Conwy Local Flood Risk Management Strategy

Non Technical Summary – Strategic Environmental Assessment Environment Report

March 2013

Conwy County Borough Council

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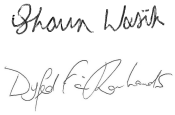
Checked by		S Wasik D Rowlands	15/02/13
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Non-Technical Summary

Introduction

Conwy County Borough Council (CCBC) has prepared a draft Local Flood Risk Management Strategy (LFRMS), as required by the Flood and Water Management Act 2010 (FWMA). The Act placed statutory obligations on local authorities to manage local flood risk in their area. To prepare this strategy there are statutory requirements to undertake a Strategic Environmental Assessment (SEA) to assess the potential environmental effects of the Strategy before it is finally adopted.

The results of the SEA process have been documented in an Environmental Report that was produced for consultation alongside the Consultation Draft of the Conwy LFRMS issued in December 2012. This is the Non-Technical Summary of the Environmental Report which incorporates the comments from the consultation process and should be read in conjunction with the two revised final documents (March 2013).

The aim of the Non-Technical Summary was to present the information that has been gathered as part of the SEA process and documented in the Environmental Report in a concise and clear manner, particularly regarding the SEA process, the likely significant environmental effects of the Conwy LFRMS and an explanation of the difference the SEA process has made.

SEA Legislative Requirements and Purpose

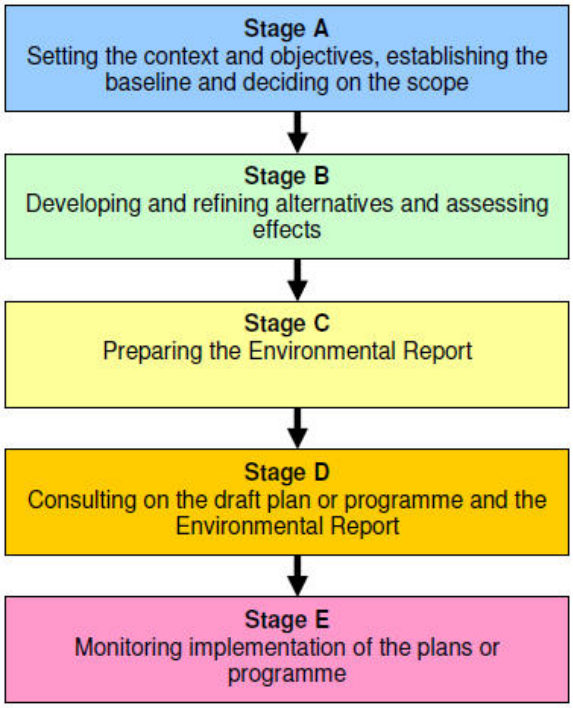
An SEA was required for the Conwy LFRMS under the European Union SEA Directive. The Directive was transposed into United Kingdom law via the Environmental Assessment of Plans and Programmes Regulations 2004, which requires an assessment of the effects of certain plans and programmes (including strategies) on the environment so that they can be taken into account prior to being approved and formally adopted. As local strategies are considered to be statutory plans the Conwy LFRMS has been subject to the SEA process.

In addition, under the European Directive 92/43/EEC on the Conservation of Habitats and Species Regulations 2010 (as amended), a Habitat Regulations Assessment (HRA) is required where a plan may give rise to significant effects on European designated sites, known as Natura 2000 sites. Natura 2000 sites consist of Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites, and also include potential SPA (pSPA) and candidate SAC (cSAC). Species and habitats involved in the 'Ramsar Selection Criteria' also require consideration under the Habitats Regulations as if they were designated Natura 2000 features. Within and around the county and coast of Conwy there are a number of SPA's and SAC's, and therefore a HRA will be required. A HRA Stage 1 'Test of Likely Significant' (screening) has been undertaken for the LFRMS in parallel with the SEA. The results indicate that it is unlikely that there will be any significant impacts relating to the implementation of the strategy and hence a full assessment is not required. However, should schemes need to be implemented it is advised that each scheme is assessed in its own merit under the appropriate legislation.

Some of the key objectives of the SEA process are to afford a high level of protection to the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans. The SEA also works to inform the decision-making process through the identification and assessment of the significant and cumulative effects that a plan or programme may have on the environment. This is conducted at a strategic level and enables consultation on the potential environmental effects of a plan with a wide range of stakeholders.

The approach taken for the SEA was based on the Office of the Deputy Prime Minister's 'A Practical Guide to the SEA Directive' (2005). There are five key stages in the SEA Process illustrated in Figure 1.

