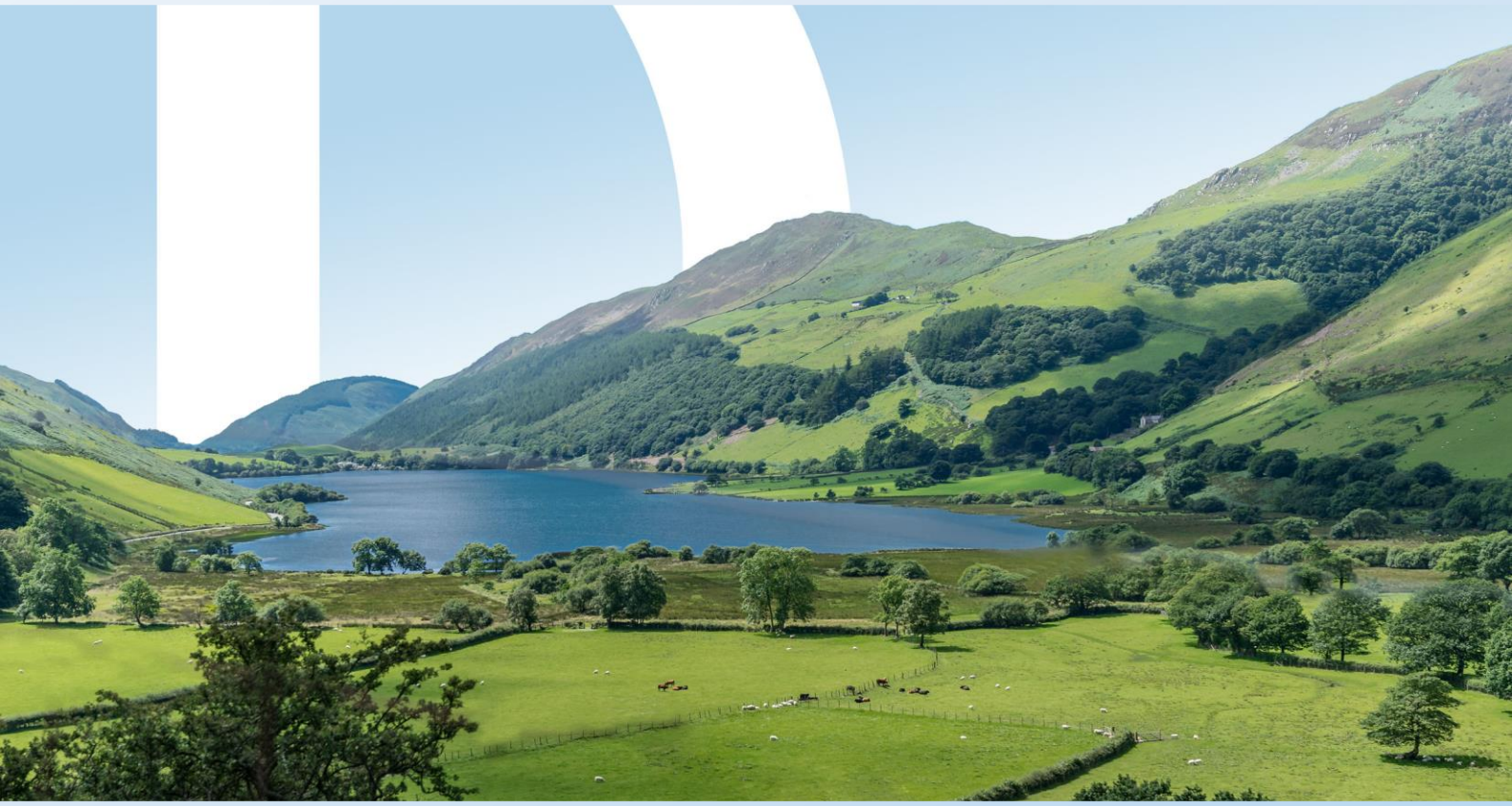
Merthyr Tydfil County Borough

LOCAL FLOOD RISK MANAGEMENT STRATEGY

Non-Technical Summary



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TABLES

1 INTRODUCTION

1.1 OVERVIEW

1.1.1. Merthyr Tydfil County Borough (here in referred to as MTCB) is in the process of preparing a new Local Flood Risk Management Strategy (here in referred to as LFRMS) for the county borough.

