

Welsh Government response recommendations contained within the Wales Coastal Flooding Review

RECOMMENDATION	ACCEPT/ ACCEPT IN PRINCIPLE	COMMENTS/CURRENT POSITION
Progressing the Recommendations		
1. The recommendations included in this report are compiled into a Delivery Plan. This Delivery Plan will identify how the recommendations will be progressed. It will consider matters such as; the parties to be involved lead responsibility, priorities, governance and resources and capacity to deliver.	Accept	NRW have been asked to lead on coordinating a delivery plan, working alongside Welsh Government Officials and Risk Management Authorities. The delivery plan will assist in prioritising and progressing these recommendations. A workshop with NRW, RMAs and Welsh Government Officials is being planned for the end of July to consider how to take forward the accepted recommendations.
2. The Delivery Plan should consider opportunities to expand the recommendations beyond just coastal flooding and erosion risks and to consider the link to risks from other sources of flooding.	Accept	There are many recommendations within the review that can, and should, be applied across all sources of flooding and coastal erosion risk. This should be contained within the delivery plan being produced by NRW. This review and delivery plan provides us with an opportunity to consider our planning and response to any event.
Recommendations – Storm Severity		
3. Further work is required to assess the joint probability of wind, waves and tides for these recent winter storms. This may take the form of an initial assessment coupled with consideration of more thorough analysis. The scope of this work will require further technical discussion.	Accept	NRW, working with the Met Office and Flood Forecasting Centre, should use data gather during and after these storm events to look at the probability of such events occurring again in order that this can be built into planning. NRW are in discussions with the joint R&D programme, comprising representative from Welsh Government, NRW, Defra and Environment Agency, regarding the possibility of taking this work forward.

4. Review and update if required, the extreme sea level dataset around the Welsh coast. The recent tidal conditions are amongst the highest for many years. This dataset may need to be amended. This is to include methods for assessment of joint probability for storm severity.	Accept	New data gathered from these storm events needs to be fed into existing datasets. NRW are in discussions with the joint R&D programme regarding the possibility of taking this work forward.
5. Review and update if required, the guidance used for the assessment and design of coastal standard of service against flooding. The review should consider whether more clarification is needed, in particular on the issues of the treatment of joint probabilities, in combination effects and appropriate national consistency.	Accept	Given the impacts of the tides and storms in December 2013 and January 2014, any guidance relating to coastal standards of protection should be reviewed. This is likely to tie into the results of recommendation 3 which looks at assessing the probability of similar storm events occurring.
Recommendations – Flood Forecasting		
6. Continue to identify and implement risk based opportunities to deliver further improvements to longer range forecasts.	Accept	This is an ongoing activity for NRW who are engaged with a number of different projects All the work carried out on flood and coastal erosion risk management should take a risk based approach. Longer range forecasts give more time to inform, prepare for potential impacts or evacuations and allocate resources.
7. Review with partners what additional forecast information could be provided to support local incident management decisions. Identify options and recommendations.	Accept	Local knowledge and local decision making informed by advice and guidance is essential to feed in to the local operational response. Additional information can support information for decision making.
8. Continue to progress risk based opportunities to deliver improvements to the accuracy of the coastal forecasting service. Develop and deliver a programme of improvement works.	Accept	All the work carried out on flood and coastal erosion risk management should take a risk based approach. Any work to improve coastal forecasting is to be welcomed. Some work on this is already taking place in Wales and England

<p>9. Review the whole wave buoy network around the Welsh coast, including working with UKCMF to address a strategic gap in the offshore wave buoy network in the Irish Sea. This is required to better validate offshore wave forecasts, leading to improvements to the Wales forecasting service. <i>(UKCMF- UK Coastal Monitoring and Forecasting Service)</i></p>	<p>Accept</p>	<p>A review of the wave buoy network needs to address the identified strategic gap in offshore wave buoy network in the Irish Sea. NRW are in ongoing discussions regarding this with UK Coastal Monitoring and Forecasting Service (UKCMF) and the Environment Agency.</p>
<p>Recommendations – Flood Warning and Community Response</p>		
<p>10. Complete the ongoing work by summer 2014 to 'rebrand' the flood warning service in Wales so that the provider is clearly identified as Natural Resources Wales.</p>	<p>Accept</p>	<p>This work is ongoing and on course to be completed by summer 2014. At present, flood warnings in Wales are issued using systems managed by Environment Agency. The rebrand will clearly identify NRW as the provider of flood warnings for Wales</p>
<p>11. Develop and implement a prioritised programme of improvement works to flood warning areas and thresholds, using the experience and data gathered from these storms. This should include engagement with professional partners and communities as appropriate.</p>	<p>Accept</p>	<p>With more accurate information, more accurate warning can be produced and appropriate actions taken, including evacuation where necessary.</p>
<p>12. Review and consider additional sources of validation information for future incidents. This has potential to improve confidence in both forecasting and warning. This may involve seeking feedback from professional partners and others.</p>	<p>Accept</p>	<p>Additional sources of validation information should provide more accurate forecasting and warning for future events.</p>
<p>13. Work with sample communities to identify options to help sustain an effective local response to flood warnings. This should consider communities where effective response and or confidence in the warning system is low.</p>	<p>Accept</p>	<p>This could feed into the work of Flood Awareness Wales. Effective local response to flood warnings requires awareness of local risk and an understanding of actions to take in advance of and during a flood event.</p>