Figure 1: SEA Process Stages



Conwy Local Flood Risk Management Strategy

In accordance with the FWMA, CCBC must develop, maintain, apply and monitor a strategy for local flood risk management in its new role as LLFA. Local flood risk is defined by the FWMA as flood risk resulting from surface runoff, groundwater, and ordinary watercourses (including lakes and ponds). Although outside the scope of the Act, other sources of flooding including sewers, sea, main rivers and reservoirs were considered due to their potential interaction and cumulative effects.

The FWMA 2010 requires that the Local Strategy sets out the following:

- The risk management authorities in Conwy County Borough Council;
- The flood and coastal risk management functions that may be exercised by those authorities in relation to Conwy County Borough Council;
- The objectives (*written as 'outcomes' for CCBC*) for managing local flood risk;
- The measures proposed to achieve those objectives;
- How and when the measures are expected to be implemented;
- The costs and benefits of those measures, and how they are to be paid for;
- The assessment of local flood risk for the purpose of the Strategy;
- How and when the Strategy is to be reviewed; and
- How the Strategy contributes to the achievement of wider environmental objectives.

A glossary of technical terms relating to flood risk management can be found in the final Local Flood Risk Management Strategy (March 2013).

Stage A - Baseline Scoping Summary

The SEA Regulations require that a Scoping exercise has been completed prior to commencing the SEA and writing the Environmental Report. The Scoping Report was completed in August 2012 and included:

- Review of relevant plans, programmes and environmental protection legislation, focusing on those that may influence or be influenced by the LFRMS;
- Topic based summaries of the current baseline environmental information, in terms of air; water; climatic factors; soil, biodiversity, fauna and flora, landscape, cultural heritage, population and human health, and material assets (and predicted evolution of the baseline without the LFRMS);
- Identification of key issues, challenges and opportunities for the LFRMS; and
- Proposed SEA Framework including SEA objectives, assessment criteria and potential monitoring indicators.

The baseline information collected during the scoping stage of the process forms an evidence base against which environmental effects (either positive or negative) resulting from the LFRMS can be predicted and assessed. The SEA Directive also requires that the evolution of the baseline without the implementation of the LFRMS is identified. Assuming that the proposed LFRMS is not implemented and based on the information currently available to date it is believed that the following trends and statements that were identified in the scoping exercise stand:

- Air quality – new development, regeneration and tourism may lead to increased car journeys within the County and may increase traffic on the A55 leading to localised air quality effects. Public transport improvements, national air quality targets and European emissions standards for new vehicles should contribute to reducing future air quality impacts from motor vehicles;
- Water – water quality is likely to continue to be maintained and improved through legislation such as the Water Framework Directive. New development could increase surface water run-off and exacerbate flooding issues. Future flooding may cause pollution of watercourses and groundwater;
- Climatic Factors – future climate change effects are likely to include sea level rise, higher temperatures and more severe weather conditions (higher intensity and duration) including flash floods;
- Biodiversity – habitats and species are likely to continue to be protected through European and UK legislation. However, future development may put pressure on these ecological areas. Future climate change effects and flooding may affect ecosystems, habitats and species;
- Population – the population of the County is predicted to increase. This may put development pressure on the land and development may have to be located in flood risk areas. Future severe flood events may affect the population in term of damage to houses, local infrastructure and services that communities rely on. Future flood events may also affect the economy through damage to businesses and tourism;
- Human Health – future flood events may impact on human health through injury or death, emotional stress of flooding, and pollution leading to health issues;
- Material Assets – regeneration and future investment and demand are likely to increase the number and quality of material assets such as housing, transport infrastructure, waste facilities, power stations and community facilities;
- Landscape – future flood events and future development may affect the quality and character of landscapes;
- Soil – future flood events may cause damage to agricultural land which could have consequences for the rural economy. Future flooding in contaminated areas could also increase pollution; and
- Cultural Heritage – historic assets are likely to continue to be protected through European and UK legislation. Future flooding may damage historic assets and their character.

The SEA objectives were developed based on the SEA Directive topics, baseline information, and key issues for the County:

1. Protect and enhance where possible the ecological and chemical status of watercourses and water bodies in accordance with the WFD objectives;
2. Reduce and manage flood risk from ordinary watercourses, surface water run-off, groundwater and artificial water bodies within Conwy County;
3. Enhance human health and wellbeing through reducing flooding effects;
4. Protect and enhance biodiversity and geo-diversity across the Conwy County;
5. Protect and enhance landscape quality and character across the county;
6. Protect historic assets and their landscapes;
7. Educate, manage, plan and adapt for the effects of climate change;
8. Minimise the key impacts and consequences of flood risk on key assets, infrastructure, properties and businesses; and
9. Protect best quality soil and agricultural land and minimise the potential for pollution.

