Guildford Borough Council Level 2 Strategic Flood Risk Assessment: 2017 Addendum December 2017



This page has been deliberately left blank.

Contents

1.	Purpose of this addendum	4
2.	Explanation of changes to the Submission Local Plan (2017) and Level 2 SFRA	5
	Sites deleted in the 2017 Plan	5
	Sites added in the 2017 Plan	5
	Climate change allowances	5
3.	Additional information for sites assessed as suitable for allocation at Stage 3	7
	Site 2183 (policy A13): Kernal Court, Walnut Tree Close, Guildford	7
	Site 2226 (policy A14): Wey Corner, Walnut Tree Close, Guildford	9
	Site 1107 (policy A5): Jewsons, Walnut Tree Close, Guildford	. 11
ΑĮ	ppendix 1: New site proformas	. 12
	Site 1107 (policy A5): Jewsons, Walnut Tree Close, Guildford	. 12
	Site 152 (policy A58) – Land around Burnt Common warehouse, London Road, Send	. 17
	Site 2365 (policy A59) – New rail station at Guildford West (Park Barn)	. 21
•	ppendix 2: Sites assessed as part of the Level 2 Strategic Flood Risk Assessment (SFR/	•

This page has been deliberately left blank.

1. Purpose of this addendum

- 1.1 This addendum to the Guildford Borough Level 2 Strategic Flood Risk Assessment (SFRA) (May 2016) was prepared to update the Level 2 SFRA so that it reflects the latest position on strategic sites proposed to be allocated in the forthcoming Local Plan. This position changed with the publication of the Proposed Submission Local Plan: Strategy and Sites (June 2017), which added new site allocations, deleted others and amended the scale and types of proposed uses for some allocated sites.
- 1.2 The information in this addendum supersedes the information in the proformas for sites in the Level 2 SFRA where that information had changed between the June 2016 and June 2017 versions of the Submission Plan. The addendum sets out in a table format where the site information is different to that in the Level 2 SFRA. The addendum accompanies, and should be read alongside, the Level 2 SFRA to obtain the most up-to-date information on sites in the emerging Local Plan.
- 1.3 This addendum also includes a detailed assessment of fluvial and surface water flood risk at a site in Guilford Town Centre that is proposed to be allocated in the 2017 Submission Plan which was not included in the May 2016 Level 2 SFRA (Site 1107/A5: Jewsons, Walnut Tree Close).
- 1.4 In addition, in order to address a point of soundness made in a representation by the Environment Agency (EA) during consultation on the 2016 Proposed Submission Local Plan, we have included a separate assessment of potential issues for safe access and egress for two other proposed site allocations in Walnut Tree Close. These are sites 2183/A13: Kernal Court and 2226/A14: Wey Corner.
- 1.5 As it had not been feasible for Capita (which had prepared the Level 2 SFRA) to undertake a full update of the Level 2 SFRA document prior to submission of the Local Plan, the Council prepared this addendum in-house as a part-update to the Level 2 SFRA, to be read alongside that document. In doing so, we have addressed the concerns of the EA in relation to the feasibility of providing safe access and egress to and from sites that the EA had previously raised concerns about in their representations during consultation on the 2016 and 2017 versions of the Proposed Submission Plan.

2. Explanation of changes to the Submission Local Plan (2017) and Level 2 SFRA

2.1 The tables in this section indicate the sites that were added to or deleted from the Submission Local Plan between the 2016 and 2017 versions. For details and an explanation of the reasons for these changes, and for an explanation of changes to the capacity of other sites allocated in the plan, please refer to the 2017 Land Availability Assessment (LAA) Addendum (February 2017).

Sites deleted in the 2017 Plan

2.2 The following proposed site allocations (listed in Table 3-3 of the Level 2 SFRA) were removed in the 2017 Submission Local Plan and therefore did not need to be considered by the SFRA in detail via assessment proformas. The Stage 2 and Stage 3 assessment tables in the latest Flood Risk Sequential and Exception Test document therefore show these sites as discounted:

Local Plan site ref.	LAA site ref.	Site	Allocated uses	Approx. no. of homes over plan period (gross)
A34	2186	Broadford Business Park, Shalford	Homes (C3)	100
A46	368	Land to the south of Normandy and north of Flexford	Mixed use development	1,100

Sites added in the 2017 Plan

2.3 The 2017 Submission Local Plan included the following new proposed site allocations:

Local Plan site ref.	LAA site ref.	Site	Allocated uses	Approx. no. of homes over plan period (gross)
A59	2365	New rail station at Guildford West (Park Barn)	New rail station	0
A58	152	Land around Burnt Common warehouse, London Road, Send	Employment floorspace (minimum 7,000 sq. m. B1c, B2, B8)	0

2.4 Both of the above two sites are entirely in Flood Zone 1 and therefore at low risk of flooding from fluvial sources. As there were no other constraints identified at Stage 2 that would prevent allocation of these sites, we took both sites forward to Stage 3, where they were confirmed as being appropriate for allocation in the plan. New site proformas, which provide an assessment of flood risk for these sites, are included in Appendix 1.

