Level 2 SFRA Site Assessment
Potential Sites along Hurley Brook

Site ID/Ref	SHLAA Site/ ABD Number	SHLAA Name/ Full Ref	SHLAA LOCAL/ Site Name	Site Description	Flood Depth Assessment	Flood Velocity Assessment	Flood Hazard Assessment	Blockage Scenario	Recommendations
3	Rear of Swan Hotel	Watling Street	Wellington	Site is almost entirely in Flood Zone 1. A small part of the southern extent of the site lies in Flood Zones 3b, 3a and 2. This is a result of the surcharging of the culvert on the Hurley Brook upstream of Watling Street.	Negligible impact on site. Depth of 1000 year event is very shallow, typically <20cm	Velocities in the affected areas is generally slow (<0.5m/s) for the range of return periods. Towards the southern boundary of the site velocities increase to approximately 0.8m/s for the 100 year, 100 year plus climate change and 1000 year events.	The flood hazard is low, 'danger for some' in the affected area of the site.	There is little difference between the extent of flooding between the 1% AEP (1 in 100 year) event and the 1% AEP (1 in 100 year) with blockage. The difference in the depth and velocity of flooding and flood hazard to the site is also minimal between the modelled events.	The site is suitable for development provided the flood affected areas can be left as open space, which should be achievable given the size. Follow requirements for development in Flood Zone 1.
69	Land at	Okehampton Road	Hadley Castle	Site lies fully in Flood Zone 1. There are no watercourses running through the site.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
74	Land at Ketley Dingle	Whitchurch Drive	Ketley Brook	The Ketley Brook runs along the western edge of the site and the majority of the site lies within Flood Zones 3b, 3a and 2. There is very little difference in the extent of the Flood Zone maps at this site.	The depth of flooding across the site is typically greater than 2m. Depths increase by up to 3m between the range of return periods, with depths in excess of 9m within the area affected by Flood Zone 2.	Velocities across the site are generally slow (<0.5m/s) for the range of return periods, although parts of the site exhibit velocities greater than 2m/s.	Flood hazard across the majority of the site is extreme, with 'danger for all.'	There is little difference between the extent of flooding between the 1% AEP (1 in 100 year) event and the 1% AEP (1 in 100 year) with blockage. The difference in the depth and velocity of flooding and flood hazard to the site is also minimal between the modelled events.	The flood hazard for all return periods, is too high to enable reasonable and adequate mitigation measures. This site should not be developed and alternative sites in lower risk areas should be developed in preference.
93	Land off	Whitchurch Drive	Wellington	Site lies fully in Flood Zone 1. A drain runs along the western edge of the site.	n/a	n/a	n/a	n/a	A development easement for development from the top of the bank of the drain should be negotiated with the EA (typically 8m). Follow requirements for development in Flood Zone 1.
138	Land at Sinclair Works	Holyhead Rd / Whitchurch Drive	Ketley	Site is almost entirely within Flood Zone 1. A small part of the south western edge of the site is affected by Flood Zones 3b, 3a and 2. There is some residual risk from the Ketley Brook where it is culverted beneath the site. The modelled flood outlines do not extend as far into the site as the JFLOW outlines. A small ponded area is located in the north eastern corner of the site.	The depth of flooding in the affected area is typically greater than 0.5m with parts of the site affected by Flood Zone 2 showing depths of up to 0.7m. In general the depth increases by approximately 0.1 to 0.2m between the return periods.	Velocities across the affected part of the site are typically <0.5m/s with the highest velocities Flood Zone 2.	Flood hazard across the affected part of the site is significant to extreme, with 'danger for most.'	There is little difference between the extent of flooding between the 1% AEP (1 in 100 year) event and the 1% AEP (1 in 100 year) with blockage. The difference in the depth and velocity of flooding and flood hazard to the site is also minimal between the modelled events.	For the parts of the site affected by Flood Zones 3b, 3a and 2 the flood hazard is too high to enable reasonable and adequate mitigation measures. Development within this site should be directed towards Flood Zone 1 and the parts of the site shown to be affected should be left as open space. It is recommended that more vulnerable development be directed away from the part of the site affected by flooding and that the requirements for development in Flood Zone 1 are followed.
