

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

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| 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

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|--|---|---|----------------------|-------------------------------|------------------|
| Community details | Community | East Rudham | | | |
| | Flood Risk Summary | Highest risk flooding mechanism | | Surface Water | |
| | | Most likely source of flooding | | Fluvial | |
| Sources of flood risk | Existing drainage features | <ul style="list-style-type: none"> There are several drains located within the community bisecting the centre of the community as well as to the south, east and west of the community. | | | |
| | Fluvial | Indicative Flood Zone 3b. | | | |
| | Tidal | Small impact in Flood Zone 3a | | | |
| | Surface Water | Small impact from 3.3% AEP event. More significant impact in 1% and 0.1% AEP events. | | | |
| | Residual Risk | Yes - risk of reservoir breach from Village Farm Reservoir | | | |
| | IDB watercourse present? | Norfolk Rivers internal Drainage Board (IDB) Catchment CMT087G-Tatterset A is a receiving waterbody to the immediate east of the community. | | | |
| | Flood history | <ul style="list-style-type: none"> The provided Environment Agency recorded flood outlines dataset, Section 19 data and sewer flooding records indicate no records of flooding. An internet search provides visual evidence of flooding along the A148 in December 2017. | | | |
| Flood risk management infrastructure | Defences | Defence Type | Flooding Type | Standard of Protection | Condition |
| | | - | - | - | - |
| | | N/A | | | |
| 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 | <ul style="list-style-type: none"> This area is within the Broadland Rivers Catchment Flood Management Plan and sub-areas 2, River Wensum and 4, Fluvial Rivers. The CFMP promotes the restoration of the upper River Wensum to reduce risk downstream. In the wider catchment, where there is lower flood risk, the policy is to reduce flood risk management work. 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 partially covered by the 'Upper Wensum and Tat' Flood Alert Service, provided by the Environment Agency. No Flood Warning system is present within the community. | | | |

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| | Access and egress | <ul style="list-style-type: none"> During all fluvial water flood events several routes are blocked by inundated roads. In the 3.3% and 1% AEP surface water flood events there may be difficulties with access and egress. In the 0.1% AEP event surface water may present a more significant access and egress problem. | |
| Climate Change | Implications for the community | <ul style="list-style-type: none"> Significant increase in flooding from surface water in the whole community due to climate change. No modelled data is provided to demonstrate the change in fluvial flood risk as a result of climate change. This will need to be considered in site specific Flood Risk Assessments. | |
| Requirements for drainage control and impact mitigation | Broad scale assessment of possible SuDS | Bedrock Geology | Chalk |
| | | Superficial Geology | Sand and gravel |
| | | Soil Type | Freely draining |
| | | Groundwater Source Protection Zone | No |
| | | Historic Landfill Site | No |
| | | <ul style="list-style-type: none"> Source control techniques are likely to be suitable for this community. Although mapping suggest groundwater flooding may be an issue in this community, Infiltration techniques may be suitable, providing they are located in areas that are not at medium to high risk from groundwater flooding. Detention features may be feasible providing site slopes are <5% at the location of the detention feature. If groundwater flooding is a medium to high risk to the site, then a liner may be required to mitigate against potential contamination issues. Filtration systems are probably suitable providing site slopes are <5% and the depth to the water table is >1m. If the site is at medium to high risk from groundwater flooding, 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 | <ul style="list-style-type: none"> East Rudham is identified as a Key Rural Service Centre in the Borough Council's Local Plan and has received an allocation of at least 10 new houses up until 2026. East Rudham was considered as part of Stage 1 of King's Lynn and West Norfolk Borough Council's Surface Water Management Plan, 2012 but was not concluded as having sufficient enough risk to proceed to Stage 2 assessment. | |

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| | Requirements and guidance for site-specific Flood Risk Assessment | <ul style="list-style-type: none"> New development must seek opportunities to reduce overall level of flood risk in this community an downstream. Ensure safe access and egress from the site in fluvial and surface water flood events. New development must seek opportunities to reduce overall level of surface water flood risk at the community. Detailed hydraulic modelling to understand impact of fluvial flooding along the main drain represented in the flood zones and additional small drains within the community. Hydraulic modelling should also seek to understand the impact of residual risk from culvert blockage to any proposed site. Investigate impacts of climate change on fluvial flooding using detailed hydraulic modelling. Investigate the impacts of climate change from surface water flooding within the community. Further investigation required into the impact of groundwater flooding on a proposed site as the Areas Susceptible to Groundwater Flooding shows high and medium risk in this community. | | |
| Conclusions and recommendations | | Tidal and Coastal | Fluvial | Surface Water |
| | | No risk | 5% AEP | 3.3% AEP |
| | | <ul style="list-style-type: none"> Recent records of historical flooding from December 2017 along the main access road within the community. Consider mitigation for surface water flooding. Developers should explore opportunities to contribute towards and undertake works on site to restore watercourses in this area an promote the use of natural flood management in rural areas. Ensure safe access and egress from the community in fluvial and surface water events. Significant areas of indicative Flood Zone 3b within the community which need to be verified with detailed hydraulic modelling. | | |
| Mapping Information | | | | |
| Flood Zones | <ul style="list-style-type: none"> All Flood Zones are comprised of Environment Agency Flood Zone fluvial outlines. | | | |