Climate change allowances

2.5 The detailed modelling used in the SFRA Level 2 to assess sites proposed for allocation in the Local Plan is based on the 1 in 1,000 year (0.1% annual exceedance

probability) and this data is shown on the maps where it was available. The SFRA Level 2 therefore accounts for the impacts of climate change based on guidance in the NPPF (2012) and Planning Practice Guidance on Flood Risk and Coastal Change (6 March 2014).

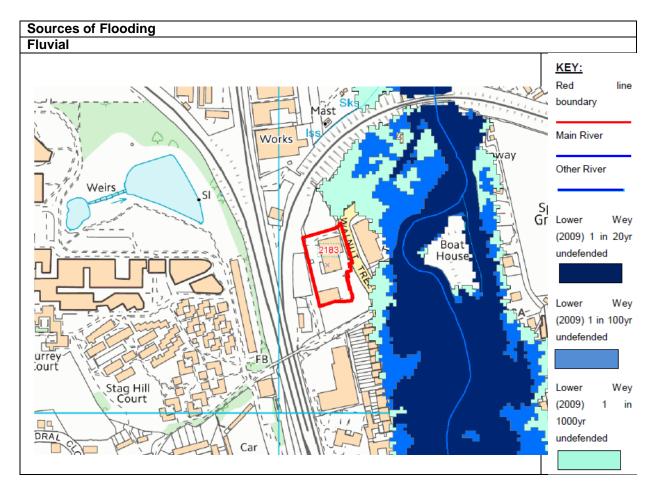
- 2.6 In February 2016, the Government updated its guidance (in the PPG) in relation to the way in which applicants for planning permission should take account of climate change within site-specific flood risk assessments of potential development sites. These assessments should now be based on a range of potential climate change allowances (Lower, Central, Higher Central and Upper) that reflect various lengths of time into the future.
- 2.7 In accordance with advice from the Environment Agency, we therefore recommend that potential applicants consult the latest climate change guidance before submitting a planning application if a site is liable to be affected and provide evidence to us that they have done so in a site-specific flood risk assessment to accompany their application. The Stage 3 table in this assessment has noted if there is a reasonable possibility that a site would be in flood zone 3 when climate change is taken into account. The latest guidance is available online at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.

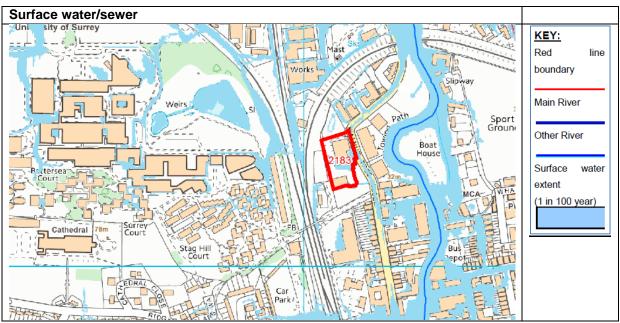
3. Additional information for sites assessed as suitable for allocation at Stage 3

- 3.1 The Submission Local Plan (2017) allocates the following three sites in Walnut Tree Close, Guildford:
 - Site 2183 (allocation policy A13): Kernal Court;
 - Site 2226 (allocation policy A14): Wey Corner; and
 - Site 1107 (allocation policy A5): Jewsons.
- 3.2 The May 2016 Level 2 SFRA included a detailed assessment of flood risk for sites A13 and A14, however, it provided a limited amount of information in relation to the potential for safe access and egress to/from these sites that can avoid areas of high flood risk. Providing a safe route to and from sites is a requirement of national Planning Practice Guidance. Further information in relation to this aspect of these two sites is therefore included below. A site proforma to assess flood risk from all sources for site A5 was not included in the Level 2 SFRA; therefore, this has been included in Appendix 1 of this document.