14. Identify and evaluate options to help communities to become more self-sufficient and resilient and identify a recommended option	Accept	NRW already provide practical advice and support to the public through the Flood Awareness Wales programme. Officials are currently undertaking work to scope out how a flood support service, similar to those in England and Scotland, could work in Wales.
15. Produce and communicate nationally consistent, public focused information on the types and availability of property level protection measures and the support available.	Accept	There needs to be a clear message across all authorities over the availability of sand bags and individual property level protection to ensure the public are aware of what assistance is available. This needs to be consistent across the country.
16. Using the experience from these recent storms, identify and evaluate options for the future development of local Flood Plans in coastal areas and identify a recommended option to help these be more effective at improving community resilience.	Accept	Flood Awareness Wales and local authorities work with local communities at risk from flooding to create community flood plans and this needs to continue. The experiences from the recent storm events should be used to consider if any other local flood plans are needed in coastal areas.
17. Using the experience from these recent storms, identify and evaluate options for the future development of local Flood Plan Leads / Warden Volunteers in coastal areas and identify a recommended option.	Accept	Local flood plan leads and wardens play a vital role in community resilience and recovery before, during and after events. The experiences from the recent storm events should be used to identify opportunities for new flood leads/wardens in coastal areas.
Recommendations – Operational Response		
18. Review and identify how to improve involvement of infrastructure operators and managers in the coastal flood risk incident management process.	Accept	A meeting will be held at the end of July involving NRW, Welsh Government and Risk Management Authorities to start to work on a delivery plan for the recommendations. Infrastructure operators will be involved in this meeting and in the preparation of the delivery plan.
19. Continue to develop potential ' <i>impact scenario</i> ' assessments, maps and/or statements. This work must be developed in close discussion with professional partners to ensure it meets all parties' requirements.	Accept	During incident response there is a need for professional partners to have readily accessible information on potential impacts and ' <i>what if scenarios</i> '. Having this information available can focus discussions around the response to an incident, including likelihood, timing and confidence in forecasts.

<p>20. Review the local decision making process associated with the issue of Severe Flood Warnings and evacuation procedures in December 2013 and early January 2014. Identify improvements and share at an all Wales level.</p>	<p>Accept</p>	<p>Good practice from the recent storm events should be identified, built on and where appropriate shared around Wales. This issue was identified at Wales Flood Group by North Wales Police. NRW are reviewing how to improve awareness within the North Wales Police. NRW also need to be aware and have an understanding of the Command and Control System used by the police during incident. Progressing this is reliant on good relationships and communication between NRW and LRFs.</p>
<p>21. Assess our national capacity to respond to a widespread and sustained period of coastal flooding. This should include consideration of when the current national resource pool will no longer function effectively. This should also consider post incident recovery issues. Provide a report with recommendations for improvement.</p>	<p>Accept</p>	<p>The response to a period of sustained flooding could be tested in a large scale coastal evacuation exercise, as discussed in recommendation 22. Due to the size and scale of the exercise, it will not on this occasion include post incident recovery issues, however consideration will be given by those involved as to the steps to be taken in terms of recovering from such an event.</p>
<p>22. Assess the collective ability to provide an effective response to a potential large scale evacuation scenario in either north east or south east Wales. This should also consider post incident recovery issues. Provide a report with recommendations for improvement.</p>	<p>Accept</p>	<p>A large-scale coastal evacuation exercise is planned for March 2015. Due to the size and scale of the exercise, it will not on this occasion include post incident recovery issues, however consideration will be given by those involved as to the steps to be taken in terms of recovering from such an event.</p>
<p>23. Review the Wales resilience structures and ways of working to identify what changes may be needed to enable us to collectively be better prepared and resilient to future coastal flooding.</p>	<p>Accept</p>	<p>We need to know what skills and capacity we have in Wales to deal with such events in the future. A review of the current structures in place can consider if changes are needed to the way we work to be better able to respond in the future. This should come out the skills and capacity audit and clarification of roles of RMAs as identified in recommendations 37 and 38.</p>