1.1.2. It will set out how the council intends to manage flooding across the Local Authority Area, being consistent with the objectives, measures and related policies and legislation set out in the National Strategy.

1.1.3. As part of this process WSP UK Ltd ("WSP") have been appointed to undertake a Strategic Environmental Assessment (SEA) in support of the LFRMS.

1.2 THE LOCAL FLOOD RISK MANAGEMENT STRATEGY

1.2.1. This LFRMS focuses on the local sources of flood risk (surface water runoff, groundwater and ordinary watercourses), as well as considering other sources of flood risk (including the sea, larger watercourses and sewers) and associated Risk Management Authorities (RMA) .

1.2.2. MTCB has been subject to several widespread flooding events in the past 50 years. It is currently estimated that more than 2,500 properties are at high risk of flooding from surface water across the county borough.

1.2.3. The LFRMS sets out the flood risk management objectives, measures and actions of reducing flood risk. The five overarching objectives of the LFRMS are as follows:

- Objective 1 – Improving our understanding and communication of risk;
- Objective 2 – Preparedness and building resilience;
- Objective 3 – Prioritising investment to the most at risk communities;
- Objective 4 – Preventing more people becoming exposed to risk; and
- Objective 5 – Provide an effective and sustained response to flood events.

1.2.4. The LFRMS intends to meet these objectives above by using a number of measures outlined below:

- Development planning and adaptation;
- Forecasting, warning and informing;
- Studies, assessments and plans;
- Outreach, awareness and engagement;
- Preparedness and response;
- Land and environmental management; and
- Asset management and maintenance.

1.2.5. The LFRMS seeks to build upon feedback from public consultations and respond to the many ideas and key issues identified by local communities, and stakeholders that have contributed to the plan-making process so far. It sets out a shared vision for the future of the county borough and includes the proposed strategy and planning policies that will help guide and manage development in the area.

1.2.6. Further details on the objectives, measures and actions can be found in **Section 2** of the main **SEA Report**.

2 METHODOLOGY

2.1 WHAT IS SEA?

2.1.1. Strategic Environmental Assessment (SEA) is a mandatory process used during the preparation of plans and programmes. Its role is to promote sustainable development by assessing environmental, social, and economic impacts, as well as mitigating any potential adverse effects that the plan might otherwise have. This process is undertaken in accordance with the SEA Regulations.

2.2 SEA METHODOLOGY

2.2.1. The SEA process in England has five distinct stages which include:

- **Stage A**: Production of a scoping report which sets the context of the draft LFRMS, identified other relevant policies, plans and programmes, baseline information and sustainability objectives. This was undertaken in October 2023;
- **Stage B**: Assessment of draft policies and alternative polices and strategic and alternative sites and the preparation of the SEA Report. The report is then consulted on alongside the draft LFRMS (also referred to as Regulation 18 consultation;
- **Stage C**: Assessment of preferred policies and preparation of the Environmental Report;
- **Stage D (this stage)**: Consultation on the draft plan or programme and the Environmental Report; and
- **Stage E**: Monitoring the significant effects of the plan on the environment.

2.2.2. Stage D (this stage) comprises the assessment of the final LFRMS Plan (following consultation), against the SEA Appraisal Framework objectives identified within the Scoping Report (Stage A). This stage incorporates the consultation responses received on the LFRMS and SEA from Natural Resources Wales, Cadw and other stakeholders. Responses received and the actions taken have been set out in **Appendix C** of the main Environmental Report.