Site 2183 (policy A13): Kernal Court, Walnut Tree Close, Guildford

3.3 This site lies to the west of, and directly adjacent to, Walnut Tree Close. The Level 2 SFRA includes a map showing detailed fluvial flood modelling (reproduced below) which shows the site to be entirely in Flood Zone 1 and at low risk of fluvial flooding from the River Wey during the 1 in 1,0000 year fluvial event or greater. The surface water modelling map in the SFRA (also reproduced below) shows the site is also at limited risk for surface water (pluvial) flooding. Surface water flood risk was not a factor in the overall assessment; national planning guidance indicates that only flood risk from fluvial sources needs to be considered when selecting a site for potential allocation in a Local Plan.





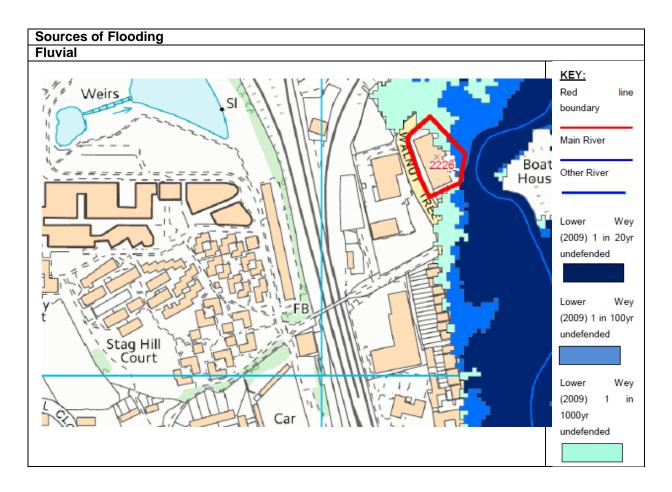
3.4 In relation to the ability of the site to provide safe access and egress routes away from flooding, the east side of the side adjoins Walnut Tree Close. This would provide a safe, dry route for the 100 homes proposed for the site, as the land from the units to Walnut Tree Close is above the floodplain level, as shown on the first

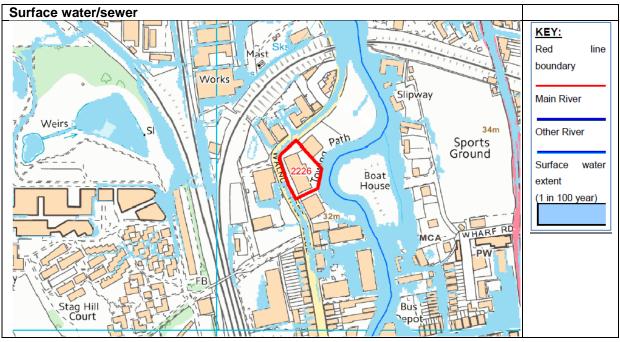
map above. Nevertheless, there are surface water flooding issues in some parts of the site, which would need to be addressed at the planning application stage; the flood risk management recommendations in the May 2016 SFRA Level 2 indicates how developers can avoid exposing any new uses for the site to flood risk. The recommendations from that document are below:

- The site should provide flood storage capacity and permeable areas in order to avoid increasing the risk of flooding downstream.
- The surface water drainage system should be designed to accommodate storage
 of events up to the 1 in 30 year event and be designed to manage surface water
 exceedance events. The layout and landscaping of the site should aim to route
 water away from any vulnerable property, and avoid creating hazards to access
 and egress routes.
- Appropriate set back distances from the watercourse near the site should be agreed with both the Environment Agency and Guildford borough Council. This could be up to 16 metres however; it is more likely to be between 5 metres and 8 metres.
- 3.5 In addition, the proforma for this site in the Level 2 SFRA recommends that:
 - Developments within the site are encouraged to achieve a reduction in existing runoff rates / volumes where possible, to mitigate effects of cumulative development in this area.

Site 2226 (policy A14): Wey Corner, Walnut Tree Close, Guildford

- 3.6 This 0.38ha site is bounded to the south, north and west by Walnut Tree Close and lies directly opposite site A13: Kernal Court.
- 3.7 The site received planning permission on 11th November 2016 for a redevelopment of 56 homes (to replace an existing warehouse) (application ref. 16/P/00752). The case officer considered flood risk as part of assessing the planning application. The Council consulted the Environment Agency on the application and they did not raise objections, subject to requesting that the Council attach conditions to the approval in order to ensure that the proposed scheme would reduce overall flood risk on the site and would enhance the area's natural and built environment.
- 3.8 The detailed hydraulic flood modelling in the Level 2 SFRA (reproduced below) showed that the majority of the site is located in Flood Zone 1. Most of the site is therefore at low risk of fluvial flooding, although the east of the site is predicted to flood during the 1 in 100 year fluvial event or greater (flood zone 2) and the north east of the site predicted to flood during the 1 in 1,000 year event or greater (flood zone 3a). This is illustrated in the second map below.





