King's Lynn and West Norfolk Borough Strategic Flood Risk Assessment Level 2 Community Level Guidance Tables

Completed by	JBA consulting
Date	March 2019
Author	Freyja Scarborough
Reviewer / Sign-off	Hannah Coogan
Version Number	Version 2.0

Level 2 Community Level Guidance Tables

Community details	**Community**	Wisbech Fringe (including Walsoken)			
	Flood Risk Summary	Highest risk flooding mechanism	Surface Water		
		Most likely source of flooding	Surface Water (minimal)		
Sources of flood risk	**Existing drainage features**	• Three small areas of open watercourse between culvert within the community boundary. • Minor drainage features between culvert located to the north-east of the community.			
	Fluvial	No			
	Tidal	Minor encroachment of Flood Zone 2 across the northern boundary.			
	Surface Water	Minor impact from 3.3% AEP event and greater impact with increased AEP event.			
	Residual Risk	Breach risk across entire community, from the Tidal Nene.			
	IDB watercourse present?	This community is entirely covered by the King's Lynn IDB, in the admin area of the Water Management Alliance (WMA). The drains influencing the community are: • Cow Lane Drain (Long Lotts Drain) • Simpoles Dyke • Church Dyke • Goodales Dyke • Baxters Dyke • German Dyke • Red House Dyke			
	Flood history	The Environment Agency's recorded flood outline dataset, the provided Section 19 data, data of previous sewer flooding and an internet search indicate no record of flooding in this community.			
Flood risk management infrastructure	**Defences**	**Defence Type**	**Flooding Type**	**Standard of Protection**	**Condition**
		Embankment (x3)	Coastal	200	3 (Fair)
		Embankment	Coastal	0	3(Fair)
		Embankment (x3)	Tidal	200	3(Fair)
		Wall	Tidal	25	4 (Poor)
		Embankment (x3)	Coastal	150	2 (Good)
		Embankment (x3)	Tidal	150	3(Fair)
		Embankment	Tidal	150	2 (Good)
		• The areas benefiting from defences dataset has a small impact on the east of the community. • Large number of defences benefitting this community both coastal defences to the North and tidal defences from the River Great Ouse to the east of the community and from the Tidal Nene on the West of the community.			

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Opportunities for sustainable development	**Asset management**	No EA pipeline schemes at or near this community.	
	Capital investment policy and regeneration	No current schemes identified for this community.	
	Higher level policy	This community is not explicitly mentioned in any higher-level policy documents. This area is within the Great Ouse Catchment Flood Management Plan and sub area 10, the Fens. Within this sub-area the current flood risk is appropriately managed. However, the risk is expected to significantly rise in the future with impacts from climate change. This area is designated as low-lying fenland in the hinterland of the Wash Shoreline Management Plan (SMP) 2 is protected by defences along the wash coastline and is therefore relevant to the SMP. The policy within this area (PDZ1) is to maintain the current defences into the future, considering an 'envelope of potential developments' for all future scenarios. CFMP/ SMP policies set the high level and strategic direction for flood risk and coastal change management. There is no guarantee that funding will be available from national, regional or local sources to implement the policy. More detailed strategy and scheme work considers funding needs and availability at a community level.	
Emergency planning	**Flood warning**	The community is in the 'East of Wisbech along the A47 to Terrington St. John and surrounding areas' Flood Warning Area and the 'Tidal River from Denver to south of King's Lynn' Flood Alert Area provided by the Environment Agency.	
	Access and egress	• Access and egress possible in the 5% AEP fluvial and tidal events. • Access and egress possible out of the community above the 5% AEP fluvial and tidal events but may be limited outside of the local area. • Some localised issued with access and egress in the 1% AEP event with larger impact in the 0.1% AEP event.	
Climate Change	**Implications for the community**	• Additional encroachment covering the whole community in tidal climate change scenarios. • There is a small increase in the impact of surface water when taking into account the future effects of climate change.	
Requirements for drainage control and	**Broad scale assessment of possible SuDS**	**Bedrock Geology**	Mudstone
		Superficial Geology	Clay and silt
		Soil Type	Naturally high groundwater