2.2.3. As per the SEA regulations, the SEA also needs to consider and compare all reasonable alternatives as the LFRMS evolves and assess these against the baseline environmental, economic and social characteristics of the county borough.

2.2.4. As there are no proposed alternative measures, the SEA has considered the plan's previous interventions as reasonable alternatives.

2.2.5. This Environmental Report has therefore covered the assessment of the following:

- Compatibility assessment of the objectives;
- Proposed measures; and
- Alternative measures.

2.3 IDENTIFICATION OF SUSTAINABILITY ISSUES, OPPORTUNITIES AND THE SEA FRAMEWORK

2.3.1. A Scoping Report, in support of the emerging LFRMS, was produced by WSP in October 2023, which initiated the SEA process. This report reviewed relevant legislation, plans, and programmes baseline, identified baseline information as well as key issues and opportunities for the Local Plan and identified an assessment framework.

2.3.2. This report was consulted on with the Statutory Consultees (Natural Resources Wales and Cadw) as well as the Welsh Government and details on their consultation comments can be found in **Appendix C**. The baseline information used within the SEA Scoping Report is set out in **Appendix B**.

2.3.3. Following the findings identified at scoping, an SEA Appraisal Framework was produced, which was used to guide the assessment process of the plans and strategies. This SEA Appraisal Framework has guided the SEA assessment of the LFRMS and is shown below.

- **SEA1:** To increase and enhance flood protection as well as awareness and understanding to meet both the current and future demographic changes and protect and enhance human health, quality of life and wellbeing.
- **SEA2:** To increase understanding and awareness of flood risk and increase resilience of local businesses and the local economy businesses and the local economy.
- **SEA3:** To protect, enhance and provide resilience to habitats, species and valuable ecological networks that contribute to ecosystem functionality, contributing to net benefit in biodiversity.
- **SEA4:** To protect and enhance MTCBC's townscapes and landscapes, including both the rural and urban environments.
- **SEA5:** To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their unique settings.
- **SEA6:** To maintain and enhance the quality of surface and groundwater.
- **SEA7:** Ensure that MTCBC is resilient to the effects of climate change and development supports low carbon energy efficient design.
- **SEA8:** To reduce the risk and vulnerability to flooding.
- **SEA9:** Minimise the potential impact of flooding to transport and other critical infrastructure, both at present and in the future.
- **SEA10:** To protect and enhance MTCBC geology, geomorphology, mineral resources and the quality of soils.

3 SEA ASSESSMENT FINDINGS

3.1 ASSESSMENT OF MEASURES

3.1.1. The assessment of the LFRMS measures were carried out in relation to the SEA objectives. A summary of the significant effects are detailed in Table 3-1 below. No significant negative effects were identified.

3.1.2. Further details on the assessment of the LFRMS measures can be found within Section 6 of the main SEA Report and in **Appendix D** to the main SEA Report.

Table 3-1 – Summary of Significant Effects – Assessment of Measures

Significance	Number of Significant Effects	Summary of Effects
Significant Positive (++)	8	• Measures that support SuDS Approval Body (SAB) to approve, adopt and maintain sustainable drainage systems. • Measures that improve and expand the monitoring system to include other high-risk intakes. • Measures that continue to engage in partnership working. • Measures to improve holistic flood response and recovery. • Measures supporting Natural Flood Management. • Measures that support flood risk management schemes.
Uncertain (?)	13	• Measures to support the continued working with the LPA to develop robust planning policy relating to flood risk and drainage. • Measures that support SuDS Approval Body (SAB) to approve, adopt and maintain sustainable drainage systems. • Measures that improve and expand the monitoring system to include other high-risk intakes. • Measures supporting Natural Flood Management. • Measures supporting flood risk and climate change. • Measures that support flood risk management schemes.