3.9 In relation to the ability of the site to provide safe access and egress routes that are unaffected by flooding, the west side of the side adjoins Walnut Tree Close. This would provide a safe, dry route for the homes proposed, as the land from the units to Walnut Tree Close falls within flood zone 1. The planning application maintains the

existing vehicular access at the north of the site from Woodbridge Meadows (the entry and exit point falls within flood zone 2) and proposes a second vehicular access is off Walnut Tree Close to the south to provide access to a new surface car park. Both of these access and egress routes are above the floodplain level.

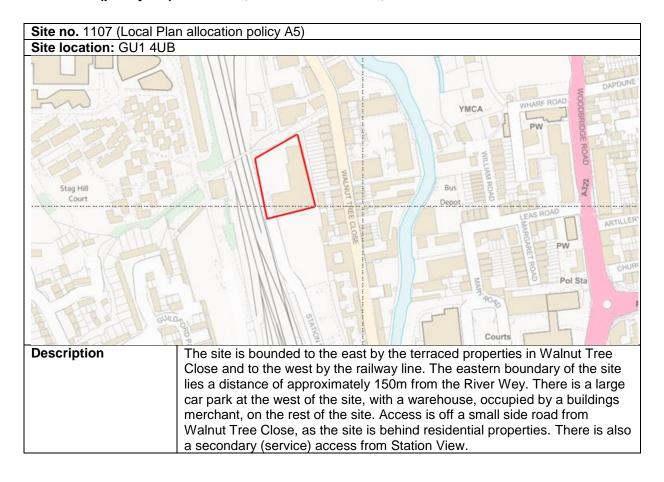
- 3.10 The layout of the proposed residential units is such that the majority of units are within flood zone 1 with only a small element of the north building in flood zone 2, with mitigation measures proposed for units in this part of the site to further reduce flood risk. The SFRA Level 2 recommends:
 - Development should be avoided adjacent to the flood corridor within the eastern edge that is within Flood Zone 3. Placing sleeping accommodation on the ground floor in areas of flood risk should be avoided.
 - Appropriate set back distances from the watercourse on site should be agreed with both the Environment Agency and Guildford Borough Council. This could be up to 16 metres however; it is more likely to be between 5 metres and 8 metres.
 - Development of flood defences should be considered as well as the opportunity to reduce flood risk to downstream areas through increasing flood storage capacity within the site.
 - Developments within the site are encouraged to achieve a reduction in existing runoff rates / volumes where possible, to mitigate effects of cumulative development in this area.
 - The surface water drainage system should be designed to accommodate storage
 of events up to the 1 in 30 year event and be designed to manage surface water
 exceedance events. The layout and landscaping of the site should aim to route
 water away from any vulnerable property, and avoid creating hazards to access
 and egress routes.

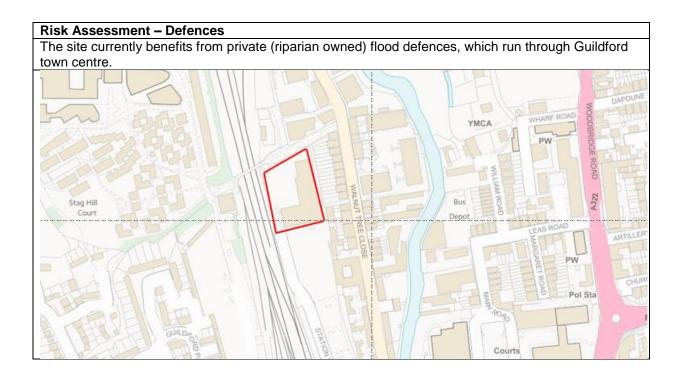
Site 1107 (policy A5): Jewsons, Walnut Tree Close, Guildford

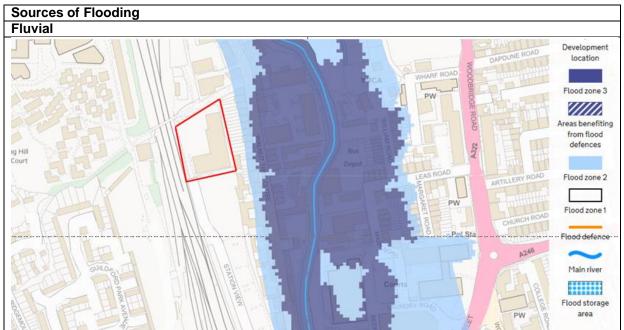
- 3.11 The site lies to the south of site A13 Kernal Court, on the west side of Walnut Tree Close. It is bounded to the east by terraces of existing residential properties in Walnut Tree Close and Hillside Mews and to the west by the railway line. A site proforma for this site containing further information on flood risk at this site is included in Appendix 1.
- 3.12 The site is entirely in Flood Zone 1 and has similar surface water ponding issues to the Kernal Court site, therefore it has been assessed as having the same suitability score (5) as that site.

