



**GREAT YARMOUTH**  
BOROUGH COUNCIL

**Draft Report on the Council response to the  
Tidal Surge**

**5/6<sup>th</sup> December 2013**



## Contents

Summary.....	2
The incident .....	3
Flood warnings & actions taken .....	3
Flood risk maps.....	4
Evacuation and Rest Centres.....	5
Communications.....	6
Flooding.....	7
Sandbags.....	7
Coastal erosion.....	8
Community Resilience.....	9
Business Continuity .....	9
Costs and the Bellwin Claim .....	10
Key learning points and recommendations.....	11

## Summary

The tidal surge of 5/6<sup>th</sup> December 2013 was a significant flood event. In Norfolk, Suffolk and Essex it was the largest surge since the flood of 1953 with the water height in Great Yarmouth exceeding that experienced 60 years ago. Despite the extent of the surge no lives were lost and there was no widespread flooding in the borough. This can be attributed to the effectiveness of the flood defences and measures taken to preserve life and property.

Several residential properties were flooded in Lichfield Road, Southtown, and Bridge Road, Runham Vauxhall. Two residential and three holiday properties were also lost at Hemsby due to significant erosion of the sand dunes.

Businesses were flooded in Runham Vauxhall as flood waters passed through their premises and into Bridge Road. A beach café at Caister was washed away.

The flood risk was initially indicated in the Flood Guidance Statement issued on Monday 2<sup>nd</sup> December. By Thursday morning 5<sup>th</sup> December the coastal flood risk in Norfolk had been raised to High (Red) due to the height of the forecast surge.

The Environment Agency issued a Flood Alert on Wednesday 4<sup>th</sup> December at 1746. A Severe Flood Warning was issued on Thursday 5<sup>th</sup> December at 0541.

The Flood Guidance Statement placing Norfolk at an Amber warning was the trigger to hold Strategic Coordinating Group (SCG) meetings on the afternoon and evening of Wednesday 4<sup>th</sup> December. At the evening meeting it was decided to activate a local Tactical Coordinating Group (TCG) at Great Yarmouth Police Station, to issue a Severe Flood Warning on the morning of Thursday 5<sup>th</sup> December, to activate Rest Centres and to evacuate residents at risk in the flood zone during the Thursday in advance of the tidal surge peaking at 2245 in the evening.

GYBC staff were fully engaged in preparing for the predicted surge throughout Wednesday and Thursday. This involved closure of the Town Hall and Greyfriars offices, deployment of staff to assist in managing the emergency, relocation of staff to maintain essential services, liaison with GYB Services to distribute sand and sandbags and support the distribution of equipment (beds and bedding) to rest centres.

Approximately 600 people were accommodated in Rest Centres. Approximately £10,000 worth of Rest Centre equipment was deployed. Schools designated as rest centres closed early on the Wednesday to prepare to receive evacuees. Volunteer school staff supported by GYBC Neighbourhood Management, Social Services and the voluntary sector staffed the rest centres. Norse supported the provision of catering in certain cases. The British Red Cross supplied trained volunteer support under a Memorandum of Understanding between GYBC and the Red Cross.

The Community Resilience Groups were involved to a greater or lesser extent depending on the local needs. The communications trees were utilised and community resilience volunteers assisted where they could.

## The incident

### ***Flood warnings & actions taken***

A flood risk was initially indicated in the Flood Guidance Statement issued by the Flood Forecasting Centre on Monday 2<sup>nd</sup> December. By Wednesday 4<sup>th</sup> December the risk had escalated from a Yellow to an Amber warning for the Norfolk coast. By Thursday morning 5<sup>th</sup> December the coastal flood risk in Norfolk, Suffolk and Essex had been raised to High (Red) due to the height of the forecast surge.

The Environment Agency issued a Flood Alert on Wednesday 4<sup>th</sup> December at 1746. A Severe Flood Warning was subsequently issued on Thursday 5<sup>th</sup> December at 0541.

In view of the Flood Guidance Statement placing Norfolk at an Amber warning a Strategic Coordinating Group (SCG) teleconference was called by the Chair of the Norfolk Resilience Forum (NRF) on Wednesday 4<sup>th</sup> December. Phil Kirby, Broadland District Council CEO, represented districts at this teleconference. A further SCG was called for 2130 in the evening at which the GYBC Emergency Planning Manager was present.

It was at the evening SCG meeting that it was decided to:

- activate a local Tactical Coordinating Group (TCG) at Great Yarmouth Police Station at midnight
- issue a Severe Flood Warning on the morning of Thursday 5<sup>th</sup> December
- activate evacuation Rest Centres
- evacuate residents at risk in the flood zone during the Thursday in advance of the predicted tidal surge peaking at 2245 in the evening.

