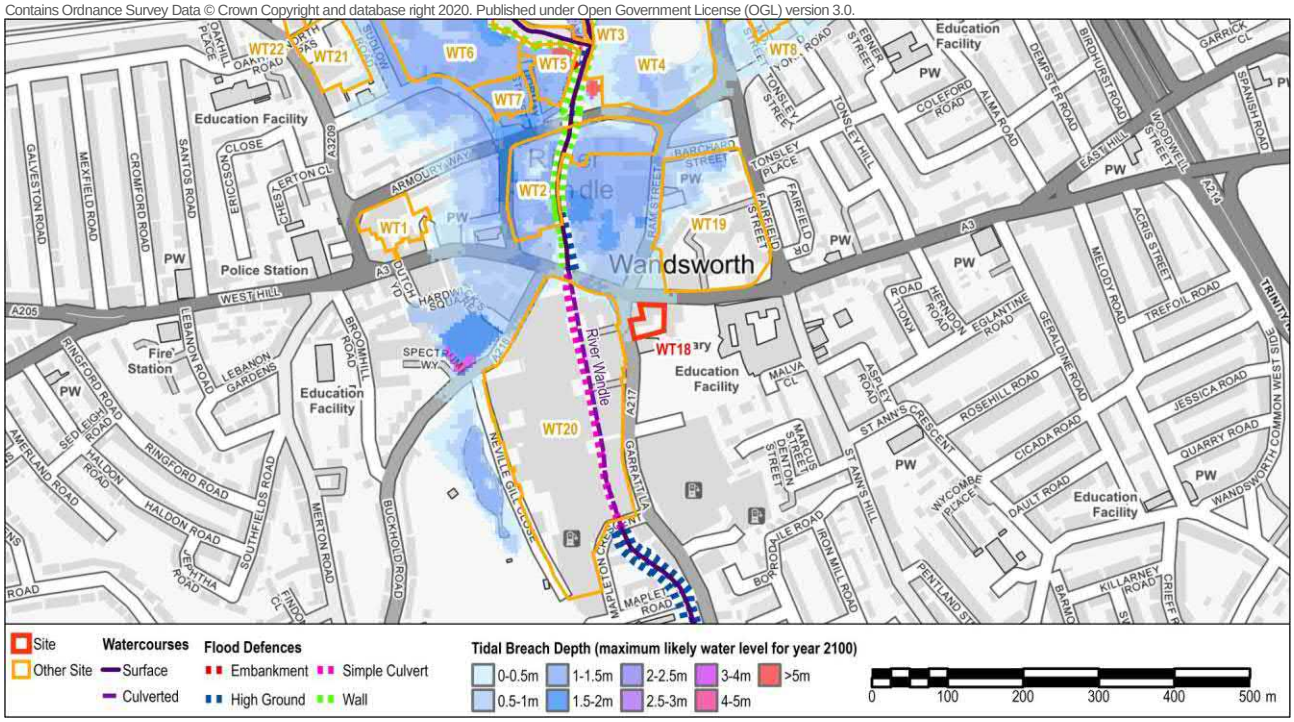

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT18 65-71 Wandsworth High Street incl. Spread Eagle Public House; Wandsworth High Street and 5 Garratt Lane, SW18

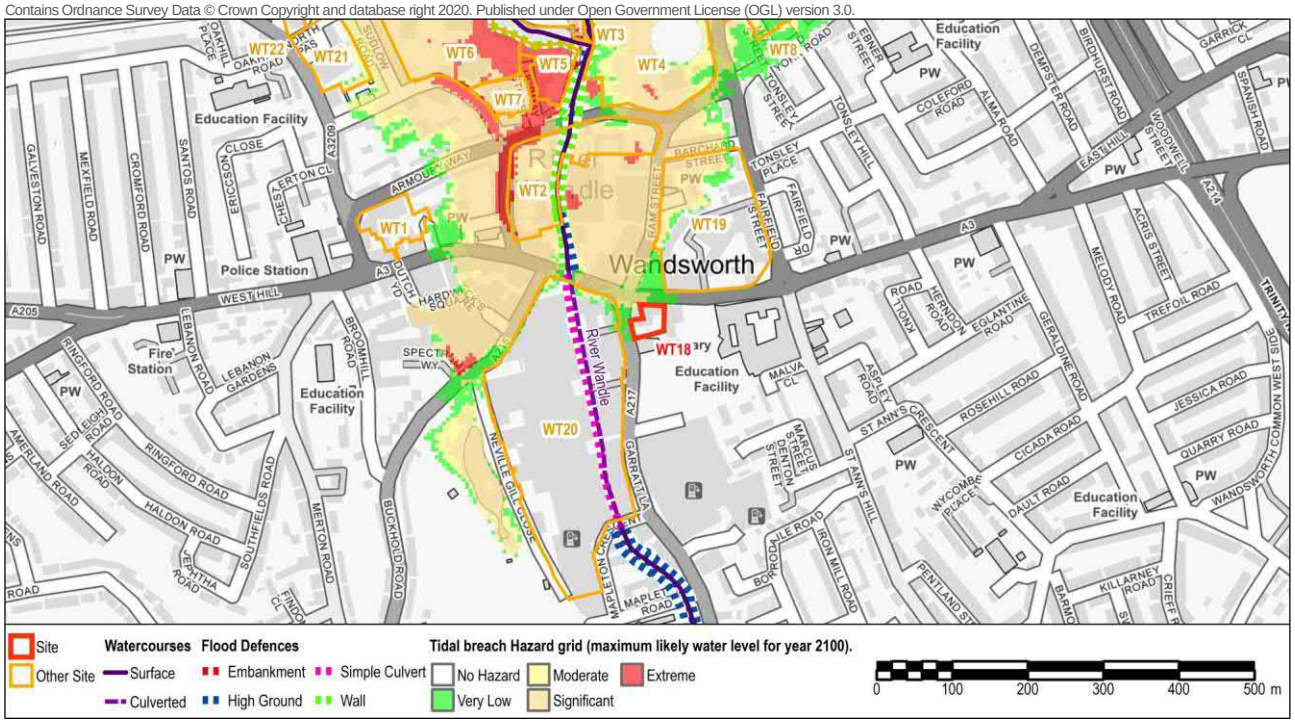

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

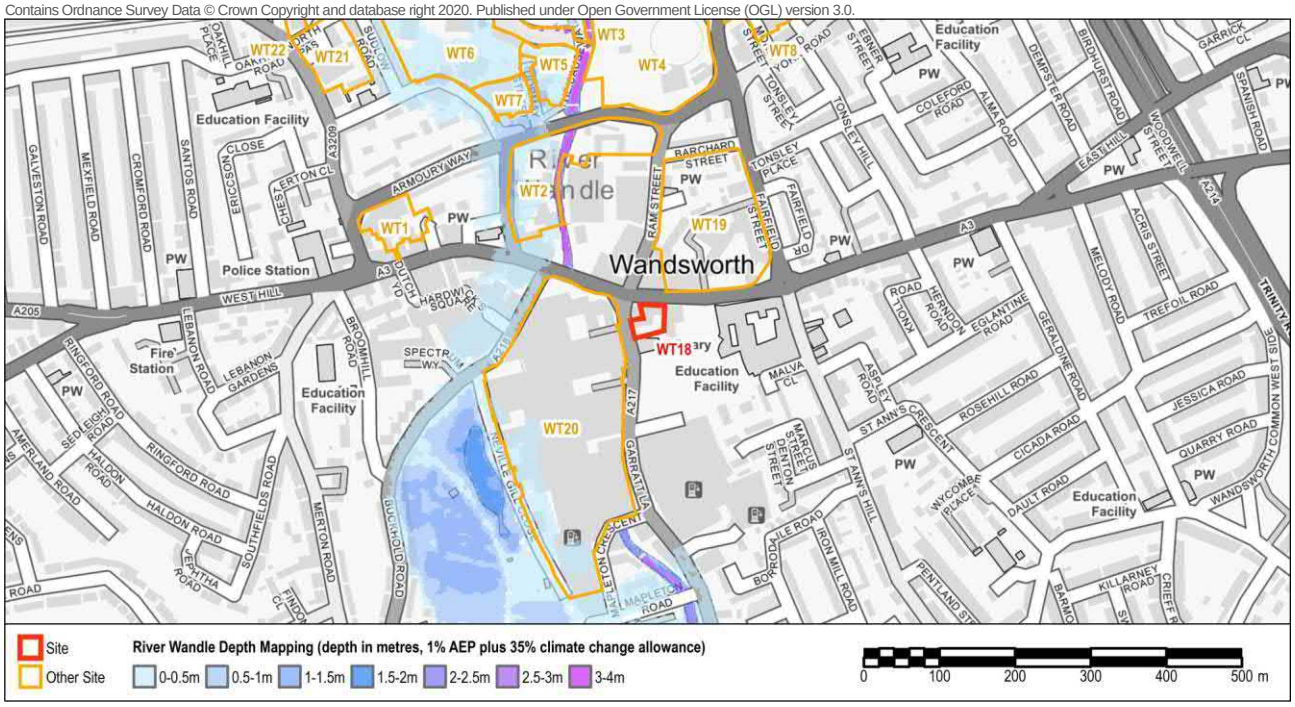

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT18 65-71 Wandsworth High Street incl. Spread Eagle Public House; Wandsworth High Street and 5 Garratt Lane, SW18