166	Station Car Park	The Parade	Wellington	Site lies fully in Flood Zone 1. Flood zones 3a and 2 are located towards the northern extent of the site but do not extend into the site itself.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
176	Market Car Park	Market Street	Wellington	Site lies fully in Flood Zone 1. Flood zones 3a and 2 are located towards the northern extent of the site but do not extend into the site itself.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
177	Tea Tree Car Park	Charlton Street	Wellington	Site lies fully in Flood Zone 1. Flood zones 3a and 2 are located towards the southern boundary of the site but do not extend into the site itself.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
189	Land off	Grainger Drive	Leegomery	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
190	Land off	Barnes Drive	Leegomery	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
191	Land off	Leegate Avenue	Leegomery	JFLOW flood outlines previously showed the site to lie entirely within Flood Zones 3a and 2. Modelled outlines produced as part of this Level 2 assessment show the site to lie entirely within Flood Zone 1 with no affect from Flood Zones 3a and 2.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.

Level 2 SFRA Site Assessment
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192	Land east Wrekin College	Whitchurch Drive	Wellington	The site lies predominantly in Flood Zone 1, with Flood Zones 3a and 2 affecting part of the south eastern extent of the site. The majority of flooding to the site is a result of flood waters which flow overland as a result of the surcharging of the entry to the culvert along the western branch of the Hurley Brook at Forester Grove (SJ 6588 1092). At the railway, water from the higher flood events flows along the railway line in a westerly direction towards Wellington Junction, and then along the northern branch of the railway towards Haybridge. The railway itself is acting as a barrier to flow. The modelled flood outlines are slightly smaller than the previous JFLOW outlines. Two drains are located in the vicinity of the site. One is located along the western boundary, the other towards the eastern extent of the site. These drains are not thought to be hydraulically connected to the Hurley Brook culvert.	The depth of flooding across the affected area is generally shallow in the southern corner (<30cm), but gradually increases towards the northern boundary of the site. Upstream of the railway flood depths range between approximately 1.6 and 2.5m. The depths for the different flood events vary considerably, particularly between the 100 year plus climate change and the 1000 year where there are differences of approximately 1.5m.	Velocities across the majority of the affected area are generally slow (<0.5m/s) for the range of return periods. In the south eastern corner of the site velocities are faster with flows of up to 1.2m/s in Flood Zone 2.	The flood hazard across the affected area is low to moderate, 'danger for some' for Flood Zone 3a, increasing to moderate to significant, with 'Danger for most' for the 1000 year event.	With the culvert along the Hurley Brook by Forester Grove blocked, the extent of flooding to this site increases slightly for the 1% AEP (1 in 100 year) event to a similar extent as the 1% AEP (1 in 100 year) plus climate change event. The depth of flooding across the site is generally similar between the 1% AEP and the blockage scenario, with the exception of the area by the northern boundary where depths have increased by up to 90cm.	The eastern side of the site (Flood Zones 3a and 2) should ideally be left as open space as the flood hazard within Flood Zone 2 is moderate to significant for a large proportion of the affected area. If this can be achieved, the use of this site for housing would be suitable. A FRA should assess local flood risk issues and the residual risk from the railway line. A development easement for development from the top of the bank of the drain should be negotiated with the EA (typically 8m).
