

Merthyr Tydfil County Borough
Council

**Local Flood Risk Management
Strategy**

**Strategic Environmental Assessment
Environmental Report**

Issue | 20 September 2012

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Contents

	Page
1 Introduction	1
1.1 Purpose of SEA	1
1.2 SEA Process and Legislation	1
1.3 Structure of the Environmental Report	2
2 The Merthyr Tydfil Local Flood Risk Management Strategy	3
2.1 Strategic Context and Guidance	3
2.2 Spatial Scope	4
2.3 Local Flood Risk Planning: Overview	6
2.4 Preliminary Flood Risk Assessment Report	6
2.5 Summary of the Local Strategy	9
2.6 Local Strategy Implementation Measures	10
3 SEA Objectives, Baseline and Method	13
3.1 Overview	13
3.2 Identifying Other Relevant Plans and Programmes and Environmental Protection Objectives	14
3.3 Merthyr Tydfil Environmental Baseline	15
3.4 Key Environmental Issues and Opportunities	17
3.5 The SEA Framework	18
3.6 Assessment of Objectives and Measures	20
3.7 Limitations, Data Gaps and Assumptions	20
4 Assessment of Local Strategy Objectives and Measures	21
4.1 Consideration of Alternatives	21
4.2 Assessment of Local Strategy Objectives	23
4.3 Local Strategy Proposed Measures	27
5 Conclusions and Recommendations	38
5.1 Recommendations and Mitigation	38
5.2 Monitoring Recommendations	38
5.3 Habitats Regulations Appraisal	42

Appendices

Appendix A

SEA Scoping Consultation Responses

Appendix B

Review of Plans and Programmes

Appendix C

Baseline Environment

1 Introduction

The Flood and Water Management Act 2010 provides for better and more comprehensive management of flood risk for people, homes and businesses. The Act implements Sir Michael Pitt's recommendations requiring urgent legislation, following his review of the 2007 floods.

As part of the Act, Lead Local Flood Authorities (LLFA) are required to develop, maintain, apply and monitor the application of a strategy for local flood risks in their area.

Merthyr Tydfil County Borough Council (MTCBC) is the LLFA for the administrative area of Merthyr Tydfil. Having considered the requirements of the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, MTCBC have determined that a Strategic Environmental Assessment (SEA) is required for their Local Flood Risk Management Strategy (the 'Local Strategy').

MTCBC have commissioned Arup to deliver aspects of the SEA for the Local Strategy on their behalf. This SEA Environmental Report documents the environmental assessment and the likely significant effects of the draft Local Strategy. The Environmental Report is part of the public consultation documents on the draft Local Strategy.

The results of the SEA and the public consultation will be taken into account in the development of the final Local Strategy and its adoption.

1.1 Purpose of SEA

Strategic Environmental Assessment (SEA) is a process that provides for the high level protection of the environment, by ensuring that the integration of environmental considerations into the preparation of strategies and plans and to contribute to the promotion of sustainable development and environmental protection.

1.2 SEA Process and Legislation

SEA for certain plans and programmes is a legal requirement under the SEA Directive (2001/42/EC). In Wales, this is transposed and implemented through the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (referred to as the SEA Regulations in this report).

MTCBC have determined that the Local Strategy is a 'plan or programme' described in the SEA Regulations and that therefore SEA is required.

In summary, SEA process requires MTCBC and the Local Strategy to:

- prepare an Environmental Report on the likely significant effects of the draft Local Strategy;
- consult on the draft Local Strategy and the accompanying Environmental Report;

- take into account the Environmental Report and the results of consultation in decision-making; and
- provide information when the Local Strategy is adopted and show how the results of the environmental assessment have been taken into account.

Welsh Government guidance¹ to LLFAs on local strategies outlines this requirement and directs LLFAs to consider detailed SEA advice² produced by the Office for the Deputy Prime Minister (now Communities and Local Government).

Further Welsh Government guidance³ on how to address Sustainable Development in local flood risk strategies is relevant both for the development of the Merthyr Tydfil Local Strategy and its SEA.

1.2.1 SEA Scoping

The SEA Regulations require responsible authorities - when deciding on the scope and level of detail of the information that must be included in an SEA Environment Report – to consult with the consultation bodies. Where a consultation body wishes to respond to such a consultation, it must do so within the period of 5 weeks beginning with the date on which the consultation begins.

MTCBC have consulted the following organisations on the scope of the SEA:

- Environment Agency Wales (EAW)
- Countryside Council for Wales (CCW)
- Cadw

The consultation responses have been documented in Appendix A, together with how each comment has been taken forward into the SEA.

1.3 Structure of the Environmental Report

Following this introduction, the Environmental Report is structured in this format:

Chapter 2: Gives the strategic context for the Local Strategy and an overview of the Local Strategy objectives and measures

Chapter 3: Provides the context and methodology for the SEA

Chapter 4: Reports on the SEA results

Chapter 5: Summarises the likely environmental effects of the Local Strategy and makes recommendations for environmental benefit.