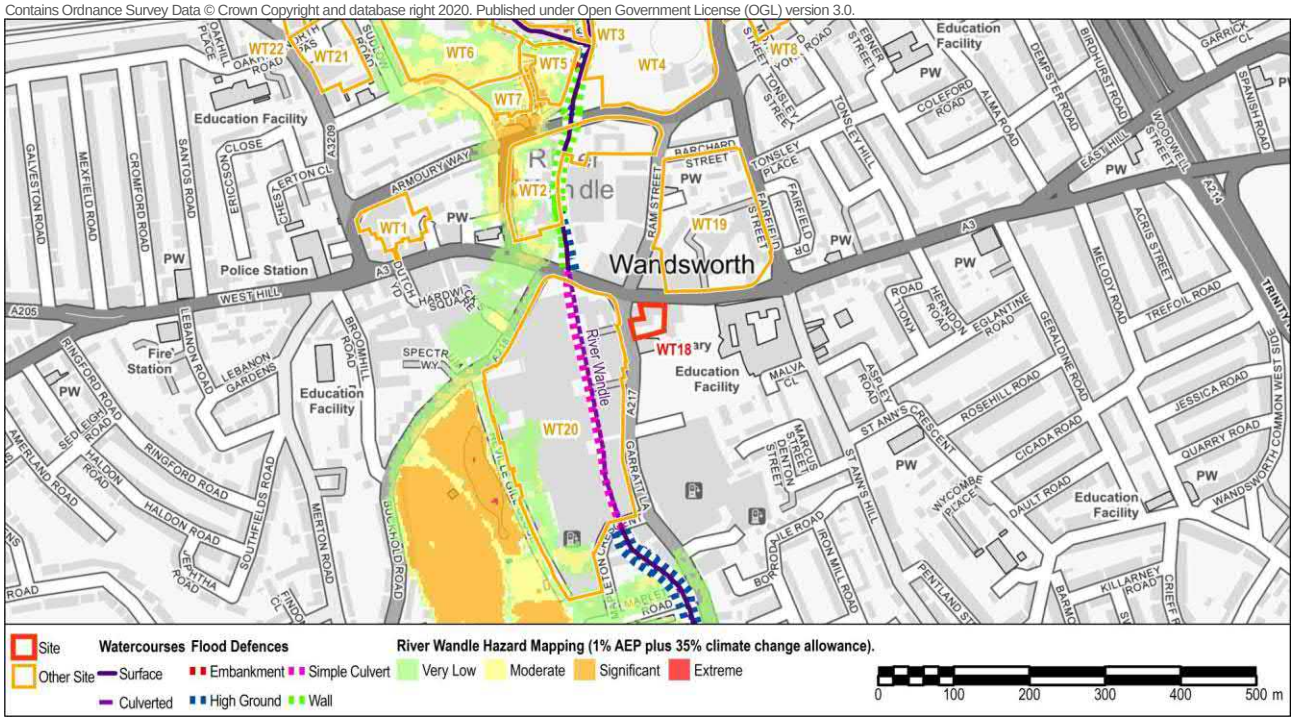

Figure E - Maximum Flood Hazard 1% AEP including climate change

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

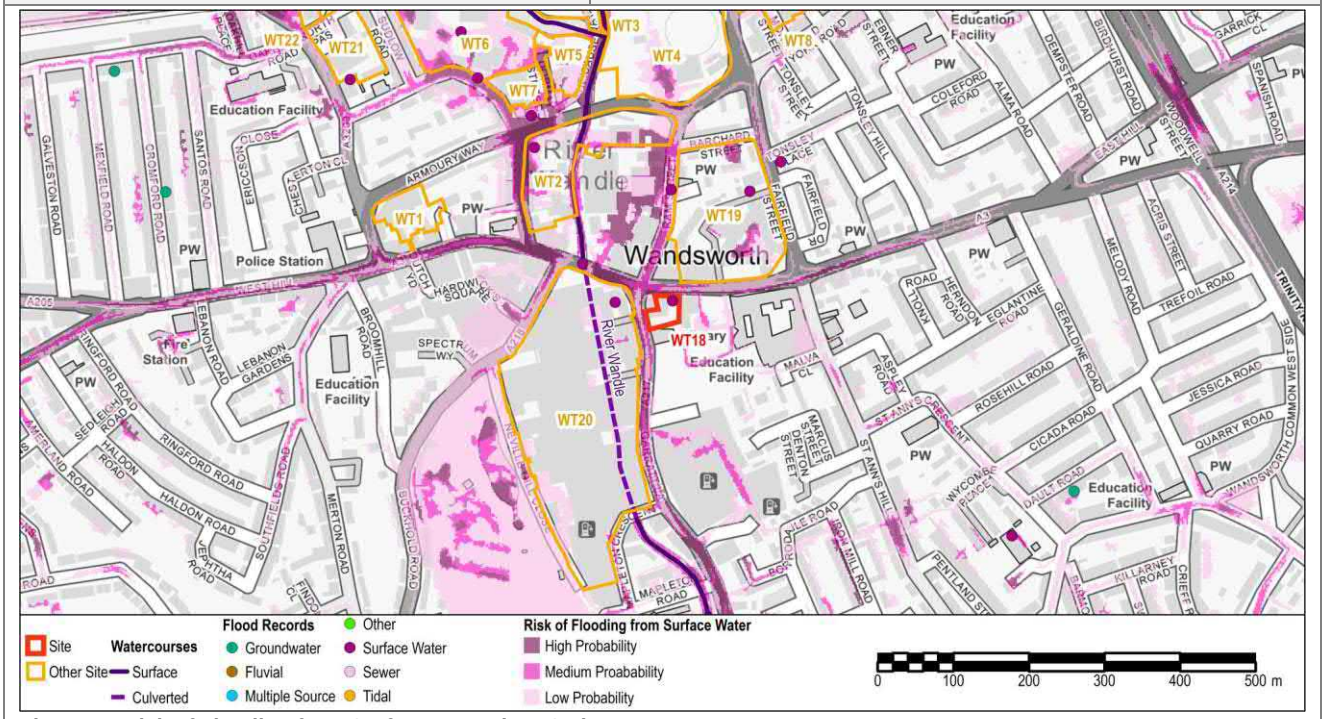

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand, Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT18 65-71 Wandsworth High Street incl. Spread Eagle Public House; Wandsworth High Street and 5 Garratt Lane, SW18

Summary

The River Wandle is located approximately 100m west to the site. The majority of the site (84%) is defined as Flood Zone 2 Medium probability of flooding, and the remainder of the site (16%) is defined as Flood Zone 3a, High probability of flooding.

The site is not shown to be at risk of flooding from the River Wandle.

The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The site is not modelled to be residual risk of tidal flooding during a breach in the Thames tidal defences, however flood water would inundate Wandsworth High Street and Garratt Lane located adjacent to the site to a depth of 0.5m, with a corresponding hazard rating of Moderate ('danger for some'). Flood levels in this area are ~5.75m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on Wandsworth High Street and Garratt Lane located adjacent to the site. There are 12 reported incidents of surface water flooding within 500m of the site.

There are no groundwater flooding records in this area. Broadscale mapping suggests that the local area may be susceptible to groundwater flooding at the surface.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels for sleeping accommodation should be set above the extreme water level including an allowance for climate change. The modelled flood level from the London Thames Breach Assessment in this location is ~5.75m AOD[1] (for the year 2100).
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change[2].
- The site is located within the Flood Warning Area for River Wandle At Wandsworth, Tidal Thames From Wandsworth Bridge To Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT19 Wandsworth Town Hall, Wandsworth High Street, SW18

Site ID:	WT19	**Area (ha):**	2.3
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 52%	**Flood Zone 2 (0.1% AEP):** 21%	**Flood Zone 3 (1% AEP):** 27%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 26%

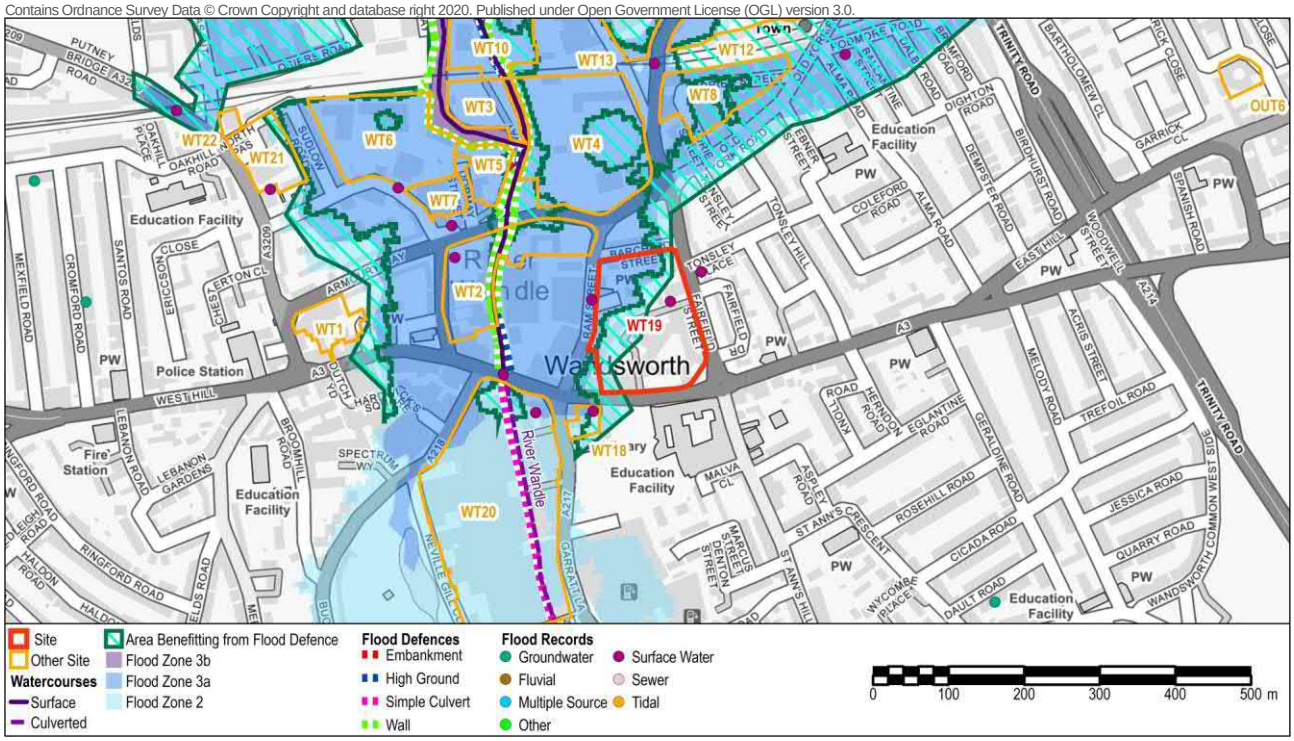

Figure A - Flood Zones and Flood Records

Flood Warning Area	River Wandle At Wandsworth, Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 15; Groundwater 1; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

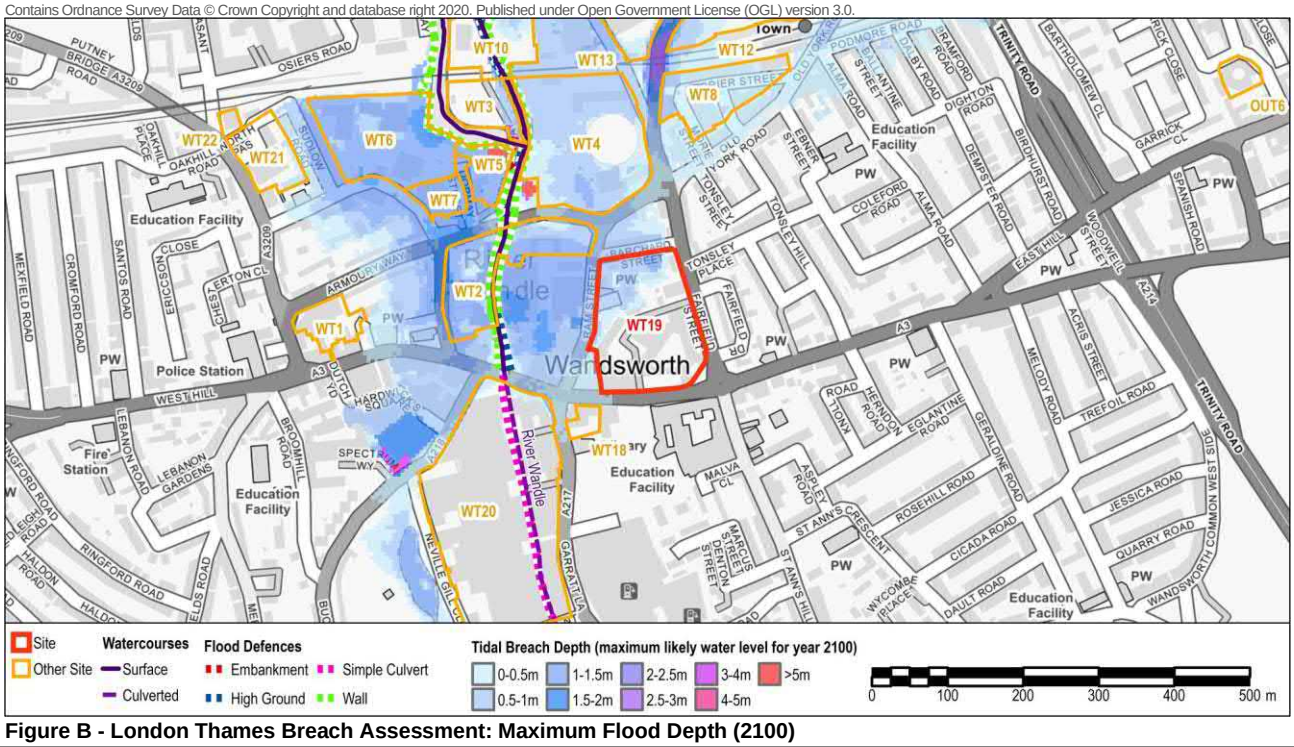

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT19 Wandsworth Town Hall, Wandsworth High Street, SW18

