Appendix B: Level 2 Mapping User Guide

The table below outlines the datasets used to in the mapping for the Level 2 site assessments.

Legend	Description
Authority Information St Albans District Boundary	The boundary of the St Albans district area, the study area for this SFRA.
Level 2 SFRA Sites	The site boundary for the individual site/group of sites shown within the map.
Watercourses Main Rivers Ordinary Watercourses	Main Rivers – the Environment Agency (EA) statutory main rivers map detailing the watercourses which are designated a Main River by the EA. All Watercourses –Ordnance Survey (OS) Open data including Open River for surface features and the EA Asset Information Management System (AIMS) data to locate culverts.

Legend	Description
Flood Zones Indicative Flood Zone 3b Flood Zone 3b Flood Zone 3a Flood Zone 2	The Flood Zones are for use in development planning and flood risk assessments: **Flood Zone 3b** – Functional Floodplain: This zone comprises land where water must flow or be stored in times of flood. **Flood Zone 3a** – High probability: greater or equal to a 1% chance of river flooding in any given year (Excludes Flood Zone 3b, which is derived as part of the SFRA). **Flood Zone 2** – Medium probability: between a 1% and 0.1% chance of river flooding in any given year. Flood Zones 2 and 3a, as shown in the Appendix A mapping, show the same extent as the online Environment Agency's Flood Map for Planning (FMfP) (which incorporates the latest available modelled data). Flood Zone 3b is identified as land which would flood with an annual probability of 1 in 30 years (3.3% AEP) where detailed hydraulic modelling exists. The following models have appropriate outputs which have been included: Upper Colne (2010) model, Lee (2010) model, London Colney (2018) model and the River Ver (2019) model. Where detailed hydraulic modelling exists but the 3.3% AEP event was not available, the layer has been based on the larger, more conservative 2% AEP. This is the case for the following models: Upper Colne (2010) and Lee (2010) model. Where no detailed hydraulic modelling exists, the Flood Zone 3a extent can be a used as an indicative Flood Zone 3b.
Fluvial climate change model data	Where hydraulic modelling with appropriate climate change uplifts was available the model flood depth, velocity and hazard outputs have been included within the mapping. The following outputs have been included: • River Ver - 3.33% AEP, 1% AEP and 0.1% AEP plus 21% CC (central) • River Ver - 3.33% AEP, 1% AEP and 0.1% AEP plus 35% CC (higher central) • London Colney - 3.33% AEP, 1% AEP and 0.1% AEP plus 21% CC (central)

Legend	Description
	• London Colney - 3.33% AEP, 1% AEP and 0.1% AEP plus 35% CC (higher central) The climate change extents shown are the central or higher central allowances. Suitable model outputs were not available the following proxy data was used: • Flood Zone 3b plus climate change - 1% AEP extent (Flood Zone 3a) • Flood Zone 3a plus climate change - 0.1% AEP extent (Flood Zone 2) • Flood Zone 2 plus climate change - 0.1% AEP extent retained
Risk of Flooding from Surface Water Surface Water Extent 3.3% AEP 1% AEP 0.1% AEP	The EA's Risk of Flooding from Surface Water (RoFfSW) flood maps give an indication of the broad areas likely to be at risk of surface water flooding. This includes flooding that takes place from the surface runoff generated by rainwater. The data includes the extent, velocity, depth, and hazard mapping for the 3.3%, 1% and 0.1% AEP events. The extent of flooding for each of the events is shown in the mapping.
Surface Water Extent plus Climate Change 1% AEP plus 40% Climate Change	The RoFSW was uplifted to represent surface water climate change for 1% AEP plus 40% CC event. The depth, velocity and hazard outputs for this event are included within the mapping.

Legend	Description
Risk of Groundwater Flooding JBA Groundwater Emergence Map (5m Resolution)	JBA's Groundwater Flood emergence map shows the level of groundwater below the surface, at a resolution of 5m. Flood risk could increase when groundwater is already high or emerged, causing additional overland flow paths or areas of still ponding, which may occur at sites other than those shown in the emergence mapping. The risk categories are as follows: • less than 0.025m below surface • between 0.025-0.5m below surface • Between 0.5-5m below surface • At least 5m below surface • No risk
Risk of Flooding from Reservoirs Wet Day Dry Day	The EA reservoir flood extents show the predicted flooding which would occur if a dam or reservoir fails. The EA provide two scenarios: **Dry Day** – the predicted flooding which would occur if the dam or reservoir fails when rivers are at normal levels. **Wet Day** – the predicted worsening of the flooding which would be expected if a river is already experiencing an extreme natural flood.
Defences	The EA Asset Information Management System (AIMS) spatial Flood Defence dataset, shows flood defences currently owned, managed, or inspected by the EA. A defence is any asset that provides flood defence or coastal protection functions. The main defences within St Albans are natural high ground.
Flood Mitigation Flood Alert Areas Flood Warning Areas	The EA issue flood warnings to designated Flood Warning Areas when a river level hits a certain threshold, heavy rainfall or high tides and strong winds are forecast. "Flooding is expected, immediate action is required". Flood Alerts are issued when there is water out of bank for the first time anywhere in the catchment and when forecasts indicate flooding may be possible. "Flooding is possible, be prepared". Both datasets are a polygon GIS shapefile where the above are issued; they are not flood extents.

Legend	Description
Flood History EA Historic Flood map	The EA Historic Flood Map shows areas of land that have been previously subject to fluvial flooding in the area. This includes flooding from rivers, the sea and groundwater springs but excludes surface water. If an area is not covered by the Historic Flood Map, it does not mean that it has never flooded, only that currently there are no records of flooding in this area from the EA records.