<p>24. Options to seek improvements to the standard of protection at the Garford Road area of Rhyl should be identified and evaluated. This should include detailed hydraulic analysis of the capacity and performance of the storage lagoon. This should include an assessment of the stairwell and slipway openings and the interaction with the adjacent golf course area.</p>	<p>Accept</p>	<p>Denbighshire County Council has confirmed the programme of works has been identified to address the issues and reduce the flood risk in this area.</p>
<p>25. All Risk Management Authorities (RMAs) around Wales should review their local use of stop boards, stop logs, temporary barriers or moveable gates. The purpose of this review is for RMAs to satisfy themselves that existing arrangements are appropriate and robust. Consideration should be given to replacing existing arrangements with more permanent or more robust temporary solutions. This review should be 'risk based' and focused on the locations with highest local risk.</p>	<p>Accept</p>	<p>This review across all RMAs in Wales should identify any potential weaknesses in defence systems posed by demountable stop boards, stop logs or moveable gates in order to improve response to future events. RMAs are responsible for reviewing their own systems/processes. As with all work, a risk management approach should be applied focussing on the locations with highest local flood risk first.</p>
<p>26. All Risk Management Authorities (RMAs) around Wales should review locations where they have secondary defence systems in place. The purpose of this review is for RMAs to satisfy themselves that the secondary systems will operate as designed when required. This review should be '<i>risk based</i>' and focused on the locations with highest local risk.</p>	<p>Accept</p>	<p>As above in recommendation 25</p>

Recommendations – Coastal Defences

<p>27. There needs to be continued sustained investment to manage the national coastal risks to acceptable levels. This must include flood forecasting, warning, awareness, response and recovery, as well as flood defences. Particular focus has to be on the existing defences to ensure they continue to be fit for purpose, as well as investment in new defences to reduce the flood risk for more locations.</p>	<p>Accept</p>	<p>Flood and coastal erosion risk management remains a priority for this Government. We will not know our settlement from UK Government for 2016-17 and beyond until the 2015 Spending Review. However, all indications are that public spending constraints are likely to continue. Although there remains uncertainty as to our future settlement beyond 2015/16, we will continue to maximise opportunities to sustain investment within the funding envelope available.</p> <p>Whilst investment needs to continue to ensure existing defences continue to be fit for purpose, investment also needs to focus on further and improved flood forecasting, warning, awareness, response and recovery as well as new defences.</p>
<p>28. Review and identify options to maximise certainty in flood and coastal erosion risk management funding over a longer timeframe and to maximise flexibility in the use of this funding. This would mean less focus on annual and in year budgets and more focus on delivery and budget management of 3-5 years.</p>	<p>Accept</p>	<p>Budgets are currently set until 2015-16 which is the final financial year for which we have a firm settlement. We will not know our settlement for 2016-17 and beyond until the 2015 Spending Review. Our focus will be on maximising the funding we have available to deliver the coastal and flood risk management programme.</p> <p>The development of the National Programme of Investment will provide a long term programme of schemes for future investment.</p>
<p>29. The development of the National Programme of Investment should be progressed as a matter of importance and its development should seek a wide range of ways of working and technical improvements to the flood and coastal erosion risk management investment allocation, decision making and prioritisation process.</p>	<p>Accept</p>	<p>The consultation on a National Programme of Investment will be issued later this year considering all elements of Welsh Government funding. This programme will set out a prioritisation methodology to enable areas of Wales to be ranked according to risk from all sources of flooding and coastal erosion</p>
<p>30. Review and identify options to gain additional funding to supplement core flood and</p>	<p>Accept</p>	<p>Over the next few months work will continue with delivery partners in local authorities to examine the case for an innovatively funded</p>