The extent of the concern was described in the Flood Guidance Statement of Thursday 5<sup>th</sup> December issued at 1030:

“An area of low pressure is forecast to bring a large surge, gale force winds and large waves to many areas today (Thursday) and tomorrow (Friday). With spring tides peaking during this period, the combination of these factors could result in significant coastal flooding along parts of the North Wales and north-west England coastlines during the middle of today, most of the east coast of England later today and the whole east coast of England tomorrow.

There is now a high likelihood of severe impacts along parts of the coast of Norfolk, Suffolk and Essex, especially Great Yarmouth, later today and tomorrow morning. This brings a HIGH overall flood risk for these areas with impacts such as danger to life, flooding affecting a significant number of properties and large scale evacuations.”

The Tactical Coordinating Group (TCG) met at Great Yarmouth Police Station very early on the Thursday morning and then partners worked through the night and the next day to prepare for the evacuation of up to 9,000 homes designated as being at risk from tidal flooding.

Subsequent multi-agency SCG meetings were held throughout the emergency with senior GYBC staff at Director level attending. Multi-agency TCG meetings were also held at GY Police Station with Environmental Health and Emergency Planning in attendance.

On the Wednesday it was clear from the Flood Guidance Statements and Met Office reports that a significant storm and tidal surge was expected. Several calls were made by the emergency planning manager to colleagues and other districts on the need to consider the establishment of local TCGs. On Wednesday evening a call was made to the duty inspector at GY Police Station regarding the possibility of a TCG but it seems the situation had not been highlighted by Police HQ as warranting a TCG at that time. It was not until an SCG was called by Norfolk Fire & Rescue Service at 2130 on the Wednesday evening that a multi-agency response swung into action at the Tactical level. In retrospect it would have been helpful to have agreed at least preparatory actions earlier on the Wednesday.

### ***Flood risk maps***

The Environment Agency (EA) maps used to identify the flood zone is based on the EA maps available on their website and regularly updated and sent to partners electronically. The maps establish the flood warning areas used to notify residents and businesses at risk through Floodline, the automated flood warning system which distributes warnings by text, recorded message, e-mail, fax, etc.

The currently used EA maps indicate areas at risk of flooding in the Borough without flood defences in place. That is, areas at risk of flooding assuming no flood defences. This is the worst case scenario for the mapped flood frequencies. Maps with flood defences in place give a significantly different picture of which areas are likely to flood.

The decision on which areas to evacuate is based on the EA flood risk maps. The meaning of these maps and their interpretation is key to understanding priority areas for evacuation.

GYBC received requests for over 16 large (A0 size) printed flood maps from different agencies. This was despite the council having prepared maps ready for use in waterproof tubes that were soon deployed. This was quite a printing burden and other agencies should be requested to have their own maps ready for deployment in the future.

Following the tidal surge EA officers were on the ground to check areas of actual flooding with the predicted areas on the flood maps. All this data will be collated and analysed to update the flood maps.

## ***Evacuation and Rest Centres***

The TCG agreed to establish an Evacuation Cell to oversee the evacuation of residents at risk. The Multi-agency NRF Tactical Flood Response Plan comprises a general section for Norfolk and a specific section for the Borough. The April 2013 Plan was in the process of being updated across Norfolk to include more detailed local community summary sheets. These will be available in the updated 2014 version but were not available during the surge event. Nevertheless, the plan included an overview of the numbers of properties at risk (approximately 9,000 in the borough), and an overview of critical infrastructure and vulnerable people at risk.

Overnight the Police prepared door knocking guides for the officers drafted in to assist in the evacuation and letters for residents so that they were ready for deployment during the Thursday. It is recognised that such an evacuation requires careful organization and management. Many officers were deployed from outside the region who did not know the area. Most residents at risk were contacted but we are aware of some residents who were not contacted and in some cases residents who were not at risk being asked to evacuate. It is a very important area that needs to be looked at again to ensure only those who need to be evacuated are advised to do so and that nobody is left out.

GYBC Environmental Services staff worked throughout Thursday to contact the six designated schools, as per the plan, to activate as Rest Centres to receive evacuees. A rest centre exercise had been run at Cliff Park High School in September. GYBC support staff and volunteer school staff had undergone Rest Centre training as well as attended the exercise and so were well prepared for receiving evacuees. The schools provided excellent support throughout the event.