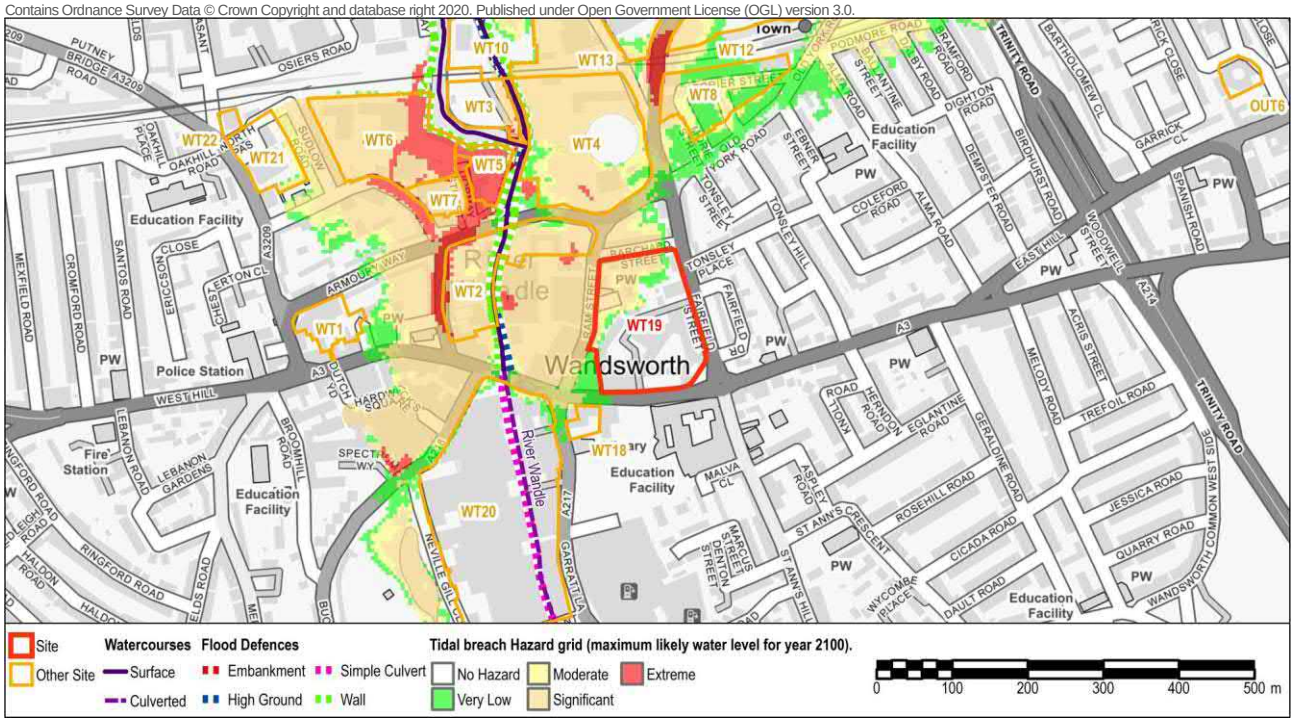

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

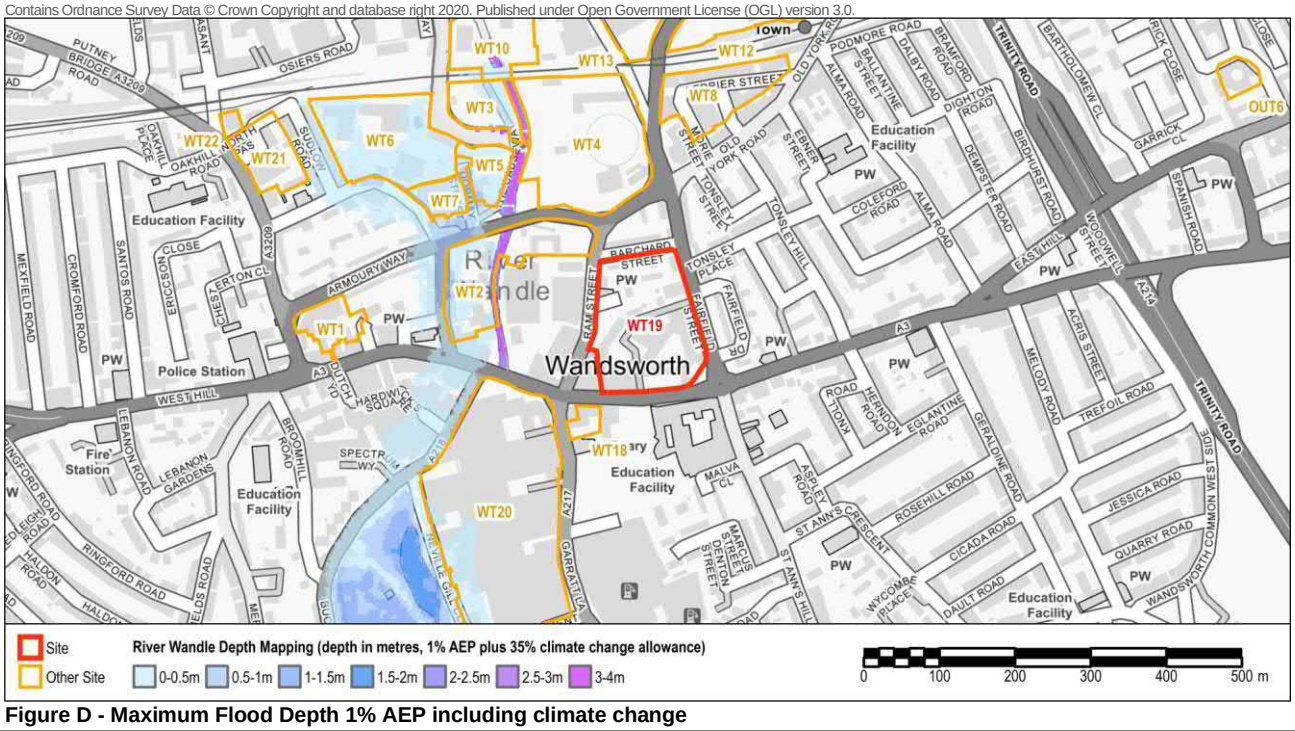

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT19 Wandsworth Town Hall, Wandsworth High Street, SW18

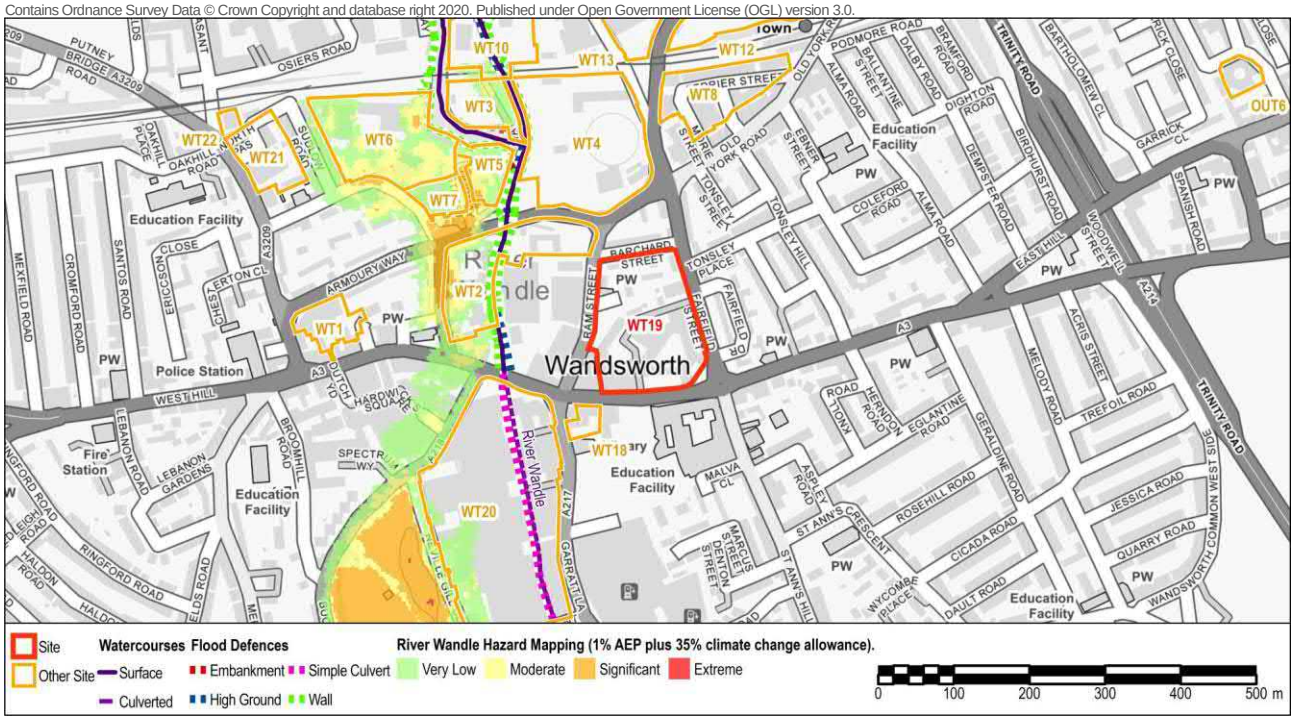

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

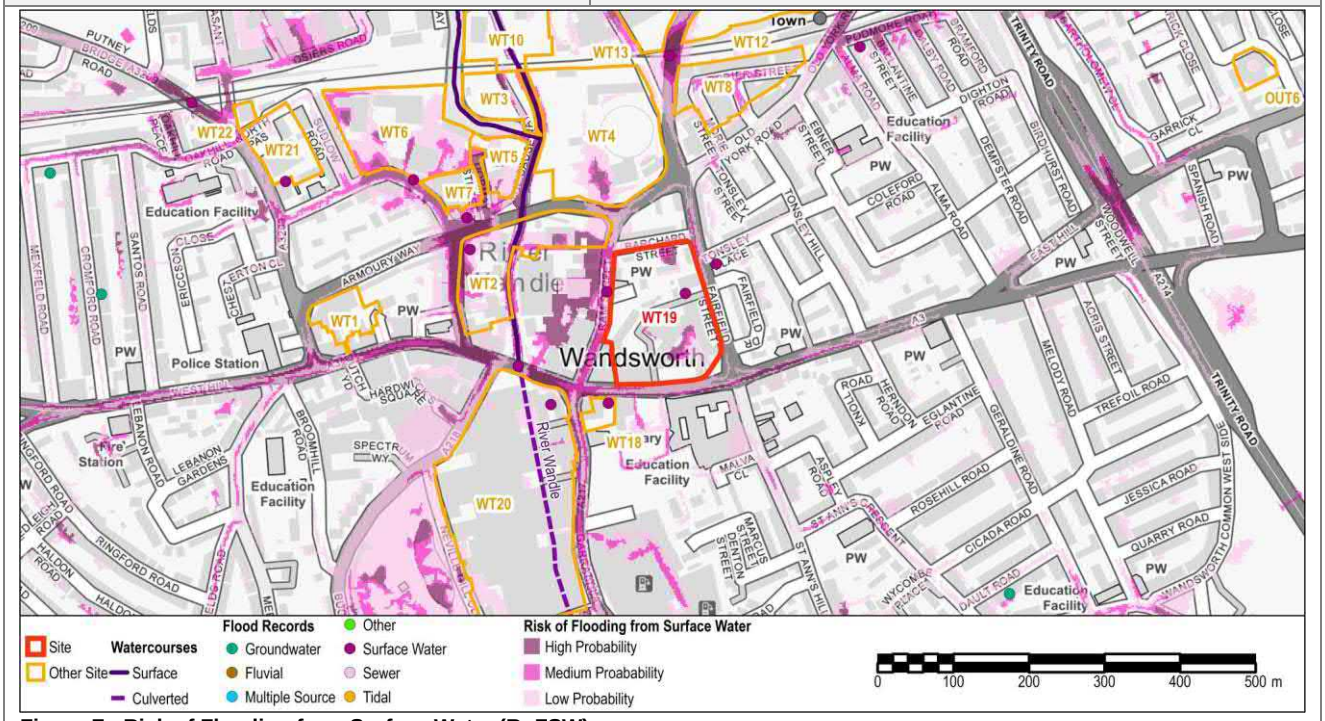

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand, Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT19 Wandsworth Town Hall, Wandsworth High Street, SW18

Summary

The River Wandle flows north approximately 120m west to the site. The majority of the site (52%) is defined as Flood Zone 1 Low probability of flooding, and the remainder of the site are defined as Flood Zone 2 Medium probability flooding (21%) and Flood Zone 3 High probability flooding (27%).

The site is not shown to be at risk of flooding from the River Wandle during the 1% AEP event including 35% allowance for climate change. During the 1% AEP event including 70% allowance for climate change, flooding extends to Ram Street to the west of the site, with flood levels of ~5.07m AOD1.

The River Wandle meets the tidal River Thames approximately 530m north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Flood water would inundate part of the site to a depth of 1.5-2.0m, with a corresponding hazard rating of Significant ('danger for most') on the site, and 1.5-2.0m depth, Significant hazard rating on Barchard Street and Ram Street ('danger for most') for the year 2100. Flood levels on the site are ~5.52-5.77m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site, and also on Barchard Street and Ram Street adjacent to the site. 15 reported incidents of surface water flooding within 500m of the site.