193	Land off	Giles Close	Arleston	Site lies almost entirely in Flood Zone 1. Some residual risk is evident at the site due to surcharging of the culvert upstream of Watling Street, with part of Flood Zone 2 extending into a section of the north western extent of the site. The Hurley Brook itself does not flow through the site.	Depth of flooding across affected parts of the site is shallow (<30cm).	Velocities across affected area are typically slow, <0.1m/s for the 1000 year event.	The flood hazard is low, 'danger for some' across the affected area.	n/a	The north western corner of the site (affected by the 1000 year event) should ideally be left as open space. Flood hazard within Flood Zone 2 is low, with only a small part of the development site affected. However, given the low flood hazard, the entire site could be developed for housing if it could be demonstrated that there are no other sites fully in Flood Zone 1 and the Sequential Test was passed, though the housing in this area would need appropriate raised floors (see recommendations for development in Flood Zone 2).
225	Hadley car park north	Britannia Way	Hadley	Site lies fully in Flood Zone 1. Flood Zone 2 is located along the northern boundary of the site although does not extend into the site itself.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1. Development should be located away from the area where Flood Zones 3a and 2 are located close to the site boundary.
228	Land west	Margaret Court	Ketley	This site partly lies in a designated flood storage area. Approximately 50% of the site is affected by Flood Zones 3b, 3a and 2. The modelled flood outlines show a greater extent of flooding than the existing JFLOW outlines. The Ketley Brook flows along the western edge of the site in a northerly direction.	Flooding across the affected parts of the site is deep across the different return periods, typically ranging from 1.5 to 4.0m.	Velocities across the affected parts of the site are generally slow, rarely rising above 0.05m/s for the range of return periods.	The flood hazard is significant to extreme for the range of return periods, with 'danger for all.'	There is little difference between the extent of flooding between the 1% AEP (1 in 100 year) event and the 1% AEP (1 in 100 year) with blockage. The difference in the depth and velocity of flooding and flood hazard to the site is also minimal between the modelled events.	This site should not be developed given its encroachment into the flood storage area, which should continue to be maintained and operated as such (as it is providing flood mitigation to properties downstream). In addition, the flood hazard for all return periods, is too high to enable reasonable and adequate mitigation measures. It is recommended that alternative sites in lower risk areas are considered in preference to this site.
272	Morrisons Supermarket car park	Bridge Road	Wellington	The majority of the site lies within Flood Zone 1. A small part of the south western corner of the site is affected by Flood Zones 3a and 2 as a result of overland flow that follows the path of the railway from a surcharged culvert on the Hurley Brook.	The depth of flooding across the affected parts of the site is generally shallow (<30cm).	Velocities across the affected parts of the site are slow, typically <0.2m/s.	The flood hazard is low to moderate for the affected part of the site, with 'danger for some.'	The flood extent for the blockage scenario is slightly greater than for the 1% AEP (1 in 100 year) event. The depth of flooding is approximately 20cm greater for the blockage scenario event when compared with the 1% AEP (1 in 100 year) event. There is minimal difference in the velocity of flood water across the site. The overall flood hazard is similar to the 1% AEP event being 'danger for some.'	It is recommended the part of the site within Flood Zone 3a and 2 should be left as open space. However, the low flood hazard means this risk could be mitigated in the identified areas, and could be developed for housing if it could be demonstrated that there are no other available sites fully in Flood Zone 1, and the Sequential Test is passed. The recommendations for development in Flood Zone 1 should be followed, with the most vulnerable parts of the development directed towards Flood Zone 1.