GYBC has a Memorandum of Understanding with the British Red Cross for providing Rest Centre support and Red Cross volunteers were deployed to support the rest centres.

It is not clear why two further rest centres were activated in addition to the designated centres at Hemsby Village Hall and Acle Memorial Recreation Centre (outside the borough). This caused some confusion and the redeployment of resources to Hemsby Village Hall where 25 evacuees spent the night requiring considerable support. The Acle centre did not receive anyone. Hemsby Village Hall was staffed by Hemsby parish council volunteers, GYBC staff, Red Cross volunteers and carers from NCC Social Services.

Evacuees were recommended not to return to their homes until after the high tide on the Friday morning. Once this had passed evacuees were told it was safe to return to their homes and the Rest Centres were stood down on the Friday afternoon.

There was a great deal of work involved in setting up the Rest Centres and a similar extent in standing down. GYBC maintain a limited stock of Rest Centre beds and bedding which were distributed to the centres during Thursday. This equipment was complemented by the provision of additional equipment from Norwich City Council, Broadland District Council and Breckland District Council as per our mutual aid agreement. Much of the equipment is "use once only" and so that equipment together

with lost or soiled equipment must now be replenished. It is clear that blankets were the most useful item, especially as the temperature in schools dropped during the night. The estimated cost of equipment that was used and must now be replaced is in the region of £10,000.

To the cost of the equipment must be added expenses claims of the Rest Centres which includes considerable clean up costs that had to be carried out over the weekend in readiness for the start of school on the Monday. A rough estimate at this stage suggests an overall cost for temporary accommodation of about £30 per evacuee.

In practice the Evacuation Cell could have worked better through closer partnership working between GYBC, the Police, Social Services, Children's Services and NCC ETD arranging transport. It would be useful to revisit the workings of the evacuation cell at a local level so that we can all be better prepared in future.

Approximately 600 evacuees were accommodated in Rest Centres many of whom had significant care needs. This is a small proportion of the 9,000 residential properties that were targeted for evacuation. It is not clear how many people evacuated and stayed with friends and relatives or simply moved away from the area temporarily. There is a strong feeling that large numbers of people simply did not evacuate. This clearly has implications for emergency planning assumptions and dealing with a future surge that results in widespread flooding.

### ***Communications***

The GYBC Communications and Press Officer provided regular updates to staff, elected members and the public based on information from the Strategic and Tactical Groups, individual staff and media reports. Press releases were issued, designated staff and the Leader of the Council were interviewed and a press centre at Caister High School arranged to assist in the dissemination of information.

As is often the case in fast moving events of this kind there was a constant demand and need for information. The Rest Centres and Community Resilience groups particularly wanted more information on how the situation was developing, if their homes had been flooded and when might evacuees return home. This is an area that could do with additional resourcing for any future event.

Social Media was very active with photographs posted and comments made indicating the mood of a certain section of the public. It may be worth considering allocating a specific role to a staff member to monitor social media in any future event.

## ***Flooding***

A number of residential properties were flooded in Lichfield Road, Southtown. Some houses had floodwater in their back gardens but numbers 5 to 10 Lichfield Road were flooded internally making a total of six houses flooded in Southtown.

The properties in Lichfield Road flooded as a result of river water passing through the flood defences at Ice House Quay, adjacent to Haven Bridge. The river water then passed through the Pasta Food factory access road to the traffic lights at the junction of Southtown Road and Station Road. From the junction flood water divided to flow down Station Road and Southtown Road. From Southtown Road the water flowed through Lichfield Park and then into the back gardens and houses on Lichfield Road.

Residential properties in Bridge Road, Runham Vauxhall were flooded when the river water was sufficiently high, following the peak high tide, to flow from the slipway area adjacent to the Acle New Road Bridge through businesses opposite the railway station (second hand car sales and car wash) across Acle New Road and into Bridge Road which is a low point and where the water gathered. It is reported there was a power cut in the area and the pumping station failed. This appears to have contributed to the flooding in the area. See the photograph at the front of the report for the flooding on Bridge Road several hours after the initial flooding.

A total of eight business properties were flood affected, including those in Runham Vauxhall, with Caister beach café being completely washed away.

Staff from Environmental Services visited all affected properties to assess the extent of flooding and their needs. Many properties were progressing claims through their insurers. GYBS assisted in clearing away soiled, damaged possessions where requested.

The Council offered support in all cases and is in the process of offering re-housing to three households.

## ***Sandbags***

GYBC's normal stock of sandbags is 40,000 for deployment in a major flood event. During the tidal surge a further 100,000 sandbags were purchased and delivered on the Thursday. Of the 140,000 sandbags there remains 50,000 in stock.