Stage B - Considering Alternatives and Assessing Effects

Testing the compatibility of the LFRMS outcomes against the SEA objectives is the first task in Stage B of the SEA process. It helps to identify any potential synergies or inconsistencies between the LFRMS and SEA objectives and contributes to the development of the proposed outcomes. A compatibility matrix (see Table 1) was completed between the SEA and the LFRMS objectives.

The compatibility matrix demonstrated that the LFRMS outcomes and SEA objectives are all compatible. The LFRMS outcomes aim to reduce the risks, impacts and consequences of flooding for people, business, property, infrastructure and the environment. These outcomes support the SEA objectives on protecting communities, biodiversity, landscape, heritage, water, soils etc. Adopting a sustainable approach to flood risk management will help ensure that flood management schemes do not adversely affect the environment.

The following key has been used to illustrate the LFRMS and SEA objectives compatibility:

+	Objectives / Outcomes are compatible
-	Objectives / Outcomes are potentially incompatible
0	Objectives / Outcomes are not related
/	Uncertainty over relationship

Table 1: LFRMS and SEA Objectives / Outcomes Compatibility Matrix

		Strategic Environmental Assessment Objectives								
		1. Protect and enhance where possible the ecological and chemical status of watercourses and water bodies in accordance with the WFD objectives.	2. Reduce and manage flood risk from ordinary watercourses, surface water run-off, groundwater and artificial water bodies within Conwy County.	3. Enhance human health and wellbeing through reducing flooding effects.	4. Protect and enhance biodiversity and geo-diversity across the Conwy County.	5. Protect and enhance landscape quality and character across the county.	6. Protect historic assets and their landscapes.	7. Educate, manage, plan and adapt for the effects of climate change.	8. Minimise the key impacts and consequences of flood risk on key assets, infrastructure, properties and businesses.	9. Protect best quality soil and agricultural land and minimise the potential for pollution.
Conwy CBC Local Flood Risk Management Strategy Outcomes	**Outcome 1**	+	+	+	+	+	+	+	+	+
	Outcome 2	+	+	+	+	+	+	+	+	+
	Outcome 3	+	+	+	+	+	+	+	+	+
	Outcome 4	+	+	+	+	+	+	+	+	+
	Outcome 5	+	+	+	+	+	+	+	+	+
	Outcome 6	+	+	+	+	+	+	+	+	+
	Outcome 7	+	+	+	+	+	+	+	+	+
	Outcome 8	+	+	+	+	+	+	+	+	+
	Outcome 9	+	+	+	+	+	+	+	+	+
	Outcome 10	+	+	+	+	+	+	+	+	+

Conwy CBC LFRMS Outcomes

Outcome 1. To improve the understanding of local flood (surface water, groundwater and ordinary watercourses) and coastal risks;
Outcome 2. Increasing individual and community awareness and preparedness for flood and coastal erosion events and the impacts of climate change on flood risk;
Outcome 3. To work together (both FRMA, stakeholders and public) to reduce flood and coastal risks, sharing data and resources to the greatest benefit;
Outcome 4. To reduce the impact and consequences for individuals, communities, businesses and the environment from flooding and coastal erosion;
Outcome 5. To ensure that planning decisions are properly informed by flooding issues and the impact future planning may have on flood risk management and long term developments;
Outcome 6. Improve and/or maintain the capacity of existing drainage systems by targeted maintenance;
Outcome 7. Take a sustainable approach to flood risks management balancing economic, environmental and social benefits;
Outcome 8. Increasing approaches that utilise the natural environment;
Outcome 9. Ensure the development of skills required to implement effective and innovative flood risk management measures; and
Outcome 10. Identify projects and programmes which are affordable, maximising capital funding from internal and external sources.

Assessment of Strategic Measures

A variety of measures were developed under each of the LFRMS outcomes which can be found in the Environmental Report (March 2013) and the final Conwy Local Flood Risk Management Strategy (March 2013).

The aim of the measures was to help CCBC to deliver the LFRMS outcomes by providing more detailed approaches and tasks to be undertaken. Each of the measures was assessed against the SEA Framework by determining the level of environmental performance of the measure against each of the SEA Framework objectives.