278	Supermarket car park (Aldi)	Grooms Alley	Wellington	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.

Level 2 SFRA Site Assessment
Potential Sites along Hurley Brook

Site ID/Ref	SHLAA Site/ ABD Number	SHLAA Name/ Full Ref	SHLAA LOCAL/ Site Name	Site Description	Flood Depth Assessment	Flood Velocity Assessment	Flood Hazard Assessment	Blockage Scenario	Recommendations
290	Open Space adjacent	Grainger Drive	Hadley	The existing JFLOW generated Flood Zone maps showed the whole site to lie within both Flood Zones 3a and 2. Based on the updated modelled Flood Zone maps of this Level 2 SFRA, the majority of the site now lies within Flood Zone 1, with only a small part of the eastern extent of the site affected by Flood Zone 2. The flooding to this site is a consequence of overland flow from a culvert surcharged at an upstream location on the Hurley Brook. A drain exists on the north western extent of the site. This drain is not thought to be connected to the Hurley Brook culvert.	The depth of flooding across the affected area is shallow (typically <30cm). There are small localised areas where the depth of flooding increases to values up to 70cm.	Velocities across the affected area are generally slow (<0.5m/s) with the exception of a small localised part of the affected area where the velocities range between 0.5 and 0.9m/s.	Flood Zone 2 is shown to affect a small part of the eastern extent of the site. Flood hazard across the affected area is predominantly low, with 'danger for some.'	n/a	The majority of the site lies within Flood Zone 1. Only a small part of the site is affected by Flood Zone 2 which should be left as open space should the site be developed. Where the drain is located in the north western part of the site a development easement for development from the top of the bank should be negotiated with the EA (typically 8m). A FRA should assess local flood risk issues.
361	Land at Wappenshall, near	A442 Queensway	Hadley	The Hurley Brook flows through the centre of the site splitting it in two. Within the section of the site located on the right bank of the Hurley Brook, approximately half of the site is affected in some way by Flood Zones 3b, 3a and 2. There is very little difference in the extent of the Flood Zones in this part of the site. For the part of the site located on the left bank of the Hurley Brook, approximately one third is affected by Flood Zones 3b, 3a and 2. Here, the flood water spills from the left bank of the Hurley Brook upstream of the site as it passes along the eastern boundary. The flood water then takes a flow path through the site, before re-joining the Hurley Brook further downstream outside of the western boundary of the site. A road also runs perpendicular to the watercourse through the centre of the development site. The road is flooded at a number of locations from all modelled return periods. Access to part of the northern section of the site by Wappenshall Bridge is restricted by flood waters.	The depth of flooding across the affected area on both the left and right banks of the Hurley Brook is generally shallow (<30cm) with localised areas at greater depths (up to approximately 1m). The depth of flooding between the different return periods is approximately 10cm.	Velocities across the site are generally classified as slow (generally <0.6m/s). There is relatively little change in the velocities between the different return periods.	The flood hazard across the affected area within the site is generally low to moderate across the range of return periods, with 'danger for some.'	n/a	The Hurley Brook passes through the centre of the site and as such a large portion of the site on the right bank of the watercourse is located within Flood Zones 3b, 3a and 2. The road running perpendicular to the watercourse is flooded across the range of return periods with part of Flood Zone 1 becoming cut off. Only small areas of the site on the right bank lie within Flood Zone 1 and as such is recommended that this part of the site is not developed. Approximately 30% of the site on the left bank of the Hurley Brook is within Flood Zones 3b, 3a and 2, with very little difference in the extent of flooding for Flood Zones 3a and 2. It is recommended that the affected area on the left bank is left as open space. Only if it can be demonstrated that the Sequential Test has been carried out and the Exception Test (where required in accordance with Table D3 of PPS25) can be satisfied, should this site be developed in accordance with Table D3 of PPS25, where the most vulnerable elements of the development are placed in the lowest risk Flood Zone. Follow requirements for development in Flood Zone 1.
382	Land at Hadley Castle West	A442	Hadley	The previous JFLOW outlines showed a small part of the western part of the site to lie within Flood Zones 3a and 2. Updated modelled flood outlines show the site to lie fully within Flood Zone 1. Flood Zones 3b, 3a and 2 lie close to the north western boundary of the site although do not encroach on the site itself.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1. It is recommended that more vulnerable development is directed away from the north western edge of the site as Flood Zones 3b, 3a and 2 extend close to the edge of the site.