It is interesting to note that some of the properties that were flooded were "protected" by sandbags. They flooded because the water came up the drains and through the flooring. In addition, protecting terraced property is notoriously difficult because if water gets into, or under, one property it can flow to all the other properties.

The issue of sandbags is related to behaviour more than anything else. People feel they want to do something to protect their property. There is a demand for sandbags which in some cases can be quite irrational. GYBC gave an interview to BBC Radio Norfolk on the Thursday morning and the first question was about sandbags. We stated that sandbags would be made available and how – at collection points around the town. But we also highlighted the limitations of sandbags and the greater priority

of safeguarding life by evacuating and ensuring valuable property was either stored above the flood level or made safe, if possible.

The promotion of what to do in a flood emergency and how to protect your property from flooding is a key aspect of the work of the Community Resilience groups in the borough. The tidal surge indicates how this work needs to be intensified and the need to work closely with the media on educating the public about the effective and appropriate use of sandbags.

### ***Coastal erosion***

The potential impact of coastal erosion as part of the tidal surge was raised at the initial SCG although the emphasis appeared to remain solely on flooding. There had been concern at the erosion of sand dunes at Hemsby and the potential for further erosion. What had not been fully anticipated was the extent of erosion on the Thursday evening.

A total of five properties were rendered uninhabitable with one property being filmed by the BBC as it was washed into the sea. A further fourteen properties have been assessed as being at risk of erosion in the coming year, or so, depending on the extent of further high tides and /or surge.

A public meeting had been held with residents of The Marrams, Hemsby, in November to discuss the risk and to provide advice. A guidance sheet was delivered to all the properties in The Marrams prior to the tidal surge on how to obtain support and to publicise the Hemsby Community Resilience Plan.

Since the surge the properties were assessed. Asbestos was found to be a hazard in at least one property and so a specialist asbestos contractor was brought in to remove the asbestos and demolish the property safely together with the other remaining damaged properties. The council has arranged for all this work to be carried out.

A large amount of debris was deposited on the beaches and GYBS are currently clearing a long swathe of beach, in particular a 3 mile stretch from Great Yarmouth North Beach to Scratby.

All the work of assessment, demolition and the clearance of private homes and beaches has been arranged and financed by the council at some considerable expense.

Since the tidal surge a further public meeting has taken place in Hemsby for residents of The Marrams in January at which the Leader of the Council, a Borough Councillor, GYBC officers, police and coastguard representatives were present to address residents and answer questions. This was followed up with a meeting with the Hemsby Community Resilience Plan emergency coordinator and deputy plus community contacts for The Marrams advised by the council emergency planner. The aim is to strengthen and publicise the plan (which was only published in November) and provide additional guidance to residents of The Marrams.

## ***Community Resilience***

Over the last few years GYBC has been promoting and supporting local community resilience groups. They comprise volunteer emergency coordinators and deputies plus community contacts. The aim is to raise awareness of how to prepare for and cope with emergencies, including recovering after an incident. It is essentially about good neighbourliness – to support neighbours through a crisis. In rural areas plans have been developed through the parish councils and in the urban areas with the assistance of the Neighbourhood Management offices.

The effectiveness of the groups depends on the membership and their particular interests or risks. There have been several meetings of different groups since the tidal surge and the feedback has been generally positive. Communications trees to alert neighbours, friends and other networks were used. In some cases support was given to vulnerable neighbours by either taking them in for the night or accompanying to rest centres.

There was a feeling that they might have been used more effectively during the event and this was connected with having more information on the developing situation and what they could possibly contribute.

If there had been widespread flooding affecting the urban and some of the rural areas then support would have been required in the recovery period, especially to assist those more vulnerable.

The Cobholm, Southtown and Halfway House Group have started working on a survey of residents regarding the surge. In particular, to obtain a better estimate of how many people actually evacuated; if they did evacuate then where did they go; and if they did not evacuate then why not? This kind of information will be essential for future planning.

All the groups are coming together to staff a Community Resilience Stand in Market Gates on 5<sup>th</sup> February to obtain feedback from the public and to encourage signing up their mobile phones for Flood Alerts, providing advice on sandbags, etc.

We encourage the emergency services to recognise the community resilience groups, participate in their events and to generally support the groups to develop them further.

## ***Business Continuity***

The Town Hall and Greyfriars offices were closed down on the Thursday as the Town Hall is in the flood zone and there was a concern that the power would be cut along Hall/South Quay if the river did overtop. Hence, valuable equipment was raised above the flood level, etc and measures taken to safeguard council property.