There is 1 reported incident of groundwater flooding within 500m of the site.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- Sleeping accommodation should be set above the extreme tidal flood level including an allowance for climate change[2] (5.52-5.77m AOD[1] for the year 2100).
- In the event of a breach in the flood defences, dry access/egress is likely to be possible along the Fairfield Street to the east of the site. In line with the requirements for sleeping accommodation, safe refuge should also be provided above the extreme water level including an allowance for climate change (5.52-5.77m AOD).
- The site is located within the Flood Warning Area for River Wandle At Wandsworth, Tidal Thames From Wandsworth Bridge To Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT20 Southside Shopping Centre, Wandsworth High Street, SW18 4TG

Site ID:	WT20	Area (ha):	5.39
Proposed Use:	Mixed-use including residential	Vulnerability Classification:	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 3%	Flood Zone 2 (0.1% AEP): 91%	Flood Zone 3 (1% AEP): 6%	Flood Zone 3b (5% AEP): 0%	Area Benefiting from Defences: 4%

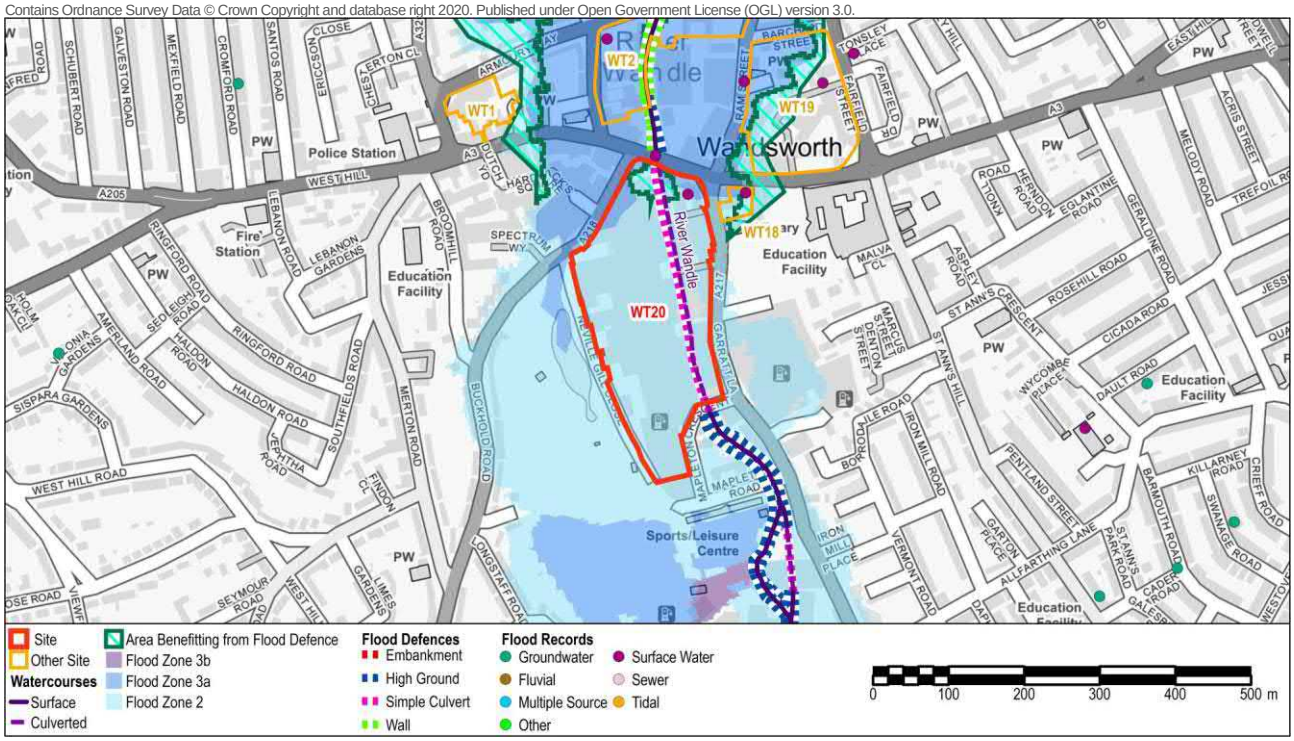

Figure A - Flood Zones and Flood Records

Flood Warning Area	River Wandle At Wandsworth, Tidal Thames From Wandsworth Bridge To Putney Bridge	Emergency Rest Centre	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 14; Groundwater 2; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

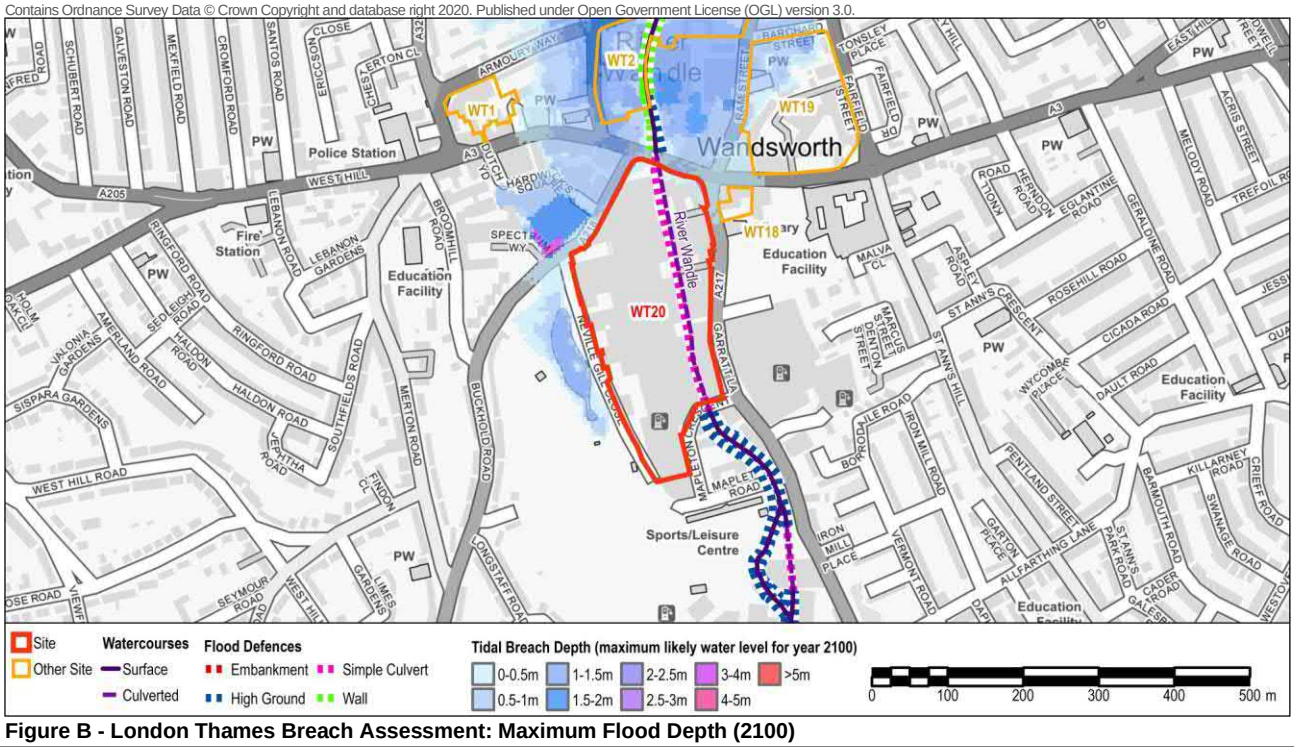

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT20 Southside Shopping Centre, Wandsworth High Street, SW18 4TG

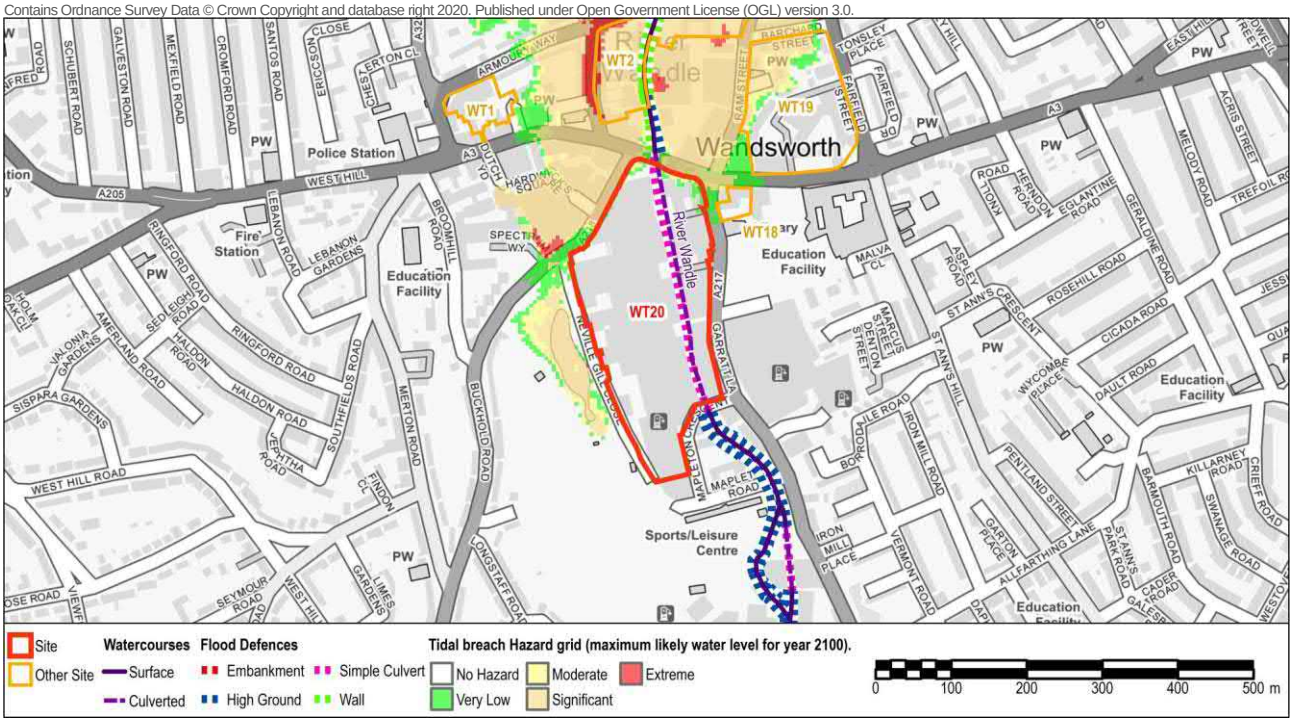

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

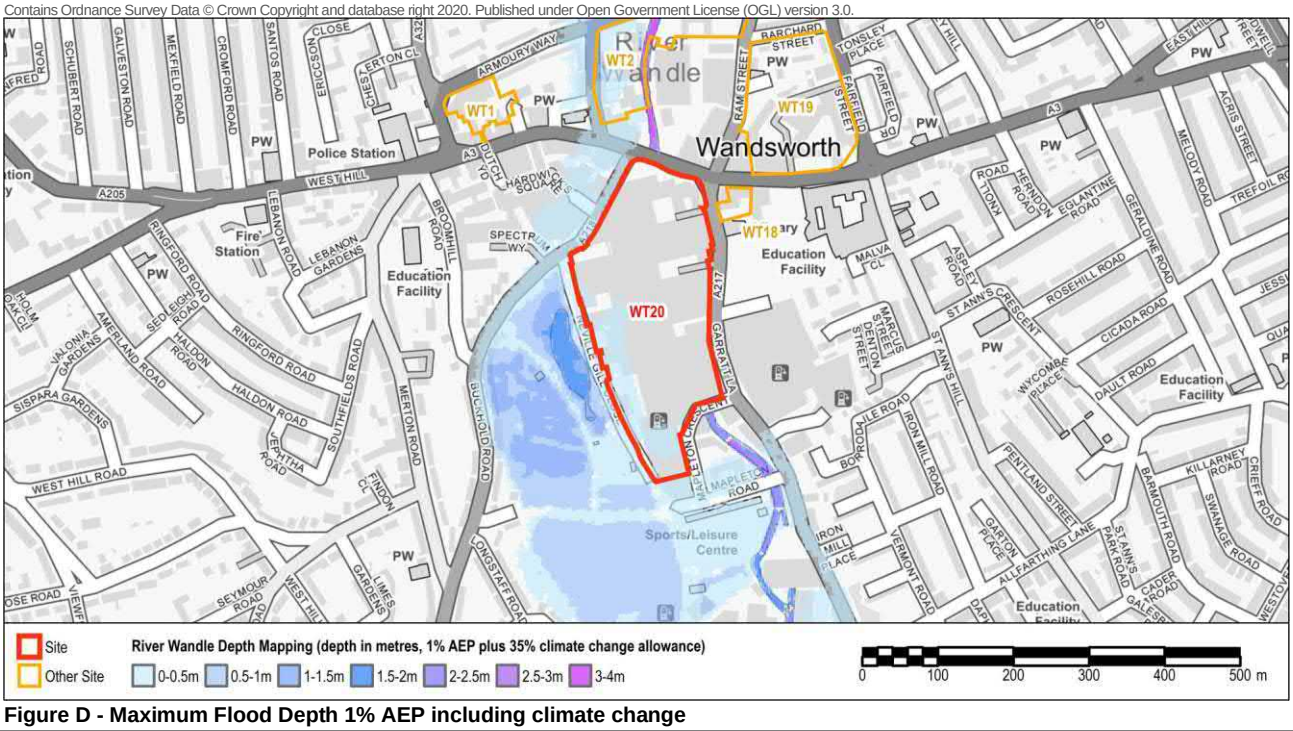

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT20 Southside Shopping Centre, Wandsworth High Street, SW18 4TG