414	Land at Wheat Leasowes	North Hadley Park / St Lukes Road	Wheat Leasowas	The site is split into three separate parts with the majority of the site lying within Flood Zone 1. The far western third of the site is affected by the Hurley Brook and part of the site furthest east by the Crow Brook. Flood Zones 3a and 2 extend into the western extent of the site for approximately 60m. There is very little difference in the extent of Flood Zones 3a and 2. The Shropshire Union Canal Trench Branch (disused) runs along the eastern boundary of the most western area of the site. Flood Zone 2 extends into the part of the site furthest east adjacent to the Crow Brook. Flood Zones 3b and 3a remain within bank, although the 1 in 100 year plus climate change event affects part of the site.	Depth of flooding across the site is generally shallow for most of the affected area along the western third of the site (typically <0.2m). In general the depth between the 100 year event with climate change and the 1000 year event is approximately 10cm. The depth of flooding within the eastern third of the site is generally <30cm within Flood Zone 2.	Velocities for the affected area along the western third of the site are generally slow to mid-range (0.2 to 0.6m/s) for Flood Zone 2. Within the eastern third of the site, the velocities across the affected areas within Flood Zone 2 tend to be slow to mid-range and are generally <0.9m/s.	The flood hazard is generally low through the affected parts of the site (both the western and eastern thirds) across the range of return periods, with 'danger for some.'	n/a	The majority of the site is located within Flood Zone 1, apart from the far western and eastern extents. The western third of the site is affected by Flood Zones 3a and 2 and there is very little difference in the extent of the flood outlines for Flood Zones 3a and 2, therefore it is recommended that this area is left as open space. This should be achievable given the size of the site. The eastern third of the site is affected by Flood Zone 2 and the 100 year plus climate change event, from the Crow Brook, which should also be left as open space.

Level 2 SFRA Site Assessment
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432	Land north Bucks Head	Haybridge Road	Wellington	A large percentage of the site lies within Flood Zones 3a and 2. The culvert on the western arm of the Hurley Brook surcharges at the entry to the culvert by Forester Grove (SJ 6588 1092). Water then follows an overland flow path towards the railway embankment. The culvert itself emerges immediately upstream of the railway where modelling demonstrates sufficient culvert capacity to convey discharge from the culvert. Approximately 20m downstream, the watercourse enters another culvert, before flowing beneath the railway line. The flooding at the site is a result of surcharging at the upstream face of the first culvert and not due to insufficient capacity of the railway culvert; however, increasing the capacity of the railway culvert may help to alleviate some of the flooding. Modelling has also indicated that water flows in a westerly direction along the railway towards Wellington Junction, with flows at higher return periods also flowing along the northern branch of the railway towards Haybridge. The modelled flood outlines differ from the existing JFLOW showing a slightly smaller extent for Flood Zone 3a and 2, with additional localised sections affected by Flood Zones 3a and 2. Only a small sections of the northern and south western extents of the site are affected by Flood Zone 3b.	Depths are generally quite shallow for most of the affected area (typically <30cm), however, there are localised areas where the depth of flooding ranges between 0.6-1.0m for higher flood events. This is generally at the area upstream of the culvert beneath the railway and, the area on the south western edge of the site. In general the depths increase by approximately 30cm for the different flood events.	Velocities for the affected area towards the centre of the site range between 0.3m/s and 1.7m/s, with similar velocities for the 100 year climate change and the 1000 year event.	Flood hazard across the affected parts of the site is low to moderate, 'danger for some,' for the lower return periods (Flood Zone 3b and 3a). Between the 1 in 100 year plus climate change and 1 in 1000 year event the flood hazard is classified as significant for small isolated parts of the affected area, but generally remains as low to moderate, with 'danger for some.'	With the culvert along the Hurley Brook by Forester Grove blocked, the extent of flooding to this site increases slightly for the 1% AEP (1 in 100 year) event to a similar extent as the 1% AEP (1 in 100 year) plus climate change event. The depth of flooding across the site has generally increased by approximately 10cm between the modelled scenarios. Velocities across the majority of the site are similar between the modelled events, apart from through the centre of the site where velocities have increased in localised areas by over 1.0m/s. Flood hazard has generally remained the same as with 'danger for some.'	Large parts of the site are affected by Flood Zone 3a and 2, and as such, it is recommended that alternative sites are considered in preference to this one.