3.2 ASSESSMENT OF REASONABLE ALTERNATIVES

3.2.1. The SEA Regulations require an assessment of the LFRMS and its “reasonable alternatives”, in addition to those proposed within the draft plan. Without this, there cannot be a proper environmental evaluation of the preferred plan. The assessment of reasonable alternatives does not need include all possible alternatives, but only those that are realistic.

3.2.2. The LFRMS did not generate any specific alternative options, therefore, the SEA has considered the continuation of the existing strategy as a reasonable alternative.

3.2.3. Overall, the existing strategy has performed similarly to the proposed LFRMS, as many of the objectives and measures overlap and ultimately will ensure flood protection. Significant positive effects are likely to remain for SEA1 (population, equalities and health) and SEA8 (flood risk) through the continuation of this strategy.

3.2.4. Where the two strategies differ slightly is through the inclusion of more hard engineering interventions such as the construction of channel and culverts, within the existing strategy. Although ‘soft engineering’ solutions will be preferred the assessment still identified a greater level of uncertainty, when compared to the proposed new strategy.

3.2.5. This has resulted in uncertain effects on landscape and townscape (SEA4), the historic environment (SEA5) and geology and soils (SEA10).

3.2.6. SEA2 (economy) has also resulted in uncertain effects. Overarching objective 1 aims to reduce community disruption by reducing the number of residential and commercial properties affected by the risk of flooding, however, the strategy doesn’t set out any specific measures to support local businesses. It is not clear how local businesses will be supported.

3.2.7. Overall, as the new strategy include less hard measures and a greater level of detail on the proposed measures, it has more potential to result in a greater number of positive effects on the SEA objectives.

4 CUMULATIVE EFFECTS

4.1.1. A cumulative effects assessment was undertaken for the SEA. This looked at two different types of cumulative effects – Intra-project and Inter-project. These are defined as follows:

- Consideration of how different proposed measures within the LFRMS may interact and cause cumulative effects on a receptor (Intra-project effects); and
- How the proposed measures within the LFRMS could cause cumulative effects in association with other plans, policies and projects in the surrounding area (Inter-Projects Effects).

4.2 INTRA-PROJECT EFFECTS

4.2.1. The proposed measures within the LFRMS resulted in the following intra-project cumulative effects:

- Positive effects have largely been identified for measures where the increased level of protection is likely to give rise to cumulative increase in protection offered to current and future populations from flood risk.
- Therefore positive effects were identified for population, equalities and human health, economy, flood risk and transport and infrastructure.
- Mixed positive and negative effects were identified for the historic environment, climate resilience and energy efficiency.

4.2.2. Further details on the assessment of the inter-project cumulative effects can be found within **Section 7** of the main SEA Report.

4.3 INTER-PROJECT EFFECTS

4.3.1. An assessment of the potential cumulative effects of the LFRMS in association with other plans, policies and projects in the surrounding area was completed, looking at the potential impacts at a strategic level. Further details on the assessment of the inter-project cumulative effects can be found within **Section 7** of the main SEA Report.

4.3.2. The following plans were considered:

- Replacement Local Development plan, 2020;
- South east Wales Valley's Local Transport Plan;
- Decarbonisation Plan 2023-2030; and
- Neighbouring Local Plans.

4.3.3. Potential positive effects were identified for population, equalities and human health, biodiversity, landscape and townscape, historic environment, water quality, energy efficiency, critical infrastructure, geology and soils.

4.3.4. Potential negative effects were identified for geology and soils.

4.3.5. Potential mixed positive and negative effects were identified for population, equalities and human health, economy, biodiversity, landscape and townscape, historic environment, and flooding.

5 MITIGATION, ENHANCEMENTS AND MONITORING

5.1 MITIGATION AND ENHANCEMENT MEASURES

5.1.1. Mitigation of significant negative effects of the LFRMS and enhancement of positive effects are a key purpose of SEA. The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan.