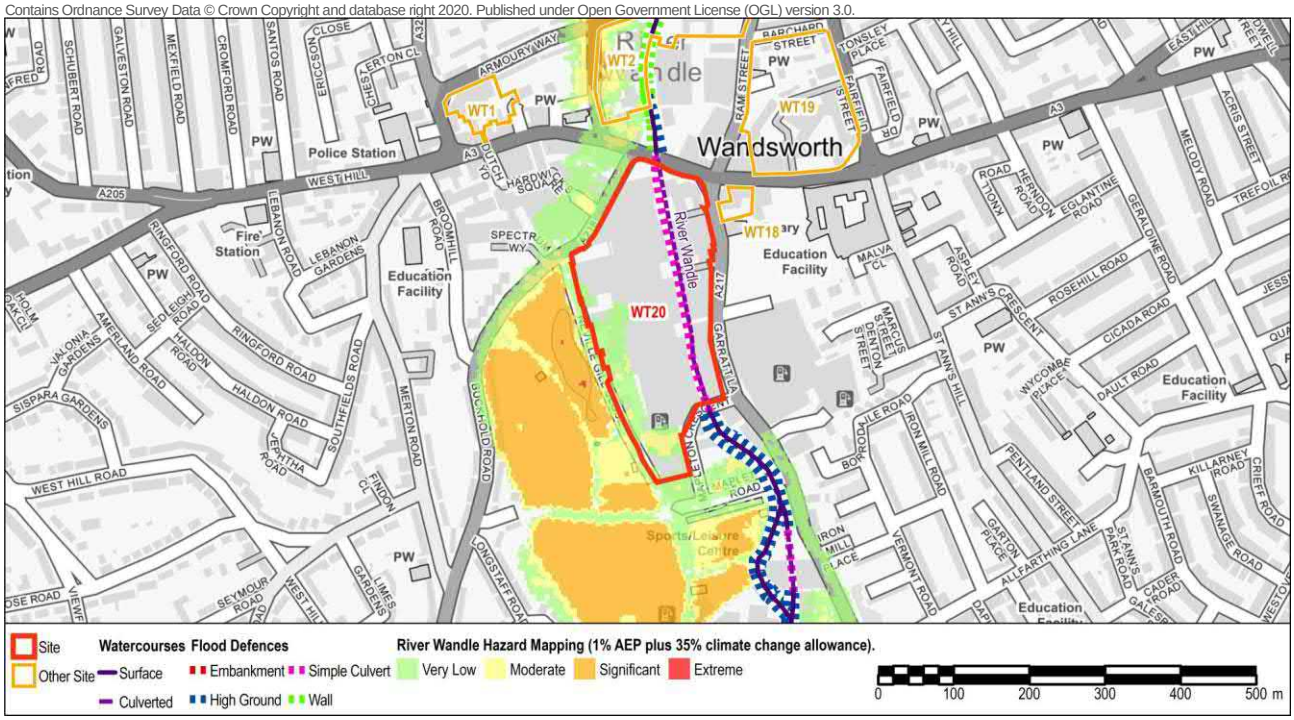

Figure E - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

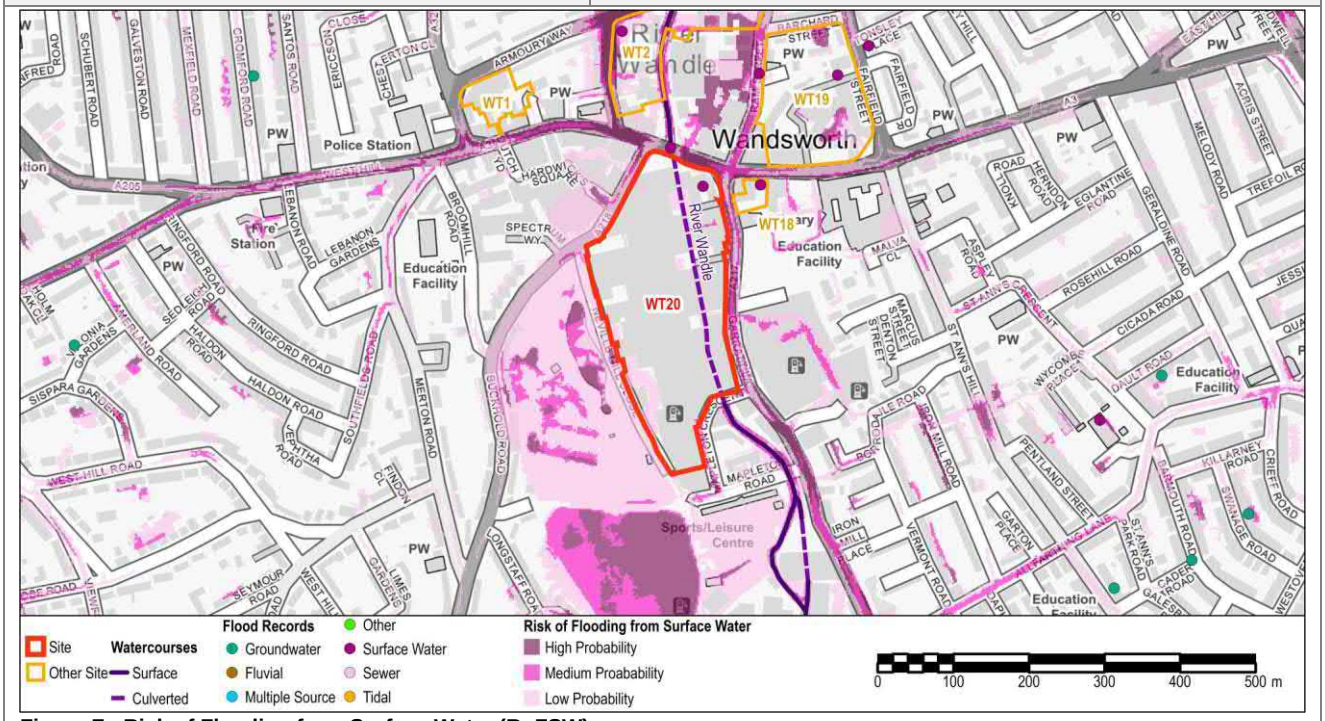

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_015 King Georges Park [Wandsworth]		
Drainage Catchment	DC6, DC7		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand, Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the western fringe of this site could be at risk of flooding, in the event of a breach of the Wimbledon Park Lake.		

Site WT20 Southside Shopping Centre, Wandsworth High Street, SW18 4TG

Summary

The River Wandle is culverted beneath the site. The majority of the site (91%) is defined as Flood Zone 2 Medium probability of flooding from rivers or the sea, with a small area of Flood Zone 3 High probability (6%).

The site is shown to be at risk of flooding from the River Wandle. During the modelled 1% AEP event including 35%, climate change, 17% of the site, on the western edge, is at risk of flooding. Flood depths reach 0.5m and the hazard rating on the site is Moderate, which presents a 'danger for some'. Flood levels range from 5.0-5.94m AOD on the site. During the 1% AEP event including 70% allowance for climate change, the extent of flooding covers more of the site and flood levels are ~5.3-6.39m AOD1.

The River Wandle meets the tidal River Thames approximately 800m north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that in the event of a breach in the Thames tidal defences, floodwater does not extend to reach the site. However, land immediately to the north of the site including the A218 and Wandsworth High Street is shown to be at residual risk of tidal flooding, with a corresponding hazard rating of Significant ('danger for most') for the year 2100. Flood levels along Wandsworth High Street and Buckhold Road are ~5.77m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond on the roads around the edge of the site. There are records of surface water flooding in proximity to the site and it is located within a Critical Drainage Area (CDA 15 King Georges Park). There are 14 reported incidents of surface water flooding within 500m of the site.

There are 2 reported incidents of groundwater flooding within 500m of the site. Broadscale mapping suggests there may be potential for groundwater flooding to occur at surface in this area.

Site Specific Recommendations

The River Wandle is culverted in this location. As part of any potential redevelopment of the site Wandsworth Council encourages de-culverting of the River Wandle to realise benefits for the local community and environment.

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is only permitted 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change (5.0-5.94m AOD). Sleeping accommodation should be set above the tidal extreme water level including an allowance for climate change[2] (5.77m AOD[1]).
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including an appropriate allowance for climate change[2]. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- In the event of a breach in the flood defences, dry access/egress may not be possible. In line with the requirements for sleeping accommodation, safe refuge should be provided above the extreme water level including an allowance for climate change and above the 1% AEP flood level for the River Wandle including climate change, whichever is higher.
- The site is located within the Flood Warning Area for the Tidal Thames From Battersea Bridge To Wandsworth Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WT21 70-90 Putney Bridge Road and 1-2 Adelaide Road, SW18

Site ID:	WT21	**Area (ha):**	0.65
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 84%	**Flood Zone 2 (0.1% AEP):** 14%	**Flood Zone 3 (1% AEP):** 2%	**Flood Zone 3b (5% AEP):** 0%	**Area Benefiting from Defences:** 11%

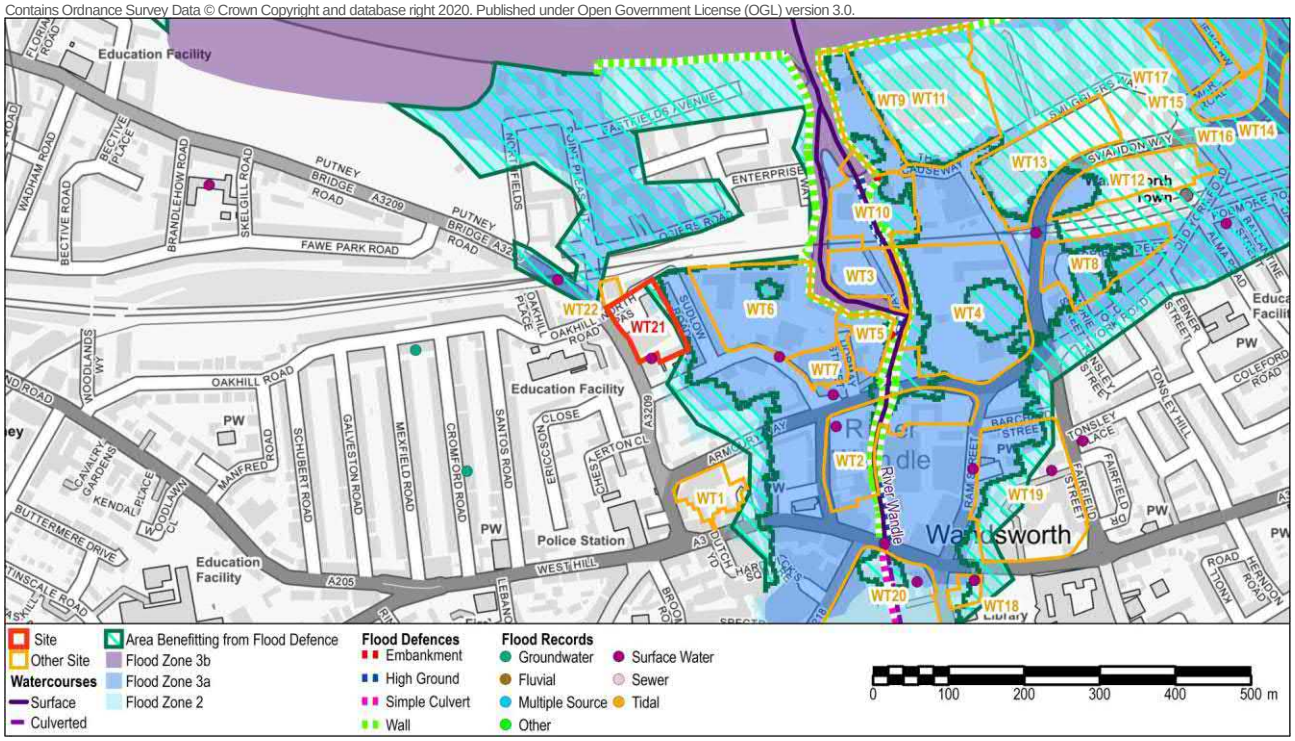

Figure A - Flood Zones and Flood Records

Flood Warning Area	Tidal Thames From Wandsworth Bridge To Putney Bridge	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 0; Surface Water 11; Groundwater 2; Sewer 0; Multiple source 0; Other source 0		