Services were in the process of updating business continuity plans and the measures taken to maintain customer services and other critical functions operating from other premises worked well. The GYBC Emergency team worked from GY Police Station

throughout Thursday and into Friday. It was very useful to have the space at the police station to operate effectively.

Staff returned to the Town Hall and Greyfriars on the Friday and operations were back to normal relatively quickly.

The experience of the tidal surge raised a number of issues which will contribute to the finalisation of the updated BC plans for the council.

### ***Costs and the Bellwin Claim***

The council has notified DCLG there will be an application to the Bellwin Scheme of Emergency Financial Assistance to Local Authorities.

Before being eligible for grant, an authority is required to have spent 0.2 per cent of its calculated annual budget on works that have been reported to DCLG as eligible. This amount is the authority's "threshold" and in the case of Great Yarmouth the threshold is £24, 209 as stated in Annex C of the Bellwin scheme documentation for 2013-14.

Under the terms of the scheme GYBC has notified DCLG within the required one month of the incident. "Eligible works" are required to be carried out within two months and the claim submitted to DCLG within three months. GYBC is currently working to this timetable and the current estimate is an expenditure in the order of £150,000 which is well over the threshold. DCLG would normally pay the grant at a rate of 85 per cent of eligible expenditure above the threshold.

## Key learning points and recommendations

1. Closer working relations at a local level between GYBC and other Cat 1 responders (the emergency services and the EA) and Cat 2 responders (the utility companies) in recognising and preparing for a similar event in the future.
2. A review of the interpretation and use of the EA flood maps to prioritise areas for evacuation and to avoid the evacuation of areas not at immediate risk.
3. Each agency to have prepared flood maps ready for deployment and use.
4. Further joint development of door-knocking guides for the Police to be “shelf-ready” for deployment.
5. Further consideration given to the involvement of community resilience volunteers in accompanying and advising police officers in door-knocking.
6. The evacuation letter for residents to be updated and consideration given to having a stock of letters ready and available for deployment at short notice.
7. Exercise Harmony held on 28<sup>th</sup> September was invaluable in preparing volunteers and agencies in the activation of a rest centre. Training and exercises to be run on a rotational basis so that all rest centres are fully prepared.
8. Maintain the Memorandum of Understanding with the British Red Cross to continue to provide rest centre training and support at an annual contribution to Red Cross funds of £1,000, currently.
9. Ad hoc Rest Centres to be avoided. In a tidal surge event Rest Centres to be established by, or on the advice of, the council who already have designated centres with trained volunteers and equipment available.
10. Given that many of the evacuees attending the rest centres had considerable care needs consideration to be given to identifying a larger number of more suitable, smaller centres with existing appropriate furniture and care support. Perhaps extending the idea of “twinned care homes” to provide mutual support.
11. Maintain and build upon the excellent mutual aid support between districts.
12. Review and purchase appropriate replacement rest centre beds and bedding based on the lessons identified.
13. Further consider the accommodation needs of pets at rest centres as some residents still did not evacuate due to concern about their pets.
14. Exercise the Evacuation Cell once the revised Tactical Flood Plan has been finalised.

15. Support the completion of the survey by community resilience volunteers on perceptions of risk and behaviours related to evacuation to obtain a better picture of how many residents actually evacuated, how many stayed at home, why they stayed, if they did evacuate then where they went, etc. It is essential to base planning on actual experience and realistic data.
16. Strengthen the ability of the council to communicate internally and externally during a crisis by having sufficient resources and communication channels to satisfy the many and various demands for information.
17. Continue to be pro-active in recommending alternatives to sandbags, to publicise the limitations of sandbags, to offer advice and guidance on how sandbags may be used effectively, where appropriate, and to work with the media on this issue.
18. The multi-agency Tactical Flood Plan was being revised and updated at the time of the surge. Completion of the Great Yarmouth Flood Plan to include the lessons identified from this event and these recommendations.
19. Continue to work with communities at risk of coastal erosion so that they understand the risks, timeframes, measures to take in advance of erosion, the support available and how to respond in an emergency.
20. Further develop the role of community resilience groups and encourage wider recognition and support for groups, volunteers and plans. The NRF is establishing a new Community Resilience Group for Norfolk at which experiences can be shared, approaches refined and existing networks can be encouraged to participate and enhance community resilience. Links with existing voluntary networks are very important.
21. Greater consideration given to recovery planning. If there had been widespread flooding there would have been a tremendous demand on services for which we need to plan in more detail.