Appendix 1: New site proformas

Site 1107 (policy A5): Jewsons, Walnut Tree Close, Guildford



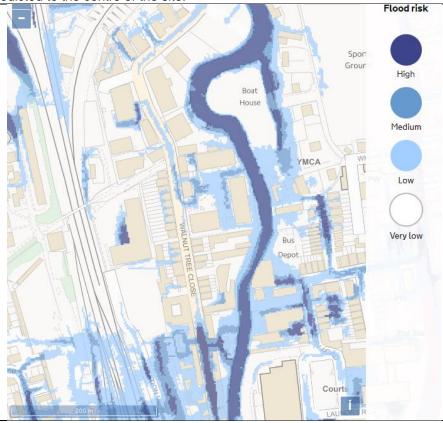




Detailed hydraulic modelling of long-term flood risk from the River Wey is presently unavailable for this site. However the EA Flood Zone extents (below) show the entire site is located in Flood Zone 1 and therefore at low risk of fluvial flooding from the River Wey during the 1 in 1,0000 year fluvial event or greater.

Surface water/sewer

The surface water modelling demonstrates that the majority of the site is not predicted to flood during the 1 in 1,000 year pluvial event, thus is considered at very low risk of pluvial flooding. A small area of surface water ponding is predicted to the centre of the site.



Artificial sources

The site falls outside of the maximum extent of reservoir flooding. Furthermore, there are no reservoirs, lakes or canals in close proximity to the site. Thus the site is considered at low risk of flooding from artificial sources.

Summary of flood risk from all sources of flooding

- Flooding from Fluvial sources The entire site is located within Flood Zone 1; it is not predicted to flood during the 1 in 1000 year fluvial event or greater. Thus, the site is considered to be at low risk of fluvial flooding.
- Flooding from Surface Water sources Surface water ponding is predicted within a small central area of the site during the 1 in 30 year (high risk) pluvial event, however the rest of the site is considered to be at very low risk.
- Flooding from Artificial sources Very low for the entire site.

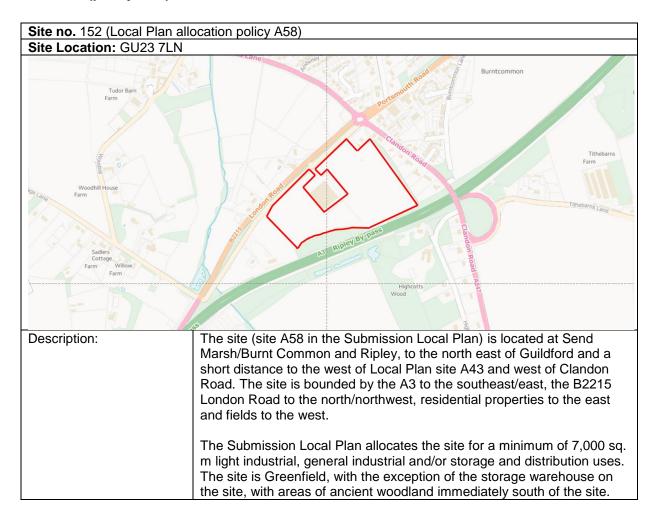
 The site should provide flood storage capacity and permeable.

