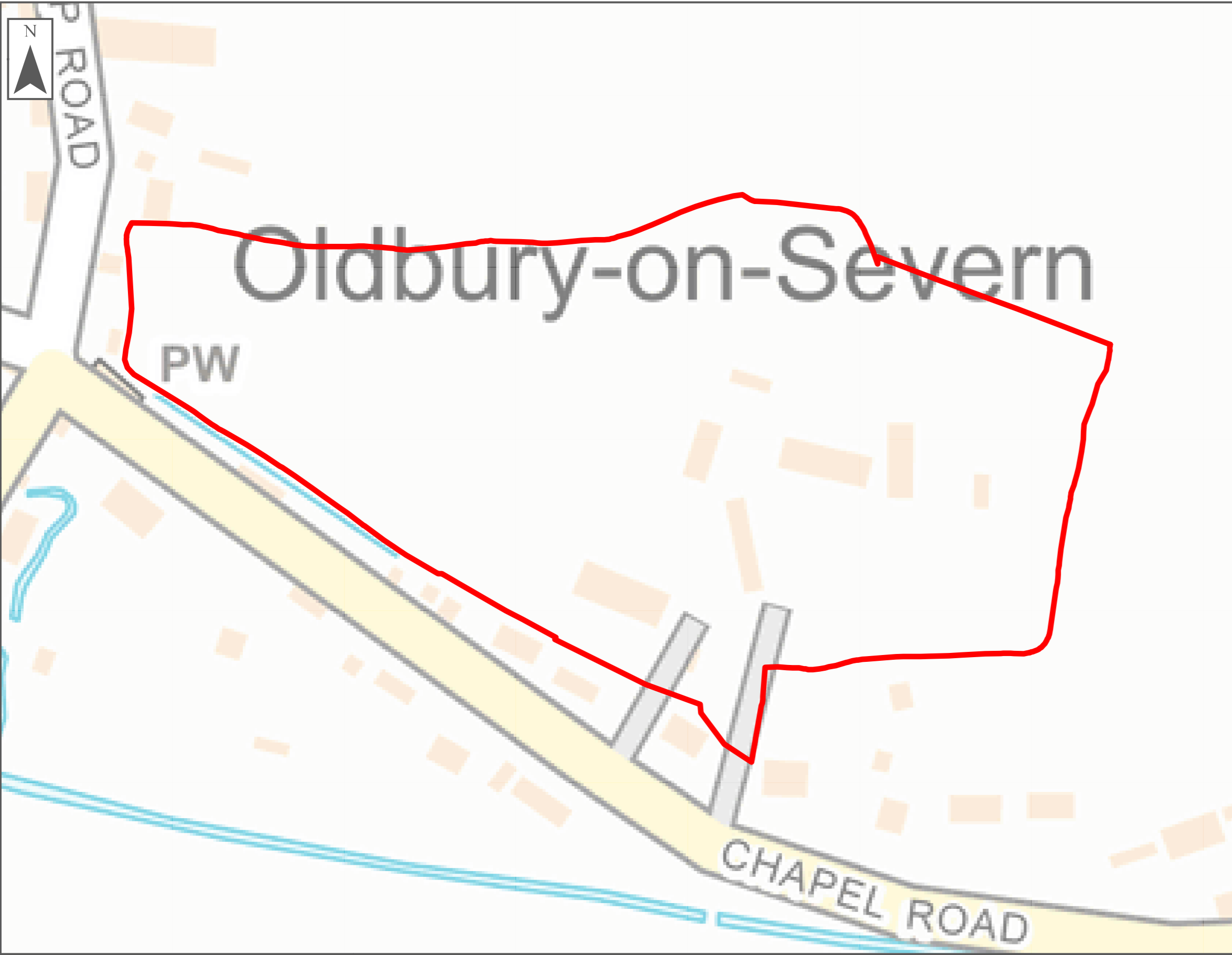


Site details	Site Number	4			
	OS Grid reference	ST 60921 92663			
	Area	3.95 hectares			
Sources of flood risk	Existing drainage features	<p>The site is located between Chapel Road and The Toot. The northern part of the site is located on land of a higher elevation, whilst the remainder of the site is in the low lying plain of the Oldbury Naite Rhine.</p> <p>The Rhine flows in a westerly direction along the opposite side of Church Road. Westend Rhine joins the Oldbury Naite Rhine upstream of Church Road bridge.</p>			
	Fluvial		5% AEP	1% AEP	0.1% AEP
		Proportion of site at risk (%)	0%	0%	1%
		Range of depths (m)	-	-	0 – 0.1
		Maximum hazard	-	-	Very Low
	Tidal	Defended			
			5% AEP	0.5% AEP	0.1% AEP
		Proportion of site at risk (%)	-	-	48
		Range of depths (m)	-	-	0 – 1.5
		Maximum hazard	-	-	Danger for Most
		Undefended			
			5% AEP	0.5% AEP	0.1% AEP
		Proportion of site at risk (%)	82	88	92
		Range of depths (m)	0 – 3.5	0 – 4.0	0 – greater than 4
		Maximum hazard	Not available		
	Surface Water	Proportion of site at risk (RoFfSW)			
3.3% AEP		1% AEP		0.1% AEP	
0		1		4	
Flood history	The south west corner of the site is within the Environment Agency's historic flood map for the December 1981 flood event.				
Defences	Defence Type	Standard of Protection	Condition		
	Penstock	n/a	n/a		
	Tidal embankment	0.5% AEP	Good		

Site details	Site Number	4			
	OS Grid reference	ST 60921 92663			
	Area	3.95 hectares			
Flood risk management infrastructure	Residual risk		Outlet failure	Oldbury Pill embankment breach	Power station embankment breach
		Proportion at risk (%)	1	13	0
		Range of depths (m)	0 – 1.5	0 – 1.0	-
		Maximum hazard	Danger for Most	Danger for Some	-
Emergency planning	Flood warning	The site is partially covered by the Severn Estuary at Oldbury on Severn, Northwick and Avonmouth Flood Alert Area. The south west corner of the site is partially covered by the Tidal Severn Flood Warning Area.			
	Access and egress	Potential access and egress routes for the site are Chapel Road and The Naite. Both roads are at risk of flooding in fluvial, tidal and residual risk scenarios resulting in the potential for the site to become cut off in a flood event.			
Climate Change	Implications for the site		1% AEP		
			Central	High Central	Upper End
		Proportion at risk (%)	1	1	4
		Range of depths (m)	0 – 0.1	0 – 0.5	0 – 0.5
		Maximum hazard	Very Low	Very Low	Danger for Some
			Tidal (defended) 0.5% AEP		Tidal (defended) 0.1% AEP
		Proportion at risk (%)	87		96
		Range of depths (m)	0 – 4.0		0 – greater than 4.0
Maximum hazard	Danger for All		Danger for All		
NPPF and planning implications	Sequential Test	The Sequential Test will need to be passed. Only once the Sequential Test is passed should the Exception Test be applied			
	Exception Test requirements	<p>The Exception test will be required in the following scenarios</p> <ul style="list-style-type: none"> • If More Vulnerable and Essential Infrastructure is proposed in FZ3a. • If Highly Vulnerable development is proposed in FZ2. • If Essential Infrastructure is proposed in Flood Zone 3b <p>Development will not be permitted in the following scenarios</p> <ul style="list-style-type: none"> • Highly Vulnerable infrastructure within FZ3a and FZ3b. • More and Less Vulnerable Infrastructure within FZ3b. 			