Tidal Flooding

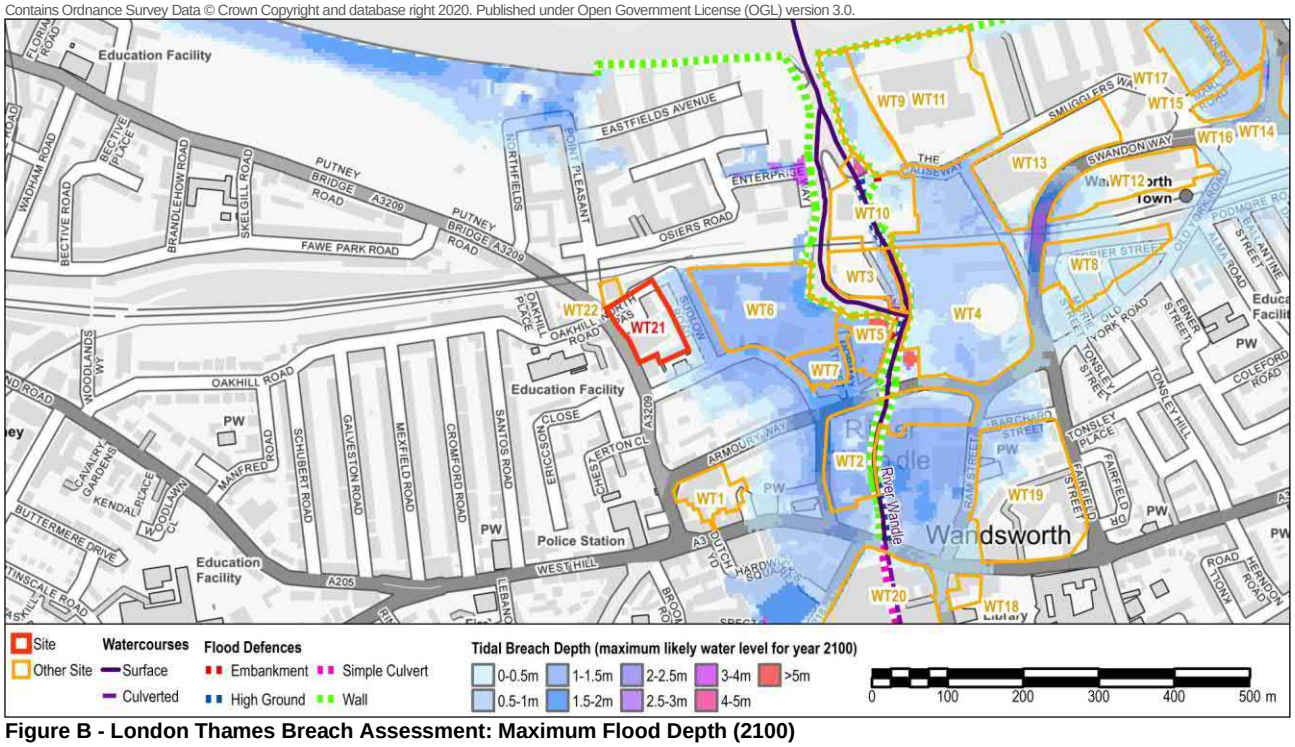

Figure B - London Thames Breach Assessment: Maximum Flood Depth (2100)

Site WT21 70-90 Putney Bridge Road and 1-2 Adelaide Road, SW18

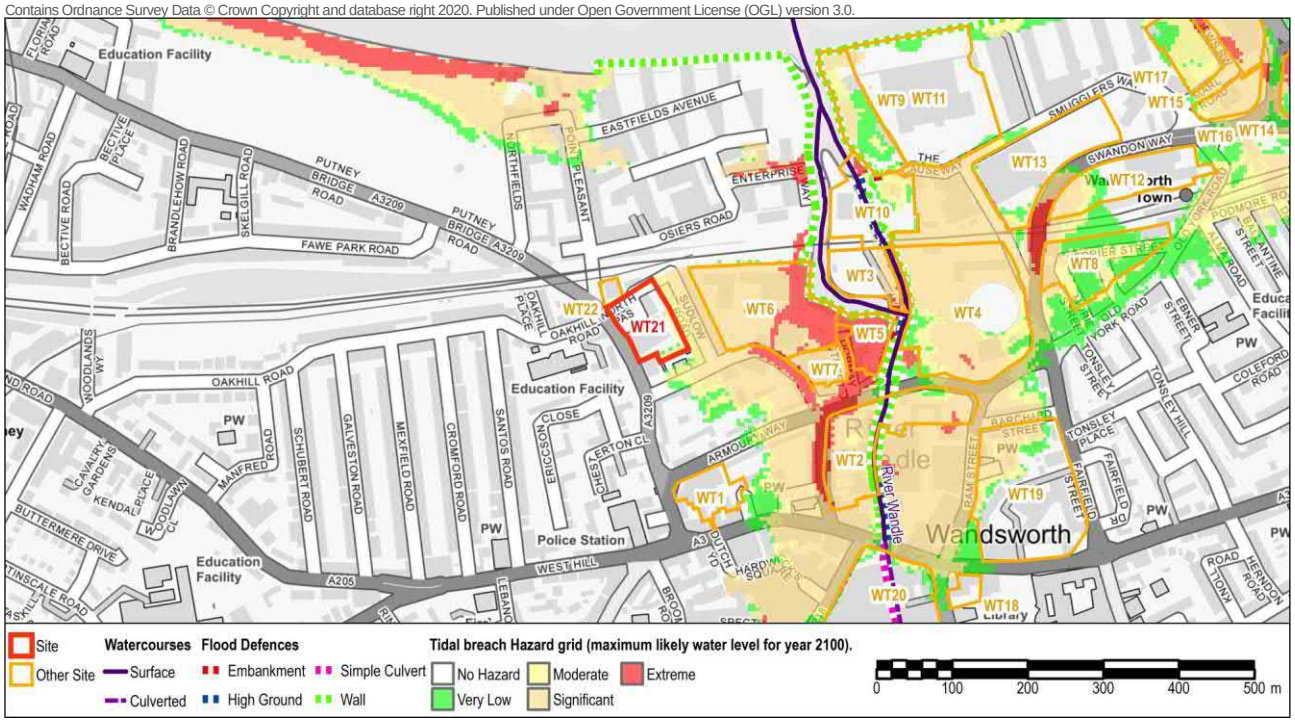

Figure C - London Thames Breach Assessment: Maximum Flood Hazard (2100)