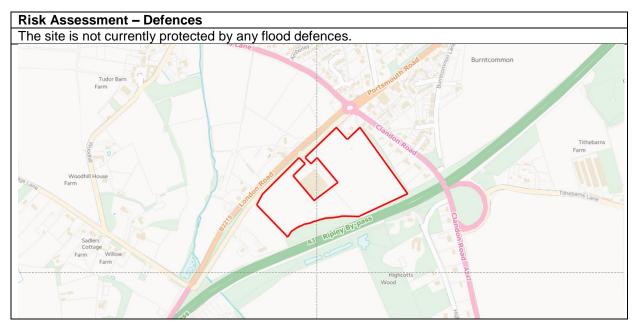
Flood Risk Management Recommendations

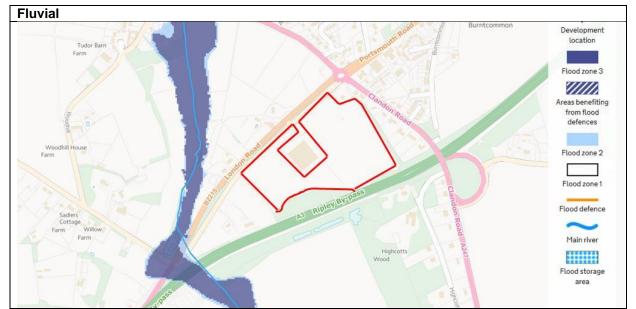
- The site should provide flood storage capacity and permeable areas in order to avoid increasing the risk of flooding downstream.
- The surface water drainage system should be designed to accommodate storage of events up to the 1 in 30 year event and be designed to manage surface water exceedance events. The layout and landscaping of the site should aim to route water away from any vulnerable property, and avoid creating hazards to access and egress routes.
- It should be possible to provide safe access and egress to and from the site, as there is an existing access into the site from Walnut Tree Close, as well as a secondary (service) access from Station View. The site itself is entirely in Flood Zone 1; however, the access route from Walnut Tree Close is partially located within Flood Zone 2. If

How can	the route cannot avoid this area of flood risk then it will be necessary to provide the main access from Station View, which is within Flood Zone 1. • Developments within the site will be required to demonstrate
development reduce flood risk overall?	adequate land drainage (under Submission Local Plan policy P4) and are encouraged to achieve a reduction in existing runoff rates / volumes where possible, to mitigate effects of cumulative development in this area.
	 Safe access and egress to the site is not achievable to the west of the site due to the railway line. It is recommended the primary access route be made to the south east of the site, linking onto Walnut Tree Close.
Reasonable prospect of compliance within the Exception Test?	The entire site is within Flood Zone 1, with none of the site predicted to flood during the 1 in 1,000 year fluvial event in the detailed fluvial modelling. Provided the access and egress route to and from the site can avoid crossing a higher flood risk area, as indicated above, then any new properties should be safe and the site will not require a Sequential Test or Exception Test.
Flood Risk Suitability Score	5

Site 152 (policy A58) - Land around Burnt Common warehouse, London Road, Send





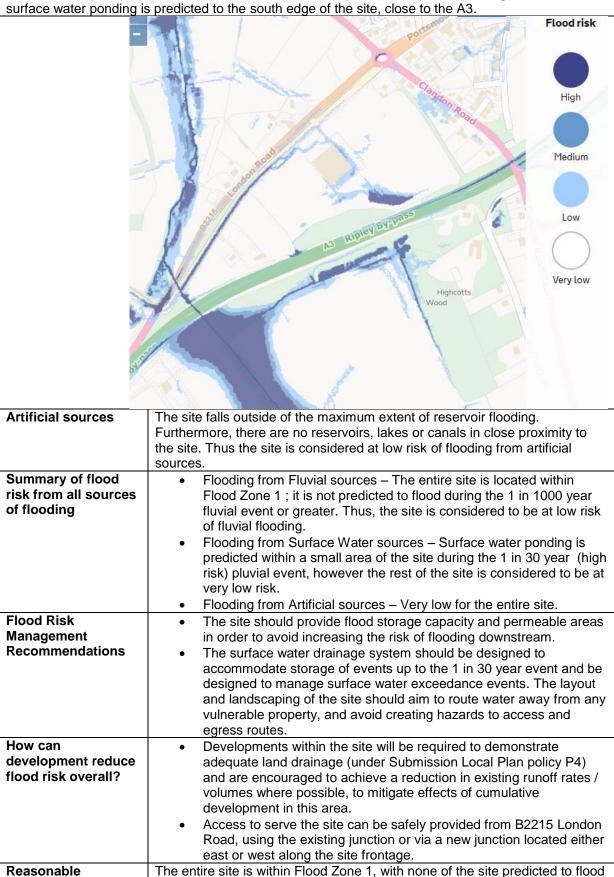


Detailed hydraulic modelling of long-term flood risk is presently unavailable for this site. However the EA Flood Zone extents (below) show the entire site is located in Flood Zone 1 and therefore at low risk of fluvial flooding from the River Wey or its tributaries during the 1 in 1,0000 year fluvial event or greater.

The site is allocated in the 2017 Submission Local Plan for B1c, B2 and B8 employment uses, which are 'less vulnerable developments' in the Flood Risk Vulnerability Classification in the PPG. These uses are considered to be suitable for development in Flood Zones 1, 2 and 3a.