5.1.2. Proposed mitigation and enhancement measures have been set out in **Table 5-1** below.

Table 5-1 – Proposed Mitigation and Enhancement Measures

IIA Objective	Mitigation/ Enhancement	Mechanism
SEA1: Population, equalities and health	Communication should not be limited to social media. Measures should ensure that all groups are reached inclusively and in a timely manner. Consideration should be given to those who may not have access or the knowledge to access the internet and/or a smart phone.	Within the LFRMS Scheme level HIA
SEA1: Population, equalities and health SEA2: Economy	Best practice mitigation measures e.g., noise and air quality management, should be implemented to minimise effects during construction on the local population. Active engagement with the local community should be undertaken prior to the commencement of any construction activities.	Construction Environmental Management Plan (CEMP) Community Engagement Plan Scheme level HIA
SEA1: Population, equalities and health SEA3: Biodiversity	NFM solutions should present opportunities for new areas of green infrastructure and green space which can be accessed by the local community.	Within the LFRMS Scheme level HIA Scheme level design Project level environmental assessment
SEA3: Biodiversity	Schemes should incorporate the biodiversity net gain where possible. Opportunity to work with natural processes to manage flood risk and enhance biodiversity and ecosystem resilience through habitat creation, green engineering and natural management techniques, in line with Section 6 duty and resilience of ecosystems duty.	Within the LFRMS Scheme level design Project level environmental assessment
SEA3: Biodiversity	Scheme design should aim to minimise the environmental effects by ‘designing to avoid’ potential habitat features that may be of local,	Scheme level design

IIA Objective	Mitigation/ Enhancement	Mechanism
	national and international importance. Habitat loss should be avoided, but where this can't be avoided, habitats will be reinstated upon completion of construction, and compensatory habitat should be considered to replace damaged or lost habitat.	Project level environmental assessment CEMP Biodiversity Management Plan
SEA4: Landscape & Townscape SEA5: Historic Environment	Measures should incorporate Construction Industry Research and Information Association's (CIRIA) guidance on SuDS design to ensure high-quality design that will minimise the effects on the historic environment	Scheme level design Project level environmental assessment
SEA4: Landscape & Townscape SEA5: Historic Environment	Developments should be well-designed and screened to ensure that their effects on the local townscape, landscape and historic setting are minimised.	Scheme level design Project level environmental assessment
SEA5: Historic Environment	Careful consideration should be given to the potential presence of heritage assets (particularly buried archaeology) when finalising proposals for pipeline routing. Where required, a programme of trial trenching and archaeological recording should be undertaken.	Archaeological/ heritage surveys CEMP
SEA6: Water Quality	Care should be taken during construction regarding the potential for contaminants such as silt, concrete or fuel oil to pollute water courses via surface run off. All construction activities should be undertaken in accordance with relevant best practice pollution prevention guidance. Pollution Incident Control Management Plans should be developed to limit adverse effects arising from pollution events. Nature based solutions and natural flood management offer an opportunity to restore heavily modified channels to natural processes. Therefore, the current statement isn't correct. Where waterbodies might be classified as a HMWB as a result of their function as a flood risk asset, there are still opportunities to deliver mitigation measures to help achieve Good Ecological Potential.	CEMP Pollution Incident Control Management Plan
SEA6: Water Quality	NFM should also avoid heavily modified channels. Potential to contribute to improving ecological status of water bodies by identifying synergies	Scheme level design

IIA Objective	Mitigation/ Enhancement	Mechanism
	between flood and coastal erosion risk management solutions and WFD measures.	Project level environmental assessment
SEA6: Water Quality	Schemes should be design and carefully located to try and avoid intrusive works such as piling which could mobilise contaminants. Dependent on the nature of proposed flood risk schemes, natural hydromorphological functions could be impacted, resulting in negative effects.	Scheme level design/ optioneering Project level environmental assessment
SEA7: Climate resilience and energy efficiency	Schemes should incorporate sustainable design measures to reduce overall levels of embodied carbon. The use of renewables for the energy supply during construction and operation will be investigated, as well as the use of materials with lower embodied carbon.	Scheme level design Project level environmental assessment
SEA10: Geology and soils	Schemes should be directed away from areas of valuable agricultural land and/or important geological sites and reduce mobilisation of contaminants.	Scheme level design Project level environmental assessment

5.2 MONITORING MEASURES

5.2.1. The SEA Regulations require that monitoring is undertaken on a plan so that the significant effects of applying the plan can be identified, and remedial action imposed. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final plan, and to measure the performance of the plan against sustainability objectives and targets. Monitoring is also used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information.