Site details	Site Number	4
	OS Grid reference	ST 60921 92663
	Area	3.95 hectares
	<p>Requirements for site-specific Flood Risk Assessment</p> <p>Guidance for developers</p>	<ul style="list-style-type: none"> At the planning application stage, a site-specific flood risk assessment will be required if any development is located within Flood Zones 2 and 3 or for any development greater than one hectare in Flood Zone 1. Modelling has shown that the site is only marginally affected by fluvial flooding, now and in the future. The Sequential approach should be used to direct buildings away from the risk areas. The greatest risk to the site is tidal flood risk. Whilst the defences protect the site from a 0.5% AEP event, they are overtopped in a 0.1% AEP event and flood just under half of the site. In the future, with climate change, these defences will be overtopped in both 0.5% and 0.1% scenarios, flooding almost all the site, if the defences are maintained at the current standard. To pass the Exception Test, it needs to be demonstrated that the development can be made safe. The residual risk to the site should be investigated, for example overtopping or breach of defences. To pass the Exception Test, it needs to be demonstrated that the development can be made safe and that the residual risk has been overcome. Safe access and egress should be demonstrated. Potential access and egress roads are at risk of flooding in fluvial, tidal and residual risk scenarios resulting in the potential for the site to become cut off in a flood event. Other sources of flooding should also be considered as part of a site-specific flood risk assessment Consultation with the Local Authority and the Environment Agency should be undertaken at an early stage The long-term strategy for maintenance of the defences should be considered. The defences currently provide protection to the site from a 0.5% AEP event. However, in the future the level of overtopping of the defence means the site will be at risk if no action is taken. Investment would be required to sustain the current level of flood risk at the site into the future. Surface water risk to the site is low. However, new or re-development should adopt exemplar source control SuDS techniques to reduce the risk of frequent low impact flooding due to post-development runoff and onsite attenuation schemes would need to be tested against the hydrographs of the Rhine system to ensure flows are not exacerbated downstream within the catchment Assessment for runoff should include allowance for climate change effects New development must seek opportunities to reduce overall level of flood risk at the site, for example by: <ul style="list-style-type: none"> Reducing volume and rate of runoff Relocating development to zones with lower flood risk Creating space for flooding Green infrastructure should be considered within the mitigation measures for surface water runoff