River Flooding

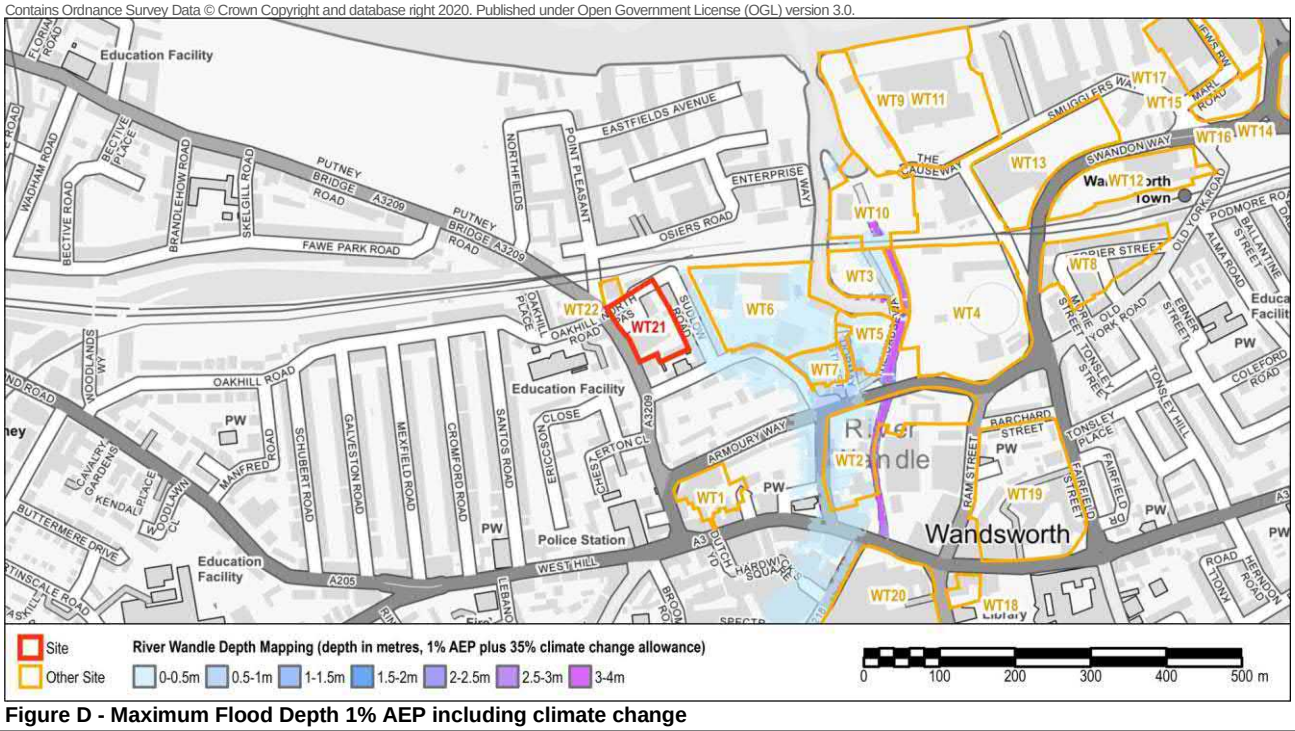

Figure D - Maximum Flood Depth 1% AEP including climate change

Site WT21 70-90 Putney Bridge Road and 1-2 Adelaide Road, SW18

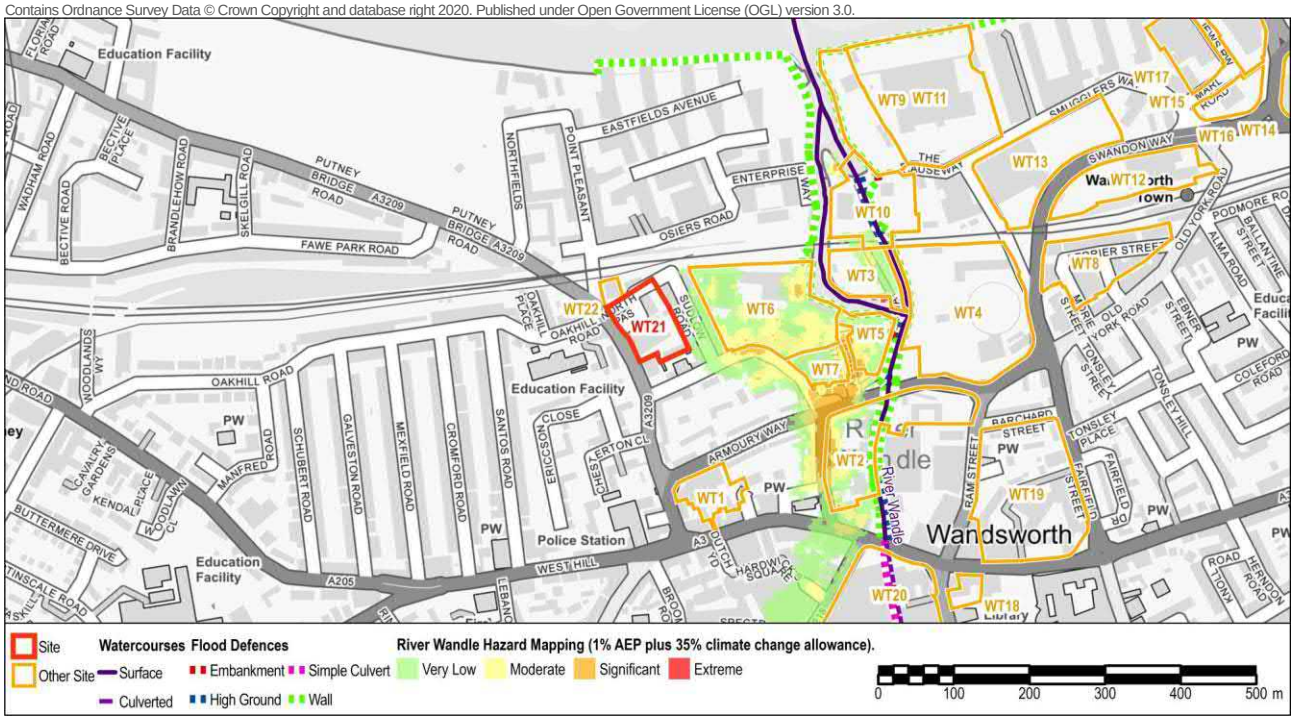

Figure E - Maximum Flood Hazard 1% AEP including climate change

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

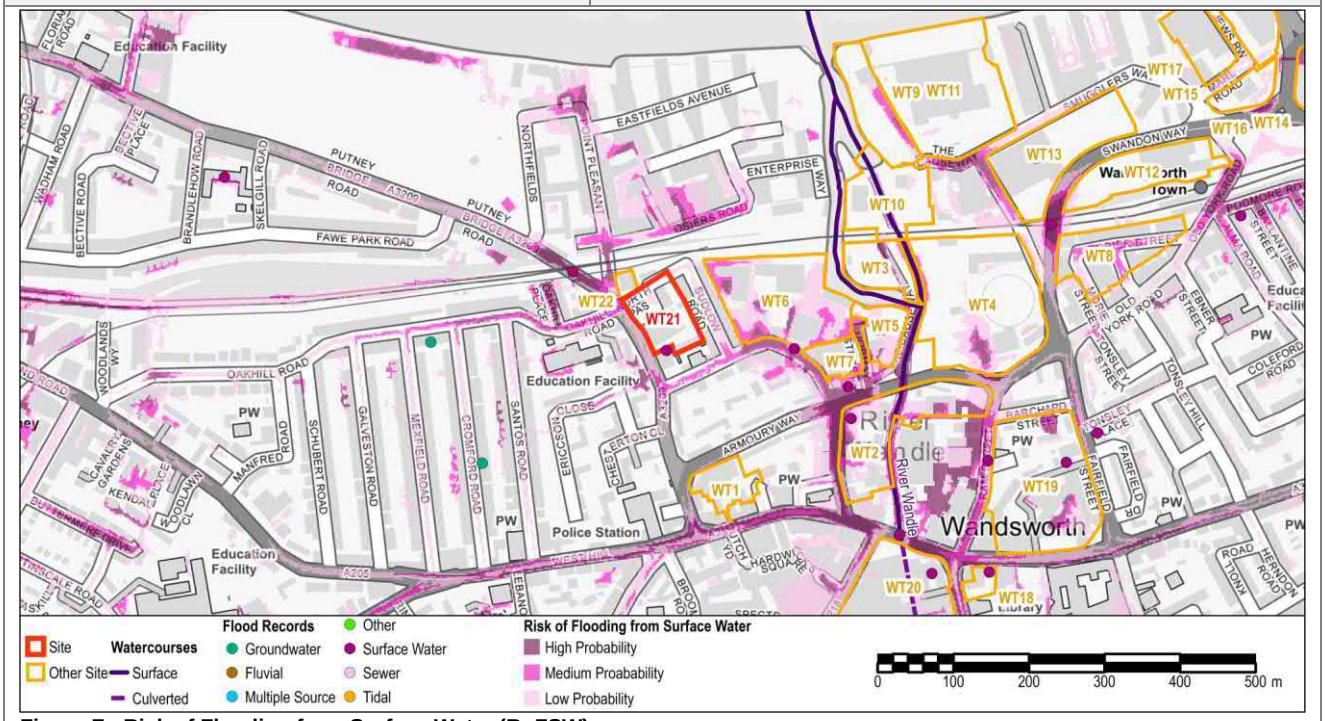

Figure F - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	None		
Drainage Catchment	DC6		
Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	
Other Sources			
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site is not at risk of flooding, in the event of a breach or failure of a reservoir.		

Site WT21 70-90 Putney Bridge Road and 1-2 Adelaide Road, SW18

Summary

The River Wandle is located 280m east to the site. The majority of the site (84%) is defined as Flood Zone 1 Low probability of flooding, and small parts of the site are defined as Flood Zone 2 Medium probability flooding (14%) and Flood Zone 3 High probability flooding (2%).

Modelling shows that the site is not at risk of flooding from the River Wandle during the 1% AEP event including 35% allowance for climate change. During the 1% AEP event including 70% allowance for climate change, flooding extends west to the edge of the site boundary along Sudlow Road, with flood levels of ~5.80m AOD1.

The River Wandle meets the tidal River Thames approximately 280m north of the site. The site is protected from tidal flooding from the River Thames by the presence of the raised flood defences along the Thames and the Thames Barrier further downstream. The results from the London Thames Breach Assessment show that the edge of the site is at residual risk of tidal flooding during a breach in the Thames tidal defences. Floodwater would reach the south eastern portion of the site to a depth of 0.5m, with a corresponding hazard rating of Moderate ('danger for some') on the site, and 1.0-1.5m depth, Significant hazard rating on Sudlow Road ('danger for most') for the year 2100. Flood levels range from ~5.64-5.77m AOD[1] for the year 2100.

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site, and also on Sudlow Road and Frogmore adjacent to the site. There are 11 reported incidents of surface water flooding within 500m of the site.

There are 2 reported incidents of groundwater flooding within 500m of the site.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. 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. It is noted that only a small part of the site is in Flood Zone 3. However, in order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- Sleeping accommodation should be set above the extreme tidal flood level including an allowance for climate change (5.64-5.77m AOD[1] for the year 2100).
- In the event of a breach in the flood defences, dry access/egress is likely to be possible to the west of the site along Putney Bridge Road. In line with the requirements for sleeping accommodation, safe refuge should also be provided above the extreme water level including an allowance for climate change[2] (5.64-5.77m AOD[1]).
- The site is located within the Flood Warning Area for Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- A Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate their development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Site WV1 Riverside Business Centre and former Bingo Hall, Bendon Valley, SW18

Site ID:	WV1	**Area (ha):**	2.22
Proposed Use:	Mixed-use including residential	**Vulnerability Classification:**	More Vulnerable

Flood Zones and Historic Flooding

Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 99%	**Flood Zone 3 (1% AEP):** 0%	**Flood Zone 3b (5% AEP):** 1%	**Area Benefiting from Defences:** 0%

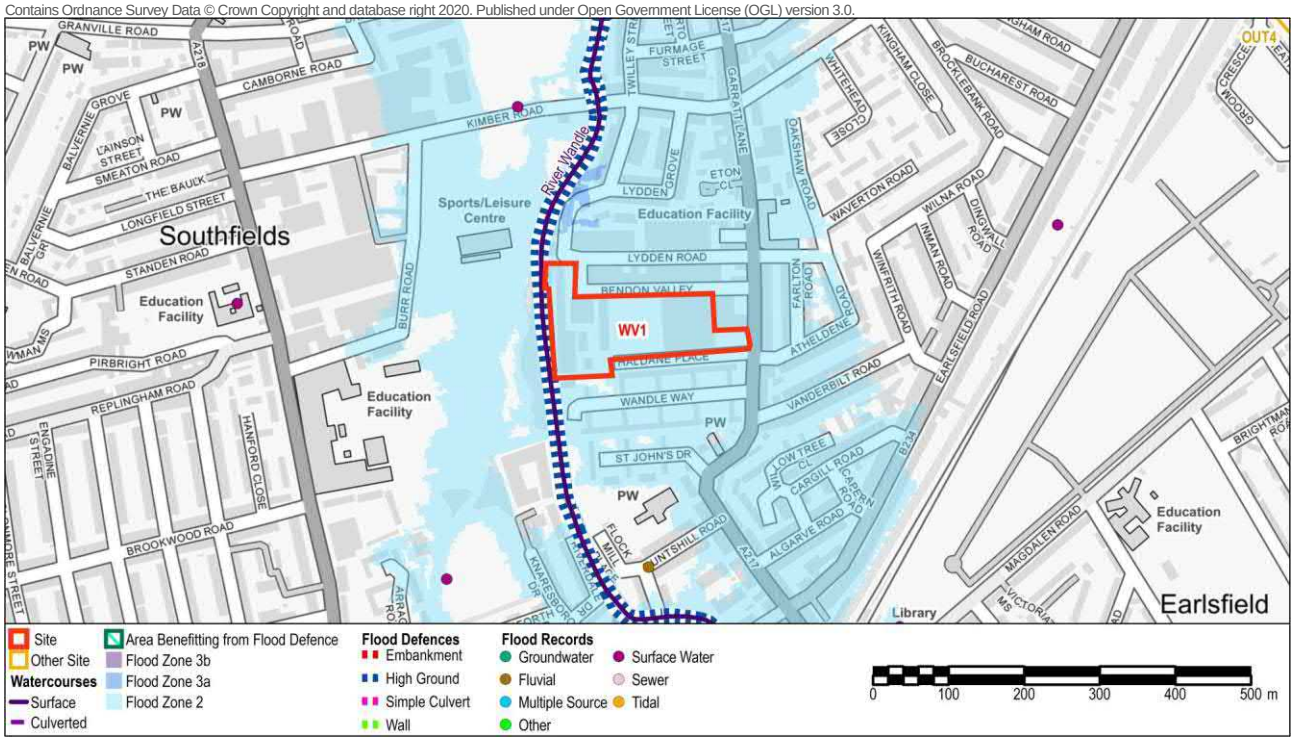

Figure A - Flood Zones and Flood Records

Flood Warning Area	River Wandle At Wandsworth	**Emergency Rest Centre**	St Luke's Church hall
Flood Records within 500m of the site:	Tidal 0; Fluvial 1; Surface Water 5; Groundwater 1; Sewer 0; Multiple source 0; Other source 0		