¹ Welsh Government, 2011. Local Flood Risk Management Strategies: Local Strategy. <http://wales.gov.uk/topics/environmentcountryside/epq/waterflooding/flooding/nationalstrategy/guidance/localstrategy/?lang=en>

² Office of the Deputy Prime Minister, 2005. A Practical Guide to the Strategic Environmental Assessment Directive.

³ Welsh Government 2011. Sustainable Development: Guidance to Risk Management Authorities

2 The Merthyr Tydfil Local Flood Risk Management Strategy

The Flood and Water Management Act 2010 places a responsibility upon LLFAs to develop, maintain, apply and monitor a strategy for local flood risk management (referred to as the Local Strategy).

The Act defines ‘local flood risk’ as that arising from:

- Surface run off;
- Groundwater; and
- ‘Ordinary watercourses’ – including risks from a lake, pond or other area of water which flows into an ordinary watercourse.

2.1 Strategic Context and Guidance

The Welsh Government is required –under the same Act - to develop, maintain and apply a flood and coastal erosion strategy for Wales. The first National Strategy⁴ was published in November 2011 and sets four overarching objectives for the management of flood and coastal erosion risk in Wales:

- reducing the consequences for individuals, communities, businesses and the environment from flooding and coastal erosion;
- raising awareness of and engaging people in the response to flood and coastal erosion risk;
- providing an effective and sustained response to flood and coastal erosion events; and
- prioritising investment in the most at risk communities

In preparing their Local Strategy, MTCBC must ensure that it is consistent with the National Strategy and that they consult with the public and the other Risk Management Authorities affected. This consistency will ensure that the objectives set out within the National Strategy are delivered through the work of all the Risk Management Authorities in Wales.

In the development of their Local Strategy, MTCBC are expected to balance the needs of communities, the economy and the environment. The Local Strategy will form the framework within which communities have a greater say in local risk management decisions.

⁴ Welsh Government 2011. National Strategy for Flood and Coastal Erosion Risk Management in Wales. November 2011.
<http://wales.gov.uk/topics/environmentcountryside/epq/waterflooding/flooding/nationalstrategy/strategy/?jsessionid=Q1fvP2TJygQWQp2ygbthJNyz6QnX3LhRCM2h631VKXXfq2wG6v47!-278964247?lang=en>

Welsh Government guidance advises that high level strategic objectives for the Local Strategy should be developed around the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage, economic activity and if considered appropriate on local community facilities, non-structural initiatives and/or on the reduction of the likelihood of flooding.

2.2 Spatial Scope

The Merthyr Tydfil Local Strategy will address local flood risk in the Merthyr Tydfil administrative area, including that part within the Brecon Beacons National Park. This area is identified in Figure 1.

The Local Strategy also needs to identify – in collaboration with adjacent LLFAs – how local flood risk sources and receptors interact across administrative boundaries, i.e. managing flood risk sources within Merthyr Tydfil affecting areas covered by adjacent strategies, and *vice versa*.