5.2.2. The aim of monitoring is to check whether the plan is having the significant effects that were predicted in the SEA, and to deal with any unforeseen problems. Those remaining significant effects (albeit uncertain effects) that remain following the implementation of the mitigation and enhancement measures above include the following:

- **SEA3 (Biodiversity):** Potential loss of and fragmentation of habitats from the construction of flood defence schemes.
- **SEA4 (Landscape and Townscape):** Potential degradation of the landscape and townscape from the construction of flood defence schemes.
- **SEA5 (Historic Environment):** Potential loss of heritage assets (including archaeological remains) and deterioration of the historic setting from the construction of flood defence schemes.
- **SEA6:** Potential degradation of groundwater quality
- **SEA7:** The uptake in low carbon energy efficient design.
- **SEA10 (Geology and Soils):** Potential loss of agricultural land from the construction of flood defence schemes.

5.2.3. It should be noted that these uncertain effects are generally where limited scheme information is currently available.

5.2.4. **Table 5-2** below sets out those monitoring measures which could be suitable in monitoring those uncertain residual effects outlined above. Additional monitoring measures have also been included to monitor the potential significant positive effects of the LFRMS.

Table 5-2 - Proposed Monitoring Measures

SEA Objective	What could be measured?	Mechanism
SEA3: Biodiversity	The number of new schemes achieving biodiversity net gain The ratio of hard to NFM schemes	Scheme level design Annual monitoring
SEA4: Landscape and Townscape	Loss or damage to landscape character and features of designated sites (e.g. AONBs/ Brecon Beacons). Area of blue and green infrastructure created The ratio of hard to NFM schemes	Scheme level design Annual monitoring
SEA5: Historic Environment	Number of developments within a conservation area.	Scheme level design

SEA Objective	What could be measured?	Mechanism
	Number of historic assets (including buried heritage) lost and/or discovered. Number of heritage assets benefiting from flood protection.	Annual monitoring
SEA6: Water quality	WFD water quality	Scheme level WFD risk assessment
SEA7: Energy Efficiency	Number of schemes that promote energy efficiency. Number od schemes that make use of existing infrastructure.	Scheme level design
SEA10: Geology and Soils	Area of greenfield land disturbed or lost. % of agricultural land lost.	Scheme level design Annual monitoring
Additional Monitoring Measures		
SEA1: Equalities and Human Health	The number of properties benefiting from flood protection % increase of green/blue infrastructure	Scheme level design Annual monitoring
SEA2: Economy and Businesses SEA8: Flood risk SEA9: Critical Infrastructure	The number of properties benefiting from flood protection The number of businesses benefiting from flood protection The number of critical infrastructure assets benefiting from flood protection	Annual monitoring
SEA10: Geology and Soils	% of land that is restored and improved	Annual monitoring

6 NEXT STEPS

6.1.1. In accordance with the SEA Regulations, the SEA Report must be made available at the same time as the draft plan or programme, as an integral part of the consultation process, and the relationship between the documents clearly indicated.

6.1.2. MTCBC sought the views of statutory bodies and other stakeholders on the results of the SEA, in order to ensure that the SEA provided a robust assessment of the LFRMSS. The ER has been updated in light of comments received during consultation.

6.1.3. Once the LFRMS is adopted, an SEA Statement will be produced to document this process and will include a record of the comments received on both the LFRMS and SEA Environmental Report, and the actions taken as well as setting out how the SEA has influence the development of LFRMS.

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