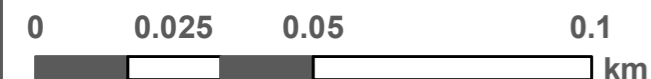


LEVEL 2 SITE SUMMARY TABLES

OLDBURY ON SEVERN LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

LEGEND

<p>Fluvial Depth 1% AEP (Present Day)</p> <p>Depth (m)</p> <ul style="list-style-type: none"> 0 - 0.10 0.10 - 0.50 0.50 - 1.00 1.00 - 1.50 1.50 - 2.00 2.00 - 2.50 2.50 - 3.00 3.00 - 3.50 3.50 - 4.00 >4.00 	<p>Risk of Flooding from Surface Water (RoFfSW)</p> <ul style="list-style-type: none"> 3.3% AEP 1% AEP 0.1% AEP
<p>Tidal Depth 0.5% AEP (Present Day Defended)</p> <p>Depth (m)</p> <ul style="list-style-type: none"> 0 - 0.10 0.10 - 0.50 0.50 - 1.00 1.00 - 1.50 1.50 - 2.00 2.00 - 2.50 2.50 - 3.00 3.00 - 3.50 3.50 - 4.00 >4.00 	<p>Fluvial Depth 1% AEP (Present Day)</p> <p>Hazard Rating</p> <ul style="list-style-type: none"> Very low hazard - caution Danger for some Danger for most Danger for all
<p>Tidal Depth 0.1% AEP (Present Day Defended)</p> <p>Depth (m)</p> <ul style="list-style-type: none"> 0 - 0.10 0.10 - 0.50 0.50 - 1.00 1.00 - 1.50 1.50 - 2.00 2.00 - 2.50 2.50 - 3.00 3.00 - 3.50 3.50 - 4.00 >4.00 	<p>Tidal Hazard 0.5% AEP (Present Day Defended)</p> <p>Hazard Rating</p> <ul style="list-style-type: none"> Very low hazard - caution Danger for some Danger for most Danger for all
<p>Tidal Hazard 0.1% AEP (Present Day Defended)</p> <p>Hazard Rating</p> <ul style="list-style-type: none"> Very low hazard - caution Danger for some Danger for most Danger for all 	<p>Tidal Hazard 0.1% AEP (Present Day Defended)</p> <p>Hazard Rating</p> <ul style="list-style-type: none"> Very low hazard - caution Danger for some Danger for most Danger for all
<p>Residual risk scenarios (0.5% AEP)</p> <ul style="list-style-type: none"> Oldbury Pill embankment breach Outfall failure 	<p>Tidal (Future 2117)</p> <ul style="list-style-type: none"> 0.5% AEP (defended) 0.5% AEP (undefended) 0.1% AEP (defended) 0.1% AEP (undefended)



JBA consulting

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Authority Information

- Potential Site Location
- Rhines

LEGEND

<p>Fluvial (Present Day)</p> <ul style="list-style-type: none"> 5% AEP 1% AEP 0.1% AEP 	<p>Fluvial (Future 2080s)</p> <ul style="list-style-type: none"> 1% AEP (Central) 1% AEP (Higher Central) 1% AEP (Upper End) 	<p>Tidal (Present Day)</p> <ul style="list-style-type: none"> 0.5% AEP (defended) 0.5% AEP (undefended) 0.1% AEP (defended) 0.1% AEP (undefended) 	<p>Tidal (Future 2117)</p> <ul style="list-style-type: none"> 0.5% AEP (defended) 0.5% AEP (undefended) 0.1% AEP (defended) 0.1% AEP (undefended)
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