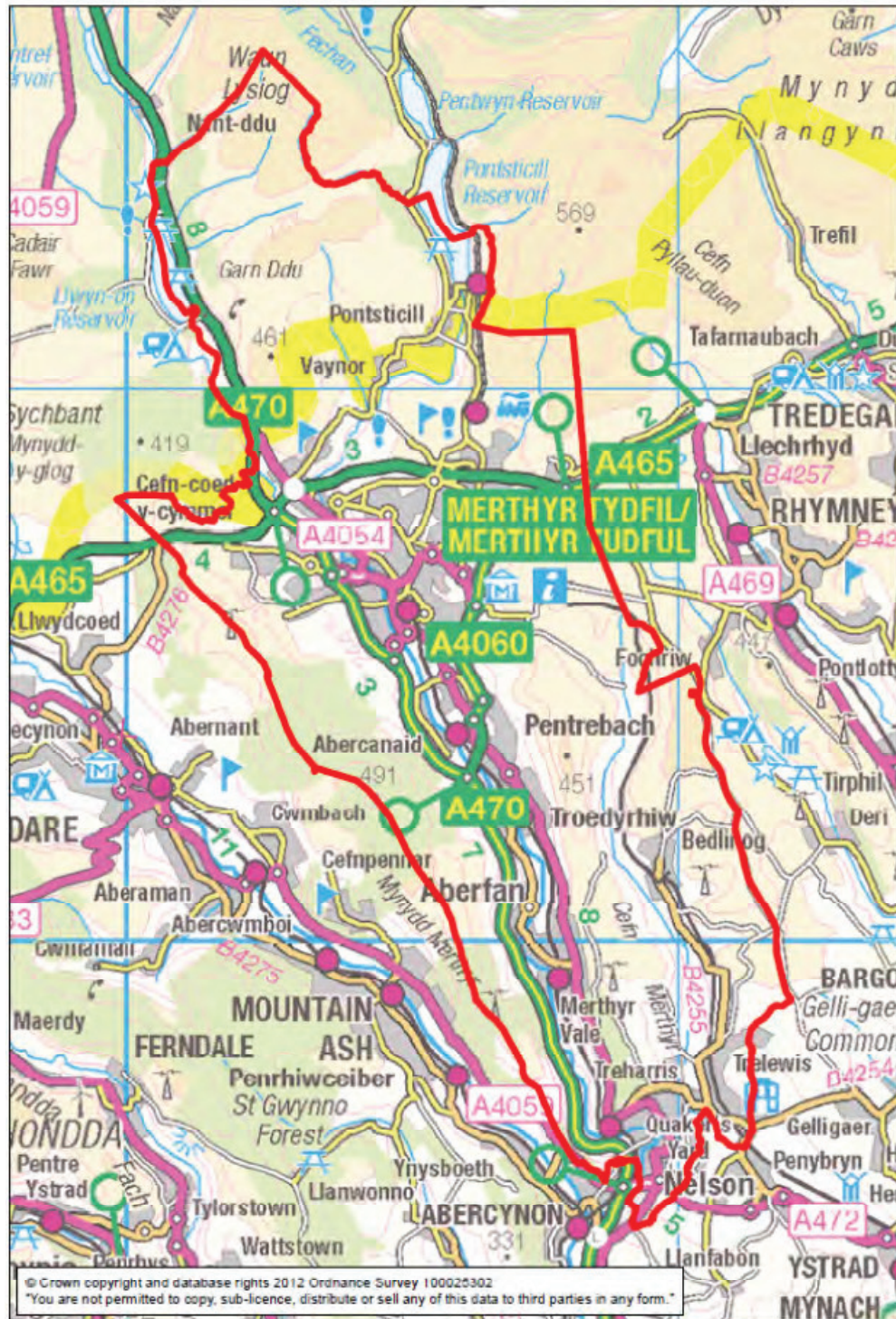


Figure 1. Merthyr Tydfil Local Strategy Area

2.3 Local Flood Risk Planning: Overview

The Flood Risk Regulations came into force in December 2009 and the Flood and Water Management Act became law in April 2010. Under this legislation Merthyr Tydfil CBC is identified as the LLFA for the area, with a number of key responsibilities. The Flood Risk Regulations place a duty on LLFAs to prepare a number of documents by key dates:

- Preliminary Flood Risk Assessment (PFRA) Report - 22nd June 2011 (now completed and approved by Welsh Government)
- Flood Hazard and Flood Risk Maps - to be completed by 22nd June 2013
- Flood Risk Management Plans to be completed by 22nd June 2015

In addition, the Flood and Water Management Act requires Merthyr Tydfil CBC to 'develop, maintain, apply and monitor a strategy for local flood risk management'. Welsh Government anticipates that all LLFAs will have completed their local strategies by 31 March 2013.

The Act sets out nine issues to be specified within the Strategy:

- the Risk Management Authorities in the Local Authority's area;
- the flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the area;
- the objectives 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.

Merthyr Tydfil CBC have indicated that the Local Strategy will be subject to reviews on a 6-year cycle.

2.4 Preliminary Flood Risk Assessment Report

2.4.1 Methodology

The methodology was based on using the flood maps produced by the EAW to identify 1km squares where flood risk exceeds a defined threshold. These squares are known as 'Areas above Flood Risk Threshold' (Blue Squares). The key flood risk indicators and their thresholds are:

- a minimum of 200 people;
- a minimum of 20 businesses;

- 2 or more critical services.

The EAW has identified 20 blue squares within MTCBC which are Areas above the Flood Risk Threshold.

A cluster of these blue squares is an indication that an area of concentrated flood risk has been identified. Where there are four or more touching blue squares within a 3km x 3km square the whole 3km x 3km square has been considered as an area which could form part of an indicative Flood Risk Area.

The key flood risk indicator for establishing an indicative Flood Risk Area is numbers of people at risk of being affected by flooding. If there is a minimum of 5,000 people within a series of connecting 3km x 3km grids, as identified above, then an indicative Flood Risk Area has been established.

2.4.2 Level of Flood Risk

A total of 22 blue squares have been identified by Merthyr Tydfil CBC and using the methodology given about 20 of these squares are contained within the Flood Risk Area of 58 km². The flood risk area and blue squares are shown in Figure 2.

The Key Flood Risk Indicators for the Merthyr Tydfil CBC Flood Risk Area have been calculated as:

Human health consequences –

Number of people (2.23 multiplier)	7,923
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Other human health consequences –

Number of critical services flooded	26
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Economic consequences –

Number of non-residential properties flooded	818
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