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 3.0

Level 2 Community Level Guidance Tables

Community details	**Community**	Brancaster			
	Flood Risk Summary	Highest risk flooding mechanism	Surface Water		
		Most likely source of flooding	Surface Water		
Sources of flood risk	**Existing drainage features**	• Proximate to Brancaster Bay to the North of the community. • A number of minor watercourses are present to the north-west of the community, with one entering culvert to the north-west corner.			
	Fluvial	No			
	Tidal	Small impact from Flood Zone 3a			
	Surface Water	Impact from 3.3% AEP event and above.			
	Residual Risk	Small residual risk from tidal breach in the north-east of the community.			
	IDB watercourse present?	Not covered by an Internal Drainage Board (IDB) area.			
	Flood history	• No incidents of flooding have been recorded in supplied datasets. • Spencer et al., (2015) reports several breaches of tidal defences (a major breach on the western margin and 3 failures on the eastern boundary to the re-alignment) in the Southern North Sea storm surge of 2013 with an area of 29ha in Brancaster West Marsh behind defences being flooded.			
Flood risk management infrastructure	**Defences**	**Defence Type**	**Flooding Type**	**Standard of Protection**	**Condition**
		Embankment (x2)	Coastal	10 years	3 (Fair)
		Embankment (x2)	Coastal	10 years	4 (Poor)
		Embankment	Tidal	0	5 (Very Poor)
		Embankment	Coastal	20 years	2 (Good)
		There are no areas within the community that benefit from flood defences within the Environment Agency 'Area's benefitting from Defences' layer however the residual risk associated with breach from defences should be considered on the community.			
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.			

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	Higher level policy	• This area is covered by the North Norfolk Shoreline Management Plan (SMP), super frontage 2. The policy that covers this area looks at the possibility of gradually increasing the natural processes while still maintaining a coastal flood defence. • 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**	Small area in the north-east of the community is within 'North Norfolk coast from old Hunstanton to and including Cley' Flood Alert area and the 'North Norfolk Coast at Brancaster' Flood Warning Area.	
	Access and egress	• Possible in all tidal events except for the small area within the tidal flood zones in the north-east of the community. • During a 3.3% AEP surface water flood event, access and egress may be prevented in some areas of the community, with this impact being greater in larger AEP surface water events.	
Climate Change	**Implications for the community**	• Additional impact from tidal flooding in both tidal climate change scenarios in the north-east of the community. • 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 impact mitigation	**Broad scale assessment of possible SuDS**	**Bedrock Geology**	Chalk
		Superficial Geology	Diamicton
		Soil Type	Freely draining
		Groundwater Source Protection Zone	No
		Historic Landfill Site	No
		• Source control techniques are likely to be suitable for this community. • Detention features may be feasible providing site slopes are <5% at the location of the detention feature. • Filtration systems are probably suitable providing site slopes are <5% and the depth to the water table is >1m. If the site has contamination 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	

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NPPF and planning implications	**Existing Local Considerations**	• Brancaster is identified as a joint key rural service centre with coastal settlements Brancaster Staithe and Burnham Deepdale in King's Lynn and West Norfolk Borough Council's Local Plan. • Brancaster Parish Neighbourhood Plan aims to provide guidelines, developed and accepted by local villagers, which will inform future development of Brancaster and nearby settlements. • The Hunstanton to Kelling Shoreline Management Plan identifies that parts of Brancaster are located in the coastal strip. It also highlights that there are several important historic assets in the coastal strip, which may be at risk.	
	Requirements and guidance for site-specific Flood Risk Assessment	• New development must seek opportunities to reduce overall level of surface water flood risk at the community. • Safe access and egress must be demonstrated from the development, especially considering the impact of surface water on this settlement. • Risk of flooding from the northern and north-eastern drains should be considered on the community using detailed hydraulic modelling. • Residual risk of blockage should be considered from the culvert to the north-eastern boundary of the community. • Green infrastructure should be considered within the mitigation measures for surface water runoff from potential development and consider using areas of high surface water flood risk. • Areas Susceptible to Groundwater Flooding data availability was limited 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. Any SuDS measures should be applied using the guidance provided by the Lead Local Flood Authority. • Climate change causes additional impact to the community by tidal flooding on the north-eastern boundary and additional impacts from surface water flooding, this impact should be considered.	
Conclusions and		Tidal and Coastal	Fluvial / Surface Water
		0.5% AEP and Breach	No risk / 3.3% AEP

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recommendations		• There are limited records of historical flooding. • The settlement is situated mainly within Flood Zone 1. • Consider mitigation for surface water flooding depending on site location. • Consider the influence of tidal breach and tidal influence under climate change. • Consider contributions to the existing tidal defence at the north of the settlement.	
Mapping Information			
Flood Zones		Comprised of tidal Wells next the Sea, 2017 supplied model outlines.	