

SITE ASSESSMENT - Albany Riverside

Address: Brentford, TW8 0BB	Area: 0.63 Ha
	Site Reference: 110

Current Use	Proposed Use
Arts Centre and Offices	Residential

Current Vulnerability Classification	Proposed Vulnerability Classification
Less Vulnerable	More Vulnerable

Current Risk Summary					
Fluvial / Tidal			Groundwater		
FZ2	47.83	% of Site	<25	0	% of Site
FZ3a	0.05	% of Site	25-50	100	% of Site
FZ3b	0.05	% of Site	50-75	0	% of Site
Surface Water			>75	0	% of Site
1 in 30*	0	% of Site	Artificial		
1 in 100**	0	% of Site	Reservoir	Yes	At risk?
1 in 1000*	8.33	% of Site	Canal	No	At risk?
Sewer Flooding					
No. Incidents					29

Flood Defences
Site is in an area benefitting from flood defences.
Flood Warning Area
The EA Flood Warning Service is available at this site.

* return periods for potential flood events * FZ3a (surface water)

FLUVIAL / TIDAL

Risk Assessment (Defended)				
Parameter	FZ3b	FZ3a	FZ3a+CC	Units
Speed of inundation	N/A	N/A	N/A	Hrs
Min. Depth	N/A	N/A	N/A	m
Max. Depth	N/A	N/A	N/A	m
Max. Velocity	N/A	N/A	N/A	m/s
Max Flood Level	N/A	N/A	N/A	m AOD
Max Ground Level	9.72	9.72	9.72	m AOD
Min Ground Level	2.01	2.01	2.01	m AOD
Max Flood Hazard	N/A	N/A	N/A	N/A
Duration of Flood	N/A	N/A	N/A	Hrs

Risk Assessment (Un defended)			
Parameter	FZ3a	FZ3a+CC	Units
Speed of inundation	N/A	N/A	Hrs
Min. Depth	N/A	N/A	m
Max. Depth	N/A	N/A	m
Max. Velocity	N/A	N/A	m/s
Max. Hazard	N/A	N/A	N/A
Duration of Flood	N/A	N/A	Hrs

Description of Flood Mechanism
<ul style="list-style-type: none"> The site is at some risk of fluvial flooding from the River Thames, which flows along the southern edge of the site. The site is mainly within Flood Zone 2, with a small area along the southern edge of the site being within Flood Zones 3a and 3b. There are no significant impacts of climate change to the extent of flooding from the River Thames. Most of the western section of the site is at risk in the Thames Tidal Breach scenario for the year 2100.

[Figure 1 - Fluvial Flood Depth Map](#)

Site Access / Egress
Site access and egress routes should be directed to the north of the site towards the High Street (A315) away from the River Thames.

[Figure 2 - Fluvial Flood Hazard Map](#)

Mitigation / FRA Requirements
<ul style="list-style-type: none"> Only water compatible or essential uses (subject to the Exception Test) are permitted in FZ3b (the edge of the site which runs alongside the River Thames). Self-contained basement dwellings and bedrooms are not permitted in FZ3a (the edge of the site which runs alongside the River Thames). See SFRA Level 2 Report mitigation requirement numbers 4.8 and 4.9 for additional basement stipulations. A FRA must be submitted as part of a planning application. Include appropriate flood resistance or resilience measures to address predicted flood depths. See SFRA Level 2 Report mitigation requirement numbers 4.2 and 4.3 for further development stipulations. Develop a Flood Emergency and Evacuation Plan for the site. Site users should be signed up to the EA's Flood Warning Service.

SURFACE WATER

Risk Assessment				
Parameter	1 in 30	1 in 100	1 in 1000	Units
Min. Depth	N/A	N/A	<0.15	m
Max. Depth	N/A	N/A	0.60 - 0.90	m
Max. Velocity	N/A	N/A	1.00 - 2.00	m/s
Max. Hazard	N/A	N/A	1.25 - 2.00	N/A

*The 1 in 1000 annual probability extent represents the potential climate change adjusted impact of current risk

Description of Flood Mechanism
<ul style="list-style-type: none"> The site is at risk of surface water flooding in the 1 in 1000 year event near the western boundary of the site. Part of the High Street (A315) to the north-east of the site is also predicted to be at risk from surface water flooding. Climate change is predicted to increase the minimum and maximum depth, and maximum depth and velocity of surface water flooding.

Site Access / Egress
Safe access and egress routes should be directed to the north of the site towards the High Street (A315) however closer to the centre of the site boundary with the High Street (A315) where there is a lower risk of flooding.

[Figure 3 - RoFSW Flood Depth Map](#)

Mitigation - Flood Risk Requirements
<ul style="list-style-type: none"> Development should be directed away from the western boundary of the site where there is a risk of surface water flooding in the 1 in 1000 year event. See also SFRA Level 2 Report Section 4 mitigation requirement numbers 4.2 and 4.3 for further development stipulations.