In accordance with the SEA Directive, a 'Do Nothing' option and a 'Business as Usual' option were also considered within all appropriate measures. The definitions of these options are described as follows:

- Do Nothing – the flood risk management team at CCBC is disbanded and no further work on flood risk management is undertaken; and
- Business as Usual – the existing flood risk management team at CCBC is retained and current flood risk management activities continue but the LFRMS is not implemented.

The detailed results of the assessment can be found in the SEA Environmental Report (March 2013).

Cumulative Assessment

The SEA Directive required that a cumulative assessment of the effects of the Conwy LFRMS was undertaken (illustrated in Table 2). The cumulative effect of the combination of measures under each LFRMS outcome has been assessed against the SEA objectives. Cumulative effects of the LFRMS are mainly positive as the measures all contribute to achieving the outcome and providing benefits in terms of flood risk reduction.

The assessment criteria and key used were as follows:

+++	Significant positive effect
++	Moderate positive effect
	Minor positive effect
0	Neutral or no effect
-	Minor negative effect
- -	Moderate negative effect
- - -	Significant negative effect
?	Uncertainty over effect or multiple effects which are both positive and negative
D	Effect depends on implementation

Table 2: Cumulative Assessment

LFRMS Outcomes and Measures	SEA Objectives 1	2	3	4	5	6	7	8	9	Commentary
LFRMS Outcome 1 – Measures 1.1-1.8	++	+++	+++	++	+	++	+++	+++	++	All the measures will contribute to increasing understanding of local flood and coastal risks. This will have cumulative benefits, making flood management more effective and efficient resulting in flood reduction benefits for biodiversity, water quality, human health, property, infrastructure, businesses, historic assets, soils and landscape. Understanding will also aid climate change planning and adaptation.
LFRMS Outcome 2 – Measures 2.1-2.7	+	+++	+++	+	+	++	+	+++	++	All the measures will contribute to increasing individual and community awareness and preparedness for flood and coastal erosion events and have cumulative positive effects, especially in terms of reducing consequences and impacts for human health, property, infrastructure and business..
LFRMS Outcome 3 – Measures 3.1-3.5	+	++	++	++	+	+	+	++	+	The measures will allow collaboration with FRMA's, stakeholders and the public. The cumulative effect of the measures will improve collaboration.
LFRMS Outcome 4 – Measures 4.1-4.5	++	++	+++	- ++	- +	- ++	++	+++	- +	Cumulative effects of the measures will be mainly positive through flood reduction. However, there will be cumulative negative effects which are likely to be temporary in nature during construction of schemes.
LFRMS Outcome 5 – Measures 5.1-5.5	++	++	++	++	++	++	++	++	++	All the measures will contribute to ensuring planning decision are properly informed by flood risk issues.
LFRMS Outcome 6 – Measures 6.1-6.3	++	+++	+++	+	+	+	++	+++	+	The cumulative effects of the measures will result in positive effects especially in terms of improving water quality and reducing flooding from drains.
LFRMS Outcome 7 – Measures 7.1-7.3	+++	++	++	++	+	+	+	++	+++	The measures will have positive cumulative effects on the SEA objectives.
LFRMS Outcome 8 – Measures 8.1-8.4	+	++	++	++	+	+	+	++	+	The measures will contribute to providing the necessary skills for implementing flood risk management tasks effectively.
LFRMS Outcome 9 – Measures 9.1-9.4	++	+++	+++	++	++	++	+++	+++	++	The cumulative effects of the measures will result in positive effects.
LFRMS Outcome 10 – Measures 10.1-10.3	+++	+++	+++	- - +++	- - +++	- - +++	++	+++	- - +++	The measures will have significant positive cumulative effects in terms of flood reduction and resulting benefits for human health, assets, property and businesses. However, there will be cumulative negative effects which are likely to be temporary in nature during construction of schemes.

Mitigation and Enhancement Measures

The measures assessment provided SEA Recommendations for taking measures forward into the LFRMS, and refining them to maximise positive effects such as amalgamating measures and suggesting additional or change of wording to measures.

Due to the nature of the LFRMS and the recommendations made during the options assessment the majority of the LFRMS measures were assessed as having positive effects. Therefore, identification of mitigation measures is limited. Opportunities to maximise positive effects have also been considered. Table 3 sets out mitigation and enhancement measures that have been developed for LFRMS.