441	Land west of	Hadley Park Road	Hadley	Based on the previous JFLOW outlines this site was shown to lie fully within Flood Zones 3a and 2. The updated modelled Flood Zone maps show the site to lie fully in Flood Zone 1.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
443	Land off	Eider Drive	Leegomery	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
460	Land at TCAT	Bennetts Bank	Wellington	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
493	Land off	Hadley Park Road	Hadley	Based on the previous JFLOW outlines the majority of this site was shown to lie within Flood Zones 3a and 2. The updated modelled Flood Zone maps show the site to lie fully in Flood Zone 1.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
519	Land at Eyton upon the Weald Moors	-	Eyton on Weald Moors	Approximately 50% of the site lies within Flood Zone 1, with Flood Zone 3a and 2 located through the centre of the site; and, Flood Zone 3b extending through the eastern extent of the site. There is little difference between the extent of flooding shown by Flood Zones 3a and 2. The Hurley Brook itself does not flow through the site, however, it flows across the northern boundary of the site. Modelling has indicated that water spills from the left banks of the watercourse upstream of the site, and follows a flow route through the centre of the site.	Depths are generally quite shallow for most of the affected areas (<30cm) across the site. Towards the north western extent of the site depths range between 0.4 to 1.0m. Only a small area towards the south eastern extent of the site is affected by the 20 year event with depths being relatively shallow (<30cm). For each return period depth increases by around 20 to 30cm and tend to be greatest through the centre of the site where the ground elevations are lowest.	Velocities across the site are generally classified as slow (<0.5m/s). A small section of mid range velocities is found towards the centre of the site but the velocity does not generally increase above 0.6m/s. There is relatively little change in the velocities between the different return periods.	The flood hazard across the site is generally classified as low, with 'danger for some.' A small part of the site adjacent to the eastern boundary is classified with a moderate to significant flood hazard, with 'danger for most.'	n/a	Approximately 50% of the site is located within Flood Zones 3a and 2. If the Sequential Test can be passed, the site is suitable for development provided the flood affected areas remain as open space. If development is granted, a FRA will be required. Only if it can be demonstrated that the Sequential Test has been passed and the Exception Test carried out where indicated in Table D3 of PPS25, should this site be developed in accordance with Table D3 of PPS25.

Level 2 SFRA Site Assessment
Potential Sites along Hurley Brook

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530	The Swan Hotel - edited	Watling Street	Wellington	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
609	Land north west	off Wappenshall Lane	Hadley	Based on the previous JFLOW outlines the whole of this site was shown to lie within Flood Zones 3a and 2. The updated modelled Flood Zone maps show the eastern half of the site to lie within Flood Zone 3a, with water spilling from the right bank of the Hurley Brook upstream of the site and following an overland flow path into the eastern extent of the site. Flood Zone 2 extends across approximately 90% of the site. The Hurley Brook itself runs along the western edge of the site. A small part of the Shropshire Union Canal Trench Branch (disused) is located in the north eastern corner of the site.	Depths are generally quite shallow across the site being typically <30cm. There is minimal difference in the depth of flooding between the different return periods.	Velocities across the site are slow (typically <0.5m/s), although the velocities tend the be greater in the area immediately adjacent to the watercourse at the north western extent of the site. There is very little difference in the velocities between the different return periods.	The flood hazard across the site is predominantly low to moderate, with 'danger for some.' there is a small localised area of extreme flood hazard with 'danger to all' along the eastern boundary of the site.	n/a	The nature of flood risk posed to this site indicates that sites which are in Flood Zone 1 are developed in preference to this site.