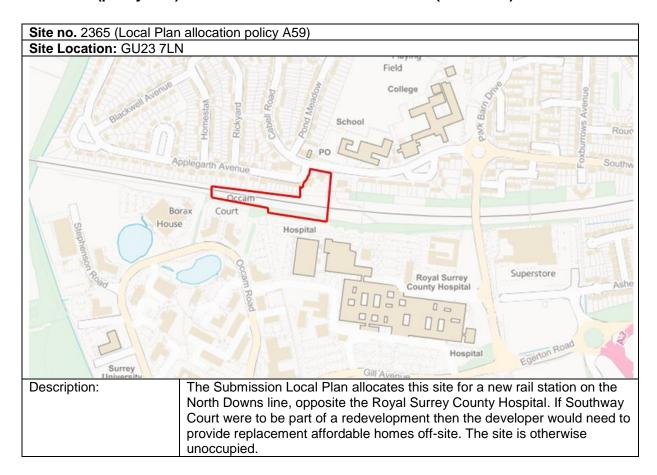
Surface water/sewer

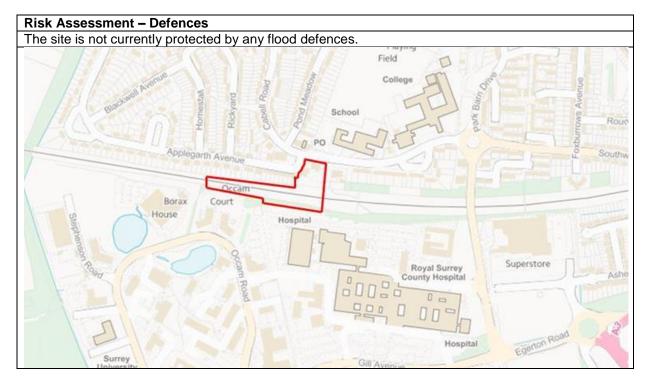
The surface water modelling demonstrates that the majority of the site is not predicted to flood during the 1 in 1,000 year pluvial event, thus is considered at very low risk of pluvial flooding. A small area of surface water ponding is predicted to the south edge of the site, close to the A3

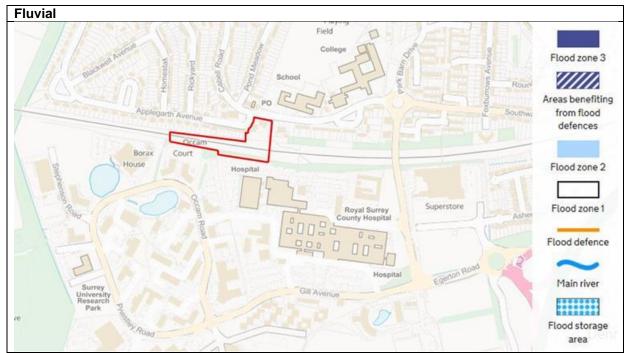


prospect of compliance within the Exception Test?	during the 1 in 1,000 year fluvial event (based on the EA Flood Zone extents). Therefore, in accordance with the PPG, the Flood Risk Sequential Test and Exception Test will not be required.					
Flood Risk Suitability Score	5					

Site 2365 (policy A59) - New rail station at Guildford West (Park Barn)





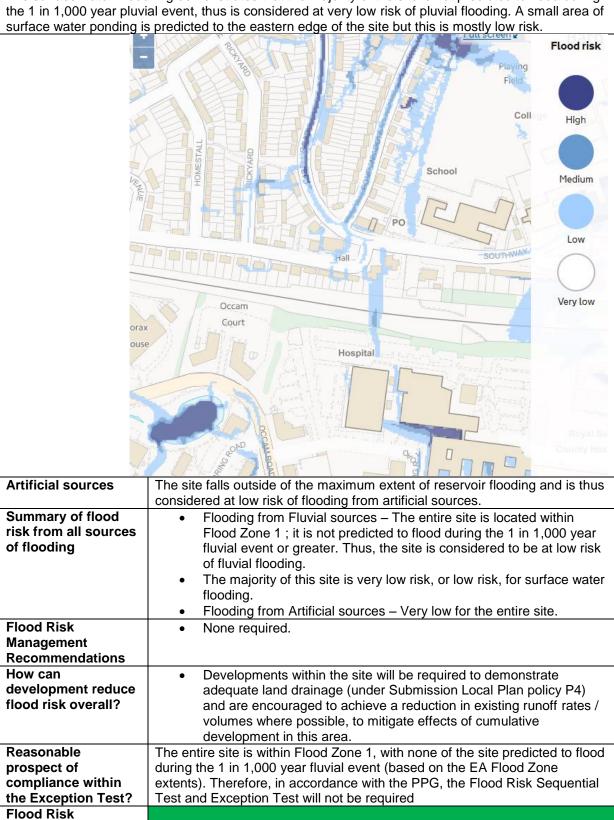


Detailed hydraulic modelling of long-term flood risk is presently unavailable for this site. However the EA Flood Zone extents (below) show the entire site is located in Flood Zone 1 and therefore at low risk of fluvial flooding from the River Wey or its tributaries during the 1 in 1,0000 year fluvial event or greater.