[Figure 4 - RoFSW Flood Hazard Map](#)

Mitigation - Surface Water Drainage
<ul style="list-style-type: none"> A drainage strategy is required for all major developments, and minor and change of use developments which modify existing surface water drainage. A site-specific FRA is required for new proposals in Flood Zone 2 or 3, including minor development and change of use. Further information on requirements can be found in Section 4 of the West London Strategic Flood Risk Assessment. Developments should apply the principles set out in Hounslow's Local Plan Policy EQ2 and Policy EQ3.

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SEWER	GROUNDWATER	ARTIFICIAL
Risk Assessment	Risk Assessment	Risk Assessment
<ul style="list-style-type: none"> The site falls within a postcode area where there are 29 reported flood incidents from sewer flooding. The site is assumed to be served by separate surface water and foul sewer networks. 	<ul style="list-style-type: none"> The site is classified as having $\geq 25\%$ $< 50\%$ susceptibility to groundwater flooding. The site is underlain by Langley Silt Member superficial deposits and London Clay bedrock geology. 	<ul style="list-style-type: none"> This site is at risk of flooding from the Brent (Welsh Harp), Island Barn, King George VI, Queen Elizabeth II, Queen Mary, Queen Mother, Staines North, Staines South, Walton - Bessborough, Walton - Knight, and Wraysbury reservoirs on a wet day. This site is not risk of flooding from canals.
Mitigation Requirements	Mitigation Requirements	Mitigation Requirements
<ul style="list-style-type: none"> Applicant must consult with TWUL to confirm if the development site has historically flooded. TWUL must agree to any proposed sewer connections. Where historic flooding has occurred, the applicant must show how this risk will be managed for the lifetime of the development. 	<ul style="list-style-type: none"> Applicant should carry out a screening study (as a minimum) to establish if there are any subterranean flood risk issues that may require further investigation. If there is a potential level of impact, mitigation actions must be proposed. Must be prepared by a chartered professional or specialist. 	<ul style="list-style-type: none"> Propose appropriate and proportionate risk management measures. A suitable emergency response plan should be put in place, including an emergency warning system in the event of a reservoir flooding incident. Local Authority Emergency Planning Officers must be consulted to create a reservoir failure emergency and evacuation plan.

[Figure 5 - Thames Water Sewer Flood Map](#)

[Figure 6 - Areas Susceptible to Groundwater Flooding Map](#)

[Figure 7 - Outline Reservoir Flood Map](#)

PLANNING CONSIDERATIONS

Safety of Development

- A. Can the development be future proofed for climate change considerations?**
- Yes, see SFRA - Level 2 Report Section 4 mitigation requirement number 4.3 for compensatory flood storage stipulations.
- B. Can the development be designed safe throughout its lifetime without increasing flood risk elsewhere?**
- Yes. The development must use surface water drainage techniques to manage surface water runoff onsite through above ground SuDS and / or below ground attenuation. Green drainage infrastructure should be prioritised to provide wider ecological / biodiversity benefits as per London Plan Policy SI 13.
 - See SFRA - Level 2 Report Section 4 mitigation requirement number 4.3 for compensatory flood storage stipulations.
- C. What is the cumulative impact of the development land use change and will flood risk increase?**
- The development land use is changing from the 'Less Vulnerable' to the 'More Vulnerable' classification, as residential uses have been proposed.
 - The site is currently a brownfield site with hardstanding areas and some areas of green space. This offers an opportunity to improve flood attenuation through the new development.
 - Development must mitigate any increase in impermeable area to the site with flood plain compensation and runoff storage to prevent any increase in flood risk. An increase in impermeable area coverage on site will increase surface water runoff and flood risk if not managed properly.
- D. How can the development reduce risk overall?**
- Direct development away from the western boundary of the site and the southern edge of the site which runs alongside the River Thames.
 - Safe egress routes should be directed to the north of the site towards the High Street (A315) where there is a lower risk of flooding.
 - By complying with Hounslow's Local Plan Policy EQ3 to ensure that flood risk is reduced by ensuring that developments are located appropriately and incorporate sustainable drainage systems.
 - By complying with SFRA - Level 2 Report Section 4 mitigation requirement numbers 4.2 and 4.3.
- E. Will development require a flood risk permit/watercourse consent?**
- Yes. The site is located within 16m of a tidal Main River so a Flood Risk Activity Permit may be required.
 - No. The site not located within 5m of an Ordinary Watercourse.
- F. Can the site pass the Exception Test?**
- Yes. The Exception Test is required for this site as 0.05% of the site area is within Flood Zone 3a (fluvial) and the proposed vulnerability classification is 'More Vulnerable'.
 - This can be passed by making the site safe throughout its lifetime without increasing flood risk elsewhere (see questions A, B, and C). The site could also reduce flood risk overall with appropriate SuDS and flood storage compensation measures implemented (see 'Mitigation - Flood Risk Requirements' and 'Mitigation - Surface Water Drainage' boxes).