611	Racecourse Site	Wappenshall Lane	Wappenshall	The majority of the site lies within Flood Zone 1. The Hurley Brook enters the site in the south eastern corner, briefly flowing in a northerly direction for approximately 250m before exiting and forming the eastern boundary of the site as it continues in a northerly direction. Flood Zones 3b, 3a and 2 extend into only a small part of the site along the eastern boundary, with Flood Zone 2 extending slightly further into the site at the north eastern corner.	Depths are generally shallow for most of the affected areas (20cm) across the site with minimal difference between the depth of water between flood return periods.	Velocities across the affected areas are generally slow (<0.5m/s). Towards the south eastern extent of the site on the right bank of the Hurley Brook, there are small, localised patches where the velocities are classified as mid-range (0.6 to 0.8m/s) for the higher return periods (e.g. 1000 year). In general there are little differences in the velocities between the return period events.	Flood hazard is low across the affected area, with 'danger to some.' .	n/a	The majority of the site is located within Flood Zone 1. Where the Hurley Brook flows through and along the boundary of the site a development easement for development from the top of the bank should be negotiated with the EA (typically 8m). A FRA should assess local flood risk issues.
614	Land off	Peregrine Way	Apley	Site lies fully in Flood Zone 1	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1.
EMP2-POR	62360 (also housing site 382)	TF60062360	Hadley Park West	The previous JFLOW outlines showed a small part of the western part of the site to lie within Flood Zones 3a and 2. Updated modelled flood outlines show the site to lie fully within Flood Zone 1. Flood Zones 3b, 3a and 2 lie close to the north western boundary of the site although do not encroach on the site itself.	n/a	n/a	n/a	n/a	Follow requirements for development in Flood Zone 1. It is recommended that more vulnerable development is directed away from the north western edge of the site as Flood Zones 3b, 3a and 2 extend close to the edge of the site.

Level 2 SFRA Site Assessment
Potential Sites along Hurley Brook

Site ID/Ref	SHLAA Site/ ABD Number	SHLAA Name/ Full Ref	SHLAA LOCAL/ Site Name	Site Description	Flood Depth Assessment	Flood Velocity Assessment	Flood Hazard Assessment	Blockage Scenario	Recommendations
432-SHLAA	(Also housing site 432)	53devs2004	Land off Haybridge Road, Wellington	A large percentage of the site lies within Flood Zones 3a and 2. The culvert on the western arm of the Hurley Brook surcharges at the entry to the culvert by Forester Grove (SJ 6588 1092). Water then follows an overland flow path towards the railway embankment. The culvert itself emerges immediately upstream of the railway where modelling demonstrates sufficient culvert capacity to convey discharge from the culvert. Approximately 20m downstream, the watercourse enters another culvert, before flowing beneath the railway line. The flooding at the site is a result of surcharging at the upstream face of the first culvert and not due to insufficient capacity of the railway culvert; however, increasing the capacity of the railway culvert may help to alleviate some of the flooding. Modelling has also indicated that water flows in a westerly direction along the railway towards Wellington Junction, with flows at higher return periods also flowing along the northern branch of the railway towards Haybrdige. The modelled flood outlines differ from the existing JFLOW showing a slightly smaller extent for Flood Zone 3	Depths are generally quite shallow for most of the affected area (typically <30cm), however, there are localised areas where the depth of flooding ranges between 0.6-1.0m for higher flood events. This is generally at the area upstream of the culvert beneath the railway and, the area on the south western edge of the site. In general the depths increase by approximately 30cm for the different flood events.	Velocities for the affected area towards the centre of the site range between 0.3m/s and 1.7m/s, with similar velocities for the 100 year climate change and the 1000 year event.	Flood hazard across the affected parts of the site is low to moderate, 'danger for some,' for the lower return periods (Flood Zone 3b and 3a). Between the 1 in 100 year plus climate change and 1 in 1000 year event the flood hazard is classified as significant for small isolated parts of the affected area, but generally remains as low to moderate, with 'danger for some.'	n/a	Large parts of the site are affected by Flood Zone 3a and 2, and as such, it is recommended that alternative sites are considered in preference to this one.