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impact mitigation		**Groundwater Source Protection Zone**	No
		Historic Landfill Site	No
		• Areas Susceptible to Groundwater Flooding data is not available for this community, as such the potential of broadscale assessment is limited and the suitability of SuDS will need to be determined by on-site investigations. • Source control techniques are likely to be suitable for this community. • Infiltration techniques will be suitable proving there are areas of the site not at high or medium ground water flood risk. • Detention features may be feasible providing site slopes are <5% at the location of the detention feature. If the site has groundwater issues, then a liner will be required. • Filtration systems are probably suitable providing site slopes are <5% and the depth to the water table is >1m. If the site has groundwater issues, then a liner will be required. • All forms of conveyance features are likely to be suitable. Where slopes are >5%, features should follow contours or utilise check dams to slow flows.	
NPPF and planning implications	**Existing Local Considerations**	• The Borough Council's Local Plan highlights that the growth of Wisbech is constrained, so opportunities for growth have moved to communities adjacent to the town – Wisbech Fringe, including Walsoken. The Core Strategy has proposed a minimum of 550 houses are built in this area. The land allocated for this development is adjacent to Walsoken. Only a small portion of the community falls in Flood Zone 2 or 3. • Communication needs to be undertaken with Fenland District Council owing to their allocation for 3000 homes planned in the Wisbech Fringe Area. The Wisbech Level 2 SFRA produced for Fenland District Council, 2012 offers flood risk advice for this area under Sub Area E – Central.	

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	Requirements and guidance for site-specific Flood Risk Assessment	• Early consultation with WMA is strongly recommended in this area. • Safe access and egress will need to be demonstrated taking into account the additional impact of climate change and prepare a flood evacuation plan for the site. • Consideration of access and egress out of the local area should be given. • A Flood Risk Assessment (FRA) should suggest appropriate mitigation (flood resilience measures). • Consider the impact of a tidal or fluvial breach by sequentially placing the highest vulnerability part of the development in the areas of lowest flood risk, applying the Councils Flood Risk Design Guidance and creating a site-specific emergency plan for flood events. • Detailed hydraulic modelling will need to consider any drains within and surrounding the community that are likely to affect the site to assess fluvial flood risk in the community (including IDB drains). Hydraulic modelling should also seek to understand the impact of residual risk from culvert blockage to any proposed site from structures along these watercourses. • The FRA should address all forms of flood risk (tidal flooding, fluvial, pluvial and groundwater). • Investigate the impacts of climate change from all flooding sources on the site. •	
Conclusions and recommendations		Tidal and Coastal	Fluvial / Surface Water
		0.1% AEP and Breach	No risk / 3.3% AEP
		• Majority of the community in Flood Zone 1. • No historical records of flooding. • The Core Strategy has proposed a minimum of 550 houses are built in this area. The land allocated for this development is adjacent to Walsoken. • The community is mostly within an area benefiting from flood defences. • Consider contributions to the defences protecting the community. • Consideration of the additional impacts of climate change • Consider the impacts of tidal breach. • Consideration of safe access and egress. • Early consultation with WMA is strongly recommended in this area.	
Mapping Information			

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Flood Zones		• Indicative Flood Zone 3b is comprised of Environment Agency Flood Zones 3 containing fluvial model outlines. • Flood Zone 3a is comprised of Environment Agency supplied outlines from the tidal Wash, 2018 model and from Environment Agency Flood Zones 3 containing fluvial model outlines. • Flood Zone 2 is comprised of Environment Agency supplied outlines from the tidal Wash, 2018 model and from Environment Agency Flood Zones 2 containing fluvial and tidal model outlines.	