<p>coastal erosion risk management investment. This must be closely aligned with the development of the National Programme for Investment.</p>		<p>coastal flood defence programme. There will be further announcements about this scheme in the autumn.</p>
<p>31. Produce a complete national dataset of coastal protection and defence assets including details of areas benefitting. It is essential that this dataset becomes a '<i>live management tool</i>' and not merely a representative picture of a snapshot in time. This dataset must therefore be associated with a process for ensuring the information is maintained.</p>	<p>Accept</p>	<p>A national GIS dataset would show the areas benefitting from the defences in place. This will be essential for delivering a more efficient and effective risk based coastal risk management service.</p>
<p>32. Review and identify options to achieve a more consistent approach to the inspection of the network of coastal defence systems. This must include recommendations to improve the efficiency and effectiveness of the asset inspection process.</p>	<p>Accept</p>	<p>This is linked to recommendation 31. Once the location and ownership of defences is known inspection programmes can be developed. A more consistent approach will be essential to deliver a more efficient and effective risk based coastal risk management service.</p>
<p>33. Continue to develop a nationally prioritised programme of coastal modelling and mapping improvements. This must be nationally risk based and consistent.</p>	<p>Accept</p>	<p>This should add to and compliment the National Coastal Erosion Risk Maps (NCERM) and the NRW flood maps. Mapping and modelling needs to be kept up to date and well publicised. Continued improvement of NCERM and NRW mapping will bring improvements to our understanding of coastal risk and how to manage it and decision making.</p>
<p>34. Locations and communities which experienced flooding in December 2013 and early January 2014 should be subjected to a risk based assessment to determine if further risk management activity/intervention is needed and can be justified.</p>	<p>Accept</p>	<p>This needs to be done routinely as part of RMAs programme of work. The risk of coastal flooding following the winter storms may have increased from the pre-storm conditions due to changes in foreshore and beach profiles in affected areas. These changes and any new risks posed now need to be considered.</p>
<p>35. Near miss locations and locations subjected to substantial foreshore change</p>	<p>Accept</p>	<p>This needs to be done routinely as part of RMAs programme of work. The 'near miss' locations came close to significant flooding. The risk</p>

<p>should be identified and subjected to a risk based assessment to determine if further risk management activity/intervention is needed and can be justified.</p>		<p>of coastal flooding following the winter storms may have increased from the pre-storm conditions due to changes in foreshore and beach profiles in these locations. These changes and the new risks posed now need to be considered.</p>
<p>36. Complete the ongoing update to the Phase 1 'rapid' assessment of environmental changes experienced during the December 2013 and January 2014 storms.</p>	<p>Accept</p>	<p>This is an ongoing activity being carried out by NRW and is due for completion by the end of June 2014.</p>
<p>37. Carry out a national skills and capacity audit for all Risk Management Authorities to assess and quantify the scale of the issue – to assess the size of the skills and capacity gap. Produce an options document for how the skills and capacity gap could be addressed to meet present day flood risk management needs and future challenges.</p>	<p>Accept</p>	<p>The review identified that the resources available during the flooding, whilst working well, were severely tested. Knowing what skills and resources are available will assist in addressing any gaps in provisions. The Welsh Local Government Association (WLGA) carried out a similar survey looking at the skills and capacity of local authority staff in May 2012 – this could be used as a basis for such a review which could be updated, added to and widened to the whole RMA community as necessary</p>
<p>38. Clarify roles and responsibilities amongst risk management authorities at both the local and national level as required. Develop consistent and common communication messages and tools to convey roles and responsibilities to communities.</p>	<p>Accept</p>	<p>Clarifying roles and responsibilities will provide more certainty and reduce potential confusion, particularly for communities. Roles and responsibilities should reflect what is contained within the National Strategy and Flood and Water Management Act 2010. The WLGA carried out a survey looking at the skills and capacity of local authority staff in May 2012 – this could be used as a basis for such a review which could be updated, added to and widened to the whole RMA community.</p>
<p>39. Undertake a review of Welsh Coastal Groups and the Wales Coastal Group Forum. This review should include, as appropriate, links and relationships with other similar groups who have a role in the management of flood and coastal erosion risks. This review should identify improvement options to maximise</p>	<p>Accept</p>	<p>With the scale of the challenges posed by present day and future coastal flood risk management, it may be necessary to review the membership and role of the coastal groups and coastal forum to ensure that they continue to contribute effectively to the management of national and local coastal risk.</p>

<p>efficient and effective delivery of flood and coastal risk management.</p>		
<p>40. The Wales Coastal Monitoring Centre submitted a business case for the future of the centre to Welsh Government in December 2013. This business case should be determined by Welsh Government.</p>	<p>Accept</p>	<p>The Wales Coastal Monitoring Centre has prepared a business case stating the future coastal monitoring requirements for Wales and outlining further coastal monitoring needs. This business case is now being considered by the Welsh Government.</p>
<p>41. Welsh Government should endorse the strategic framework established by the Shoreline Management Plans (SMP2). This should be accompanied by more national and local support to communities and community involvement in the development of local adaptation options and plans. Develop a 'local adaptation toolkit' to better support communities. This may include technical guidance, templates, and engagement and communication tools and policy positions. Local discussions in all coastal communities need to begin now, involving professional partners and the community. These discussions should consider communities on a risk basis. These discussions need to explore and develop local plans to adapt and increase resilience over time. Support and draw upon the experience of the Fairbourne multi-agency group to help inform adaptation and community resilience discussions at other locations.</p>	<p>Accept in principle</p>	<p>SMP2s are currently being reviewed and will be submitted for review and sign off by the Minister for Natural Resources, Culture and Sport during the summer period. Delivery and communication of SMPs needs to be done at a local level, understanding local issues and needs and involving local communities. Welsh Government can provide strategic direction and support, however decision making, planning and adaptation needs to be delivered locally. Welsh Government Officials are involved with the multi-agency group at Fairbourne, <i>Fairbourne Facing Change Group</i>, and will continue to support this group.</p>

<p>42. Review and evaluate existing barriers and gaps to supporting coastal adaptation and make recommendations for improvement. Review, where necessary, existing climate change guidance to ensure the most appropriate approach is being used by all parties involved in all aspects of flood and coastal erosion risk management (i.e. all Government departments, RMAs infrastructure and utility operators).</p>	<p>Accept in principle</p>	<p>2 letters have been issued recently on this issue, firstly to Chief Planning Officers about the changes to insurance cover for properties at risk from flooding and secondly to all local authority planning leads as a reminder of the importance of recognising flood risk, the use of Welsh Government Planning Policy and advice contained within Planning Policy Wales and TAN 15. Evidence shows that TAN 15 continues to work, directing development away from inappropriate locations. There are no current plans to review Planning Policy Wales and TAN15.</p> <p>Coastal policy is covered within the National Strategy and the bi-annual review of the National Strategy by NRW under section 18 reporting of the Flood and Water Management Act should identify any issues.</p>
<p>Recommendations – Infrastructure Resilience</p>		
<p>43. Review and make recommendations for how Risk Management Authorities and infrastructure and utility operators can work together operationally more efficiently and effectively. This should consider a range of working agreements to ensure clarity of roles and responsibilities between professional partners and for communities.</p>	<p>Accept</p>	<p>Better ways of working and improving communication and liaison between Risk Management Authorities and infrastructure/utility operators is always encouraged.</p> <p>Any additional work and recommendations resulting from the delivery plan should involve all relevant partners.</p> <p>The Delivery Plan will have involvement from infrastructure operators.</p>
<p>44. Review and make recommendations if more needs to be done to enable infrastructure and utility operators to effectively work together and interact on issues of mutual interest. This may include a review of the role and remit of the Wales Utility Group and other options.</p>	<p>Accept</p>	<p>Any additional work and recommendations resulting from the delivery plan should involve all relevant partners.</p>
<p>45. Encourage and support the development of programmes of works to increase resilience of infrastructure and utility assets. These must be</p>	<p>Accept in Principle</p>	<p>Ensuring the resilience of infrastructure to flood and coastal erosion risk is an important consideration for all infrastructure operators. They are best placed to determine the appropriate interventions for their</p>

aligned with local community adaptation planning. Review where appropriate if there are regulatory barriers to obstruct this process of adaptation and identify regulatory improvements which could help adaptation.		assets.
46. Review and evaluate at the national Wales level, the impacts of climate change scenarios on Network Rail infrastructure and highways infrastructure around the Welsh coastline and long term adaptation options	Accept in Principle	This action is for the relevant highways authority or Network Rail to consider with NRW and Wales Coastal Monitoring Centre (WCMC) providing data and any relevant advice
47. Undertake a periodic national assessment of infrastructure and utility resilience across Wales, in order to provide assurance of national progress towards increased resilience to coastal flood and erosion risks.	Accept in Principle	This is subject to agreement and progress on recommendations 43 – 46. Infrastructure and utility operators will already be reviewing the resilience of their assets.

Abbreviations

NRW – Natural Resources Wales

RMA – Risk Management Authorities: In Wales these are Natural Resources Wales, the 22 local authorities (in their role as Lead Local Flood Authorities), internal drainage boards, the water companies, highways authority

LRF – Local Resilience Fora

WCMC – Wales Coastal Monitoring Centre

UKCMF- UK Coastal Monitoring and Forecasting Service