Table 3: Mitigation and Enhancement Measures

LFRMS Outcome and Measure	Issue / Potential Effect	Suggested Mitigation and Enhancement Measures
Outcome 4, Measure 4.2	A capital cost investment programme is likely to result in construction of flood alleviation schemes. As well as positive effects in terms of reducing flood risk there is potential for temporary and permanent negative effects on biodiversity, landscape, soils and historic assets associated with construction and loss of land or an asset for flood defence works.	Negative effects are likely to be minimised through the planning process and legislation and therefore specific mitigation measures are not required in the LFRMS. Future scheme mitigation could include: • Undertake a feasibility study for the scheme looking at the most appropriate location and scheme type that balances social, economic and environmental factors; • Undertake an appropriate environmental assessment of the scheme (e.g. EIA or similar) to look in details at the environmental effects and specific mitigation; • Undertake WRAP (Waste Resources Action Programme) workshop during design of the scheme to help design out waste; • Develop a Construction Environmental Management Plan (CEMP) to minimise effects on the environment during construction; and • Develop a Site Waste Management Plan (SWMP) to encourage re-use and recycling of materials.
Outcome 10, Measure 10.1, 10.2, 10.3	Identifying new funding sources is likely to result in more programmes and schemes being implemented. As well as positive effects in terms of reducing flood risk there is potential for temporary and permanent negative effects on biodiversity, landscape, soils and historic assets associated with construction and loss of land or an asset for flood defence works.	

Monitoring Proposals

It is important that the implementation of the LRFMS is monitored to ensure that any unforeseen negative environmental effects are identified, predicted effects are measured and remedial action can be applied if required.

Due to the high level nature of the LFRMS and the positive results of the assessment, the requirements and feasibility of monitoring is limited. However, although negative effects were not identified it is considered that as monitoring is an integral part of the SEA process (and a statutory requirement) the LFRMS will undergo monitoring to ensure that the implementation of the strategy is as predicted in this SEA. Therefore, a range of indicators have been suggested below for monitoring the effects of the LFRMS (see Table 4). This monitoring will be incorporated within the annual action plans that will supplement the

LFRMS. It should be noted that not all indicators will be feasible to monitor straight away due to resources and baseline gaps. However, these indicators should be considered for future monitoring.

Table 4: Monitoring Proposals

Monitoring Proposal - Indicators
• Number of residential and non-residential properties at risk of flooding;
• Number of new developments permitted in areas of flood risk;
• Number of flood defences schemes implemented;
• Number of SuDS implemented;
• Number and severity of flooding incidents in the Conwy County and their source;
• Number of flood events leading to transport disruption;
• Number of awareness raising activities and events undertaken;
• Number of flood related public enquiries;
• Area of habitat created (type, and area) or lost as a result of SuDS and flood defence works;
• Populations of priority species lost or increased through flood defence works;
• Area of important landscape at risk from flooding;
• Number of significant adverse landscape effects from flooding related development in sensitive landscape;
• Positive (or negative) visual impact of flood defence schemes located within outstanding areas of landscape quality or significance;
• Number of historic assets at risk of flooding;
• Number of listed buildings on the ‘at risk’ register at risk from flooding.
• Number of educational activities (exhibitions, workshops, leaflets, questionnaires, advertising) undertaken;
• Number and severity of incidents leading to disruption or damage to service provision;
• Number of residential and non-residential properties at risk of flooding across the Conwy County;
• Number of power, waste and telecommunication assets at risk of flooding;
• Number of critical services at risk of flooding;
• Transport infrastructure at risk from flooding;
• Area of agricultural land at risk of flooding;
• Area of agricultural land lost due to the need for flood defence; and
• Number of pollution incidents arising from flooding.

Conclusions

The SEA undertaken for the Conwy LFRMS has helped ensure that those options/measures with significant negative effects that could not be mitigated were rejected at the options selection stage and not taken forward into the LFRMS. The process also helped to refine options/measures to maximise beneficial effects. Due to the nature of the LFRMS most of the options/measures and the preferred strategy itself

have positive effects. The main positive effects identified were flood risk reduction resulting is protection of people, property, infrastructure, businesses, water quality, historic assets, and biodiversity from flood damage. The only potential negative effects identified during the assessment stage were where measures may lead to future structural flood defence works/schemes. These effects are likely to be temporary and mitigated through best site practices, legislation, and the planning process.

Next Steps in the SEA Process

The Environmental Report shows the results of Stages A to D of the SEA process. The next stage of the process is Stage E which involves the Monitoriing and Implementation of the plan.. Stage E ‘Monitoring’ will be carried out annually by CCBC following adoption of the LFRMS.