The 2017 Submission Local Plan allocates this site for a new rail station on the North Downs Line. This is 'essential infrastructure' in the Flood Risk Vulnerability Classification in the PPG, which is suitable for development in Flood Zones 1 or 2.

Surface water/sewer

The surface water modelling demonstrates that the majority of the site is not predicted to flood during



5

Suitability

Score

Appendix 2: Sites assessed as part of the Level 2 Strategic Flood Risk Assessment (SFRA) (updated list)

The table below replaces Table 3-3 in the May 2016 Level 2 SFRA document:

Table 0-1: Sites assessed as part of the Level 2 Strategic Flood Risk Assessment*

ID	Address	% overlap with Flood Zone 1	% overlap with Flood Zone 2	% overlap with Flood Zone 3a	% overlap with Flood Zone 3b	Size of site (ha.)	Flood Risk Suitability Score (1 is of most concern, 5 is of least concern)
134	The Plaza, Portsmouth Road, Guildford, GU2 4DH	93.9	6.1	0.0	0.0	0.38	3
2229	Guildford Cinema, Bedford Road, Guildford, GU1 4SJ	0.0	0.0	20.5	79.5 (23.9% Flood Zone 3b Developed)	0.8	1
205	North Street redevelopment, Guildford, GU1 4PU	75.2	22.3	2.5	0.0	3.7	3
171	Land and buildings at Guildford Railway Station, Guildford, GU1 4JY	95.9	4.1	0.0	0.0	2.2	4
08	77 to 83 Walnut Tree Close, Guildford, GU1 4UH	0.0	0.0	1.7	98.3 (51.2% Flood Zone 3b Developed)	3.58	1
2183	Kernal Court, Walnut Tree Close, Guildford, GU1 4UD	100	0.0	0.0	0.0	0.55	5
2226	Wey Corner, Walnut Tree Close, Guildford, GU1 4TT	71.7	16.4	11.9	0.0	0.38	3
1107	Jewsons, Walnut Tree Close, Guildford, GU1 4UB	100	0.0	0.0	0.0	0.74	5
2365	New rail station at Guildford West (Park Barn), GU23 7LN	100	0.0	0.0	0.0	1.14	5
245	Slyfield Area Regeneration Project, Guildford, GU1 1QE	85.9	11.4	0.3	2.4 (0.0% Flood Zone 3b Developed)	40	4
53/54	Land at former Wisley Airfield, Ockham, GU23	Site 53: 96.8 Site 54: 96.5	Site 53: 0.3 Site 54: 3.5	Site 53: 2.9 Site 54: 0.0	Site 53: 0.0 Site 54: 0.0	86	4

ID	Address	% overlap with Flood Zone 1	% overlap with Flood Zone 2	% overlap with Flood Zone 3a	% overlap with Flood Zone 3b	Size of site (ha.)	Flood Risk Suitability Score (1 is of most concern, 5 is of least concern)
	6PX						
975	Land to the north of West Horsley, KT24 6PE	80.2	2.4	17.4	0.0	8	4
240	Land near Horsley Railway Station, Ockham Road North, East Horsley, KT24 6LH	69.1	2.7	28.2	0.0	5.1	4
241	Land at Whittles Drive, Aldershot Road, Normandy, GU3 2BE	73.7	20.3	6.0	0.0	2.8	3
2106	Lakeview, Lakeside Road, Ash Vale, GU12 5AD	72.7	9.6	17.7	0.0	0.55	4
2258	Land at Garlick's Arch, Send Marsh/Burnt Common and Ripley, GU23 7LN	80.0	9.5	4.0	6.5	38.1 28. 9	3
152	Land around Burnt Commom Warehouse, London Road, Send, GU23 7LN	100	0.0	0.0	0.0	9.26	5

^{*}Source: Data for Table 3-3 reproduced from Level 2 SFRA (May 2016) prepared by Capita, with the exception of sites 1107, 2365 and 152 (data assessed and provided by Guildford Borough Council)