River Flooding

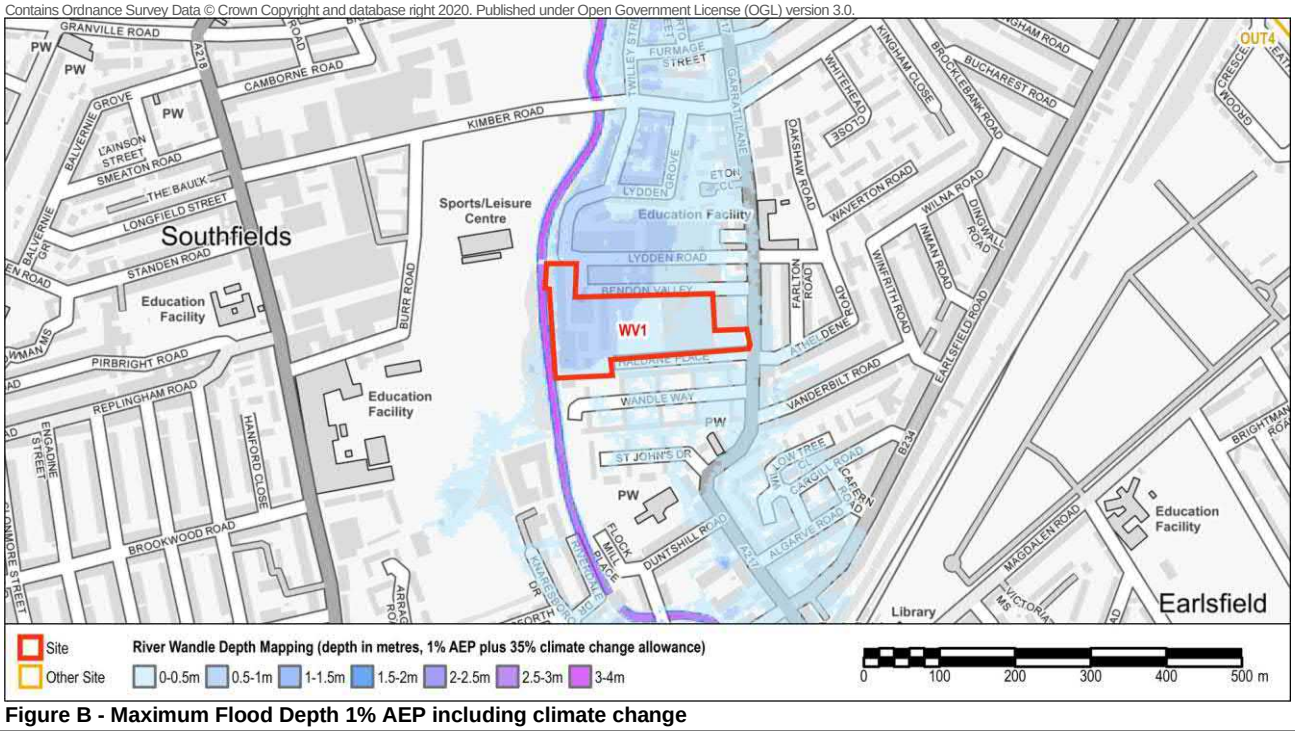

Figure B - Maximum Flood Depth 1% AEP including climate change

Site WV1 Riverside Business Centre and former Bingo Hall, Bendon Valley, SW18

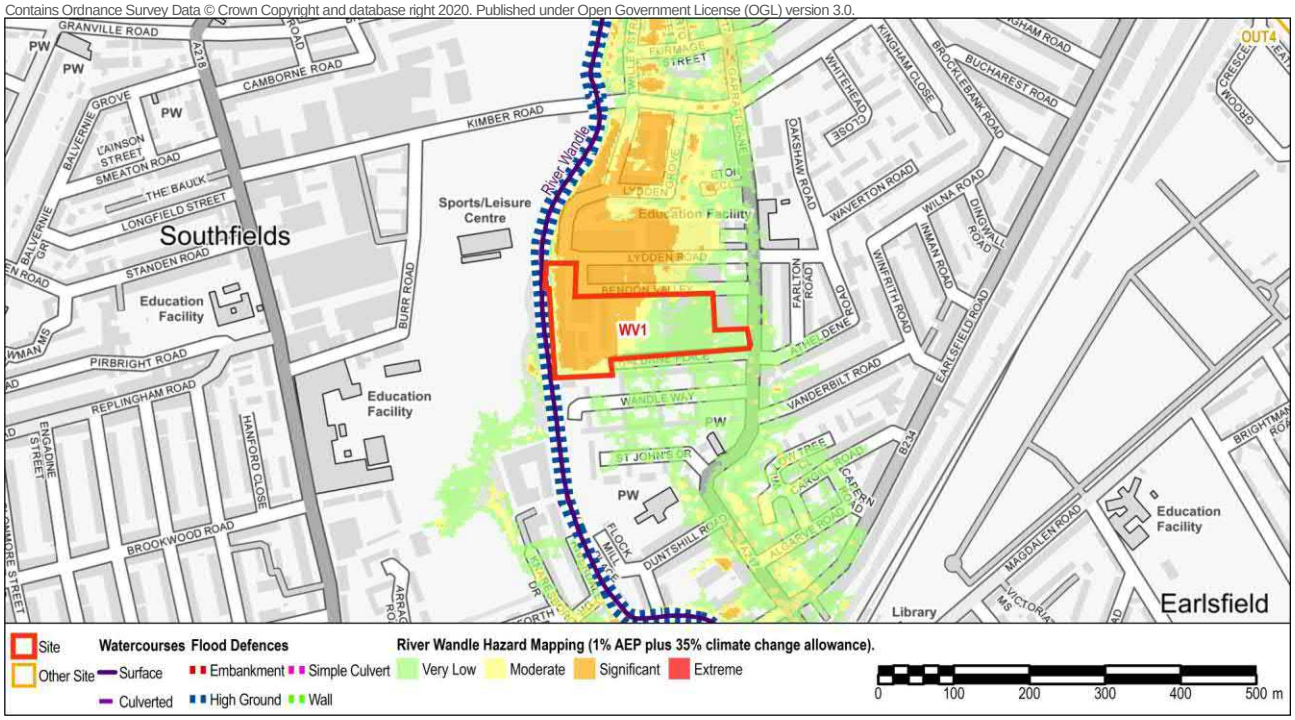

Figure C - Maximum Flood Hazard 1% AEP including climate change

Surface Water Flooding	
Risk of Flooding from Surface Water (RoFSW)	Low, Medium, High

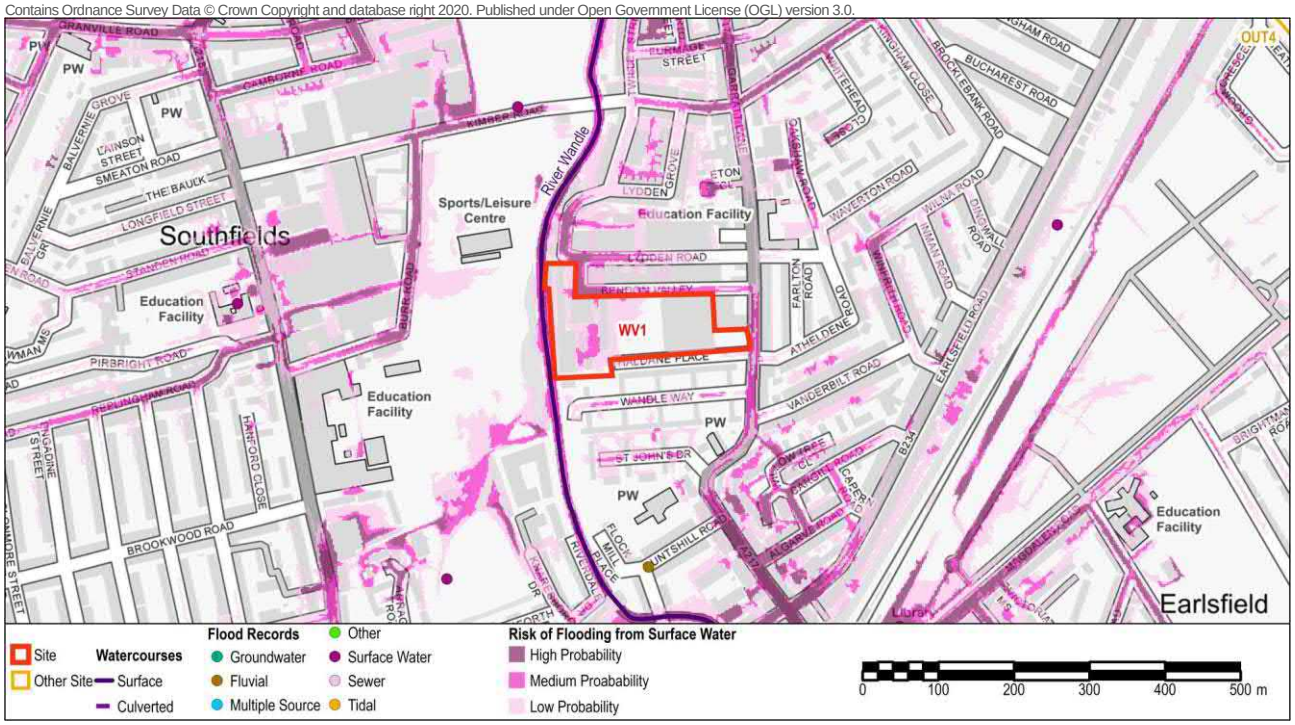

Figure D - Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	Group7_019 Earlsfield [Wandsworth]
Drainage Catchment	DC7

Groundwater Flooding			
Bedrock Geology	Thames Group - Clay, Silt, Sand and Gravel	**Superficial Geology**	Clay, Silt and Sand, Sand and Gravel
Susceptibility to Groundwater Flooding (BGS)		Potential for groundwater flooding to occur at surface.	
Within an area with 'increased potential for elevated groundwater', as identified in the SWMP (GLA 2011)		Yes	

Other Sources	
Risk of flooding from reservoirs	The Long Term Flood Risk Map shows that the site could be at risk of flooding, in the event of a breach or failure of a reservoir. (It is not possible to determine which reservoir).

Site WV1 Riverside Business Centre and former Bingo Hall, Bendon Valley, SW18

Summary

The River Wandle flows north along the western edge of the site. 99% of site is defined as Flood Zone 2 Medium probability of flooding, and 1% as Flood Zone 3b Functional Floodplain.

Modelling shows that the site is at risk of flooding from the River Wandle. During the modelled 1% AEP event including 35% allowance for climate change, 97% of the site is at risk of flooding. The depth mapping indicates flood water would inundate the site to a depth of 0.5-1.0m, with a corresponding hazard rating of Significant ('danger for most'). Flood levels in this area for the 1% AEP event including 35% climate change allowance are ~7.91-8.40m AOD[1]. For the 1% AEP event including 70% allowance for climate change this increases to ~8.25-8.48m AOD[1].

The Risk of Flooding from Surface Water mapping identifies the potential for surface water to flow and pond within the site boundary, and also on Brendon Valley and Haldane Place north and south of the site respectively. There are 5 reported incidents of surface water flooding within 500m of the site, and it is located within a Critical Drainage Area (CDA 019 Earlsfield).

There is 1 reported incident of groundwater flooding within 500m of the site.

Site Specific Recommendations

The proposed use for the site includes residential uses which are defined as More Vulnerable. More Vulnerable development is permitted in Flood Zone 2 and the Exception Test is not required. However, modelling shows that in the future the site is at risk of flooding from the River Wandle during the 1% flood event including 35% allowance for climate change. It is therefore prudent to consider how the Exception Test can be 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. In order to satisfy the requirements of the Exception Test, the following recommendations are made:

- A sequential approach should be applied within the site, steering development towards those areas at lower risk of river and surface water flooding.
- To ensure the structural integrity of the riverbank / flood defence is not impacted by the development and to provide access for inspection and maintenance of the riverbank / flood defence, the proposed development should be set back 8m from the fluvial river.
- Finished floor levels should be set 300mm above the River Wandle 1% AEP flood level including an allowance for climate change. Flood levels in this area for the 1% AEP event including 35% climate change allowance are 7.91-8.40m AOD. For the 1% AEP event including 70% allowance for climate change this increases to 8.25-8.48m AOD[1].
- The access/egress routes for the site are also shown to be at risk of flooding during the 1% AEP event including 35% climate change allowance with depths up to 0.5m. A place of safe refuge should be provided within the proposed development above the 1% AEP event including 35% allowance for climate change[2] modelled flood level, and a Flood Warning and Evacuation Plan should be prepared by occupants of the site demonstrating what actions site users will take before, during and after a flood event to ensure their safety, and to demonstrate the development will not impact on the ability of the local authority and the emergency services to safeguard the current population.
- The proposed development must not reduce the ability of the floodplain to store water. This should be considered in relation to the 1% AEP modelled flood event including 35% allowance for climate change. Floodplain compensation storage must be provided on a level-for-level and volume-for-volume basis. Given the entire site is located within the 1% AEP including 35% flood extent, it will not be possible to provide compensation storage within the site itself. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.
- The site is located within the Flood Warning Area for River Wandle at Wandsworth and Tidal Thames from Wandsworth Bridge to Putney Bridge. Occupants of the site should sign up to receive the Flood Warning Service.
- The natural surface water flow patterns on the site should be considered when preparing the surface water drainage strategy for the site to ensure that the risk to neighbouring areas is reduced.
- The risk of groundwater flooding and groundwater levels should be further assessed during a Site Investigation.

[1] These flood levels are from the most up to date modelling at the time of the preparation of this Level 2 SFRA. The most up to date modelling flood levels should always be obtained from the Environment Agency to inform future development proposals. Contact kslenquiries@environment-agency.gov.uk

[2] An appropriate allowance of climate change should be applied in line with the guidance available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances