Type	Layer	Source	Description of Layer	Included (Y/N)	Comment	Benefits	Limitations
Fluvial	Environment Agency Broad-scale Flood Zone Maps	Provided as GIS layer by EA	Polygon layer showing EA flood zone maps including Flood zone 2 and 3	Y		A quick and easy reference that can be used as an indication of flood risk.	Flood zones may not give an accurate representation of flood risk. The models do not take into account defences; are commonly based on 5m resolution DTM; JFLOW software is commonly used that is generally thought to have inaccuracies. Typically watercourses with a catchment area less than 3km^2 are omitted from Environment Agency mapping unless there is a history of flooding affecting a population. Consequently there will be some locations adjacent to watercourses that on first inspection, it is suggested there is no flood risk.
	Main Rivers and Critical Ordinary Watercourses	Provided as GIS layer by EA	Polyline layer showing all watercourses designated Main Rivers and COWs	Y		Identification of the watercourses for which the EA have discretionary and regulatory powers	There are other watercourses that may be a significant flood source.
	Hydraulic model outputs: River Waveney, 20yr, 100yr, 1000yr, 20yr+CC, 100yr+CC,100yr+CC	Provided as GIS layers by JBA	Polygon data showing the modelled outlines of River Waveney and Dove	Y	Limited data	Detailed and calibrated hydraulic model outlines that have been mapped using LiDAR (1m and 2m resolution). These outlines provide a much greater degree of accuracy and therefore confidence than the broad-scale flood zones.	There are watercourses within the study area that have not been modelled and therefore the flood risk from these cannot be as accurately assessed.
	Hydraulic model outputs: River Deben, 20yr, 100yr, 1000yr, 20yr+CC, 100yr+CC,100yr+CC	Provided as GIS layers by Royal Haskoning	Polygon data showing the modelled outlines for the Deben catchment	Y			
	Hydraulic model outputs: Gipping, 20yr, 100yr, 1000yr, 20yr+CC, 100yr+CC,100yr+CC	Provided as GIS layers by Atkins	Polygon data showing the modelled outlines of River Gipping and some tributaries.	Y			
	Hydraulic model outputs: River Great Ouse, 100yr, 1000yr,	Provided as GIS layer by EA	Polygon Data showing modelled outline of Great Ouse tributaries in Pakenham area	Y			
	Combined Flood Zone 3b - Functional Floodplain	EA Flood Zone Maps & Hydraulic Modelled Data	Polygon layer created using best available data for whole district. Where 1:20yr modelled outlines available, these have been used to represent FFP (with agreement from EA and Council). Where modelled data is not available, EA broad-scale FZ3 has been used.	Y	Combined data	A single GIS layer created using best available information at time of publication.	Assumption made that where modelled data for 20yr event is not available, the 100yr FZ3 broad-scale outline has been used. This could be overly conservative and, where possible, data should be updated as and when available.
	Combined Flood Zone 3b - Functional Floodplain+ CC	EA Flood Zone Maps, Hydraulic Modelled Data	Polygon layer created using best available data for whole district. Where 1:20r + CC modelled outlines available, these have been used to represent FZ3 + CC (with agreement from EA and the Council). Where modelled data is not available for , EA broad-scale FZ3 has been used		Combined data	A single GIS layer created using best available information at time of publication.	Assumption made that where modelled data for 20yr+CC event is not available, the 100yr FZ3 broad-scale outline has been used. This could be overly conservative and, where possible, data should be updated as and when available.
	Combined Flood Zone 3a	EA Flood Zone Maps & Hydraulic Modelled Data	Polygon layer created using best available data for whole district. Where 1:100yr modelled outlines available, these have been used to represent FZ3a (with agreement from EA and the Council). Where modelled data is not available for fluvial reaches, EA broad-scale FZ3 has been used.	Y	Combined data	A single GIS layer created using best available information at time of publication.	Assumption made that where modelled data for 100yr event is not available, the 100yr FZ3 broad-scale outline has been used. This could be overly conservative and, where possible, data should be updated as and when available.

Type	Layer	Source	Description of Layer	Included (Y/N)	Comment	Benefits	Limitations
	Combined Flood Zone 3 a+ CC	EA Flood Zone Maps, Hydraulic Modelled Data	Polygon layer created using best available data for whole district. Where 1:100yr + CC modelled outlines available, these have been used to represent FZ3 + CC (with agreement from EA and the Council). Where modelled data is not available for , EA broad-scale FZ2 has been used.	Y	Combined data	A single GIS layer created using best available information at time of publication.	Assumption made that where modelled data for 100yr+CC event is not available, the 1000yr FZ2 broad-scale outline has been used. This could be overly conservative and, where possible, data should be updated as and when available.
	Combined Flood Zone 2	EA Flood Broad Scale Flood Zone Maps and hydraulic modelled data	Polygon layer of 1:1000yr FZ2 outline created for whole district.	Y	Combined data	A single GIS layer created using best available information at time of publication.	All based on FZ2 broad-scale mapping
	Combined Flood Zone 2 + CC	EA Flood Broad Scale Flood Zone Maps and hydraulic modelled data	Polygon layer created using best available data for whole district. Where 1:1000yr + CC modelled outlines available, these have been used to represent FZ3 + CC (with agreement from EA and the Council). Where modelled data is not available this has not been shown		Combined data	A single GIS layer created using best available information at time of publication.	
Groundwater	Groundwater Vulnerability Maps	Provided as GIS layer by EA	Polygon layers showing major aquifers and their vulnerability	Y		Broadly shows extents of aquifers in the district. Where aquifers are highly vulnerable, they often have a more permeable covering and, together with dry valley and watercourse networks, potential groundwater flooding areas can be identified.	Coarse assessment of potential areas where GW flooding could occur. This is not foolproof and is based on assumptions. Where necessary, detailed groundwater flooding studies should be undertaken at SSFRA.
Other	Sewer Flooding History	DG5 data registers provided by Anglian Water	Data layer showing points of flooding with records of date of incident, location, extent, source, cause.	Y		Indicates areas that are most prone to flooding as have experienced flooding within a postcode area due to hydraulic incapacity.	The postcode areas cover relatively large areas and it is not possible to determine the exact location of the incidents from this dataset. Data only covers 6 month period and it is therefore difficult to determine long-term trends.
	Historic Flood Events	GIS layer of digitised historic flood events	Points layer showing locations of recorded historic flood events	Y		Indicates areas which have been recorded as having been flooded	Source of flooding is not always recorded and quantity and accuracy of recorded information does not reflect true scale of past flooding
Mitigation	Flood Warning areas	Provided as GIS layer by EA	Polygon layer showing areas benefiting from flood warning and emergency plans with query details presenting what is involved in each.	Y		Indicates which areas the flood warning system covers.	
	Groundwater Vulnerability Maps	Provided as GIS layer by EA	Polygon layers showing major aquifers and their vulnerability	Y		Broadly shows extents of aquifers in the district. Where aquifers are highly vulnerable, they often have a more permeable covering and, together with dry valley and watercourse networks, potential groundwater flooding areas can be identified.	Coarse assessment of potential areas where GW flooding could occur. This is not foolproof and is based on assumptions. Where necessary, detailed groundwater flooding studies should be undertaken at site-specific FRA.
Planning	LPA/study area Boundary	Provided as GIS Layer by the Council	Polygon layer showing administrative boundaries	Y		Clearly identifies the study boundary	
	LPA Land bid sites	Provided as GIS Layer by the Council	Polygon layer showing land bid site boundaries	Y		Defines land bid site boundaries and areas of potential development	
	Urban Areas	Provided as GIS Layer by the Council	Polygon Layer showing urban areas	Y		Defines urban areas	
	OS Mapping	MSDC provided OS Mapping under contractor license	1:10k (limited coverage), 1:50k and 1:250k OS raster maps for use in GIS	Y		Provides background mapping to other GIS layers.	Designed for use at 1:10k, 1:50k, 1:250k scales