192-SHLAA	(Also housing site 192)	W47	East of Wrekin College (West Whitchurch Drive)	The site lies predominantly in Flood Zone 1, with Flood Zones 3a and 2 affecting part of the south eastern extent of the site. The majority of flooding to the site is a result of flood waters which flow overland as a result of the surcharging of the entry to the culvert along the western branch of the Hurley Brook at Forester Grove (SJ 6588 1092). At the railway, water from the higher flood events flows along the railway line in a westerly direction towards Wellington Junction, and then along the northern branch of the railway towards Haybridge. The railway itself is acting as a barrier to flow. The modelled flood outlines are slightly smaller than the previous JFLOW outlines. Two drains are located in the vicinity of the site. One is located along the western boundary, the other towards the eastern extent of the site. These drains are not thought to be hydraulically connected to the Hurley Brook culvert.	The depth of flooding across the affected area is generally shallow in the southern corner (<30cm), but gradually increases towards the northern boundary of the site. Upstream of the railway flood depths range between approximately 1.6 and 2.5m. The depths for the different flood events vary considerably, particularly between the 100 year plus climate change and the 1000 year where there are differences of approximately 1.5m.	Velocities across the majority of the affected area are generally slow (<0.5m/s) for the range of return periods. In the south eastern corner of the site velocities are faster with flows of up to 1.2m/s in Flood Zone 2.	The flood hazard across the affected area is low to moderate, 'danger for some' for Flood Zone 3a, increasing to moderate to significant, with 'Danger for most' for the 1000 year event.	With the culvert along the Hurley Brook by Forester Grove blocked, the extent of flooding to this site increases slightly for the 1% AEP (1 in 100 year) event to a similar extent as the 1% AEP (1 in 100 year) plus climate change event. The depth of flooding across the site is generally similar between the 1% AEP and the blockage scenario, with the exception of the area by the northern boundary where depths have increased by up to 90cm.	The eastern side of the site (Flood Zones 3a and 2) should ideally be left as open space as the flood hazard within Flood Zone 2 is moderate to significant for a large proportion of the affected area. If this can be achieved, the use of this site for housing would be suitable. A FRA should assess local flood risk issues and the residual risk from the railway line. A development easement for development from the top of the bank of the drain should be negotiated with the EA (typically 8m).
138-SHLAA	(Also housing site 138)	E01814/001	Sinclair Works, south of Holyhead Road	Site is almost entirely within Flood Zone 1. A small part of the south western edge of the site is affected by Flood Zones 3b, 3a and 2. There is some residual risk from the Ketley Brook where it is culverted beneath the site. The modelled flood outlines do not extend as far into the site as the JFLOW outlines. A small ponded area is located in the north eastern corner of the site.	The depth of flooding in the affected area is typically greater than 0.5m with parts of the site affected by Flood Zone 2 showing depths of up to 0.7m. In general the depth increases by approximately 0.1 to 0.2m between the return periods.	Velocities across the affected part of the site are typically <0.5m/s with the highest velocities Flood Zone 2.	Flood hazard across the affected part of the site is significant to extreme, with 'danger for most.'	There is little difference between the extent of flooding between the 1% AEP (1 in 100 year) event and the 1% AEP (1 in 100 year) with blockage. The difference in the depth and velocity of flooding and flood hazard to the site is also minimal between the modelled events.	For the parts of the site affected by Flood Zones 3b, 3a and 2 the flood hazard is too high to enable reasonable and adequate mitigation measures. Development within this site should be directed towards Flood Zone 1 and the parts of the site shown to be affected should be left as open space. It is recommended that more vulnerable development be directed away from the part of the site affected by flooding and that the requirements for development in Flood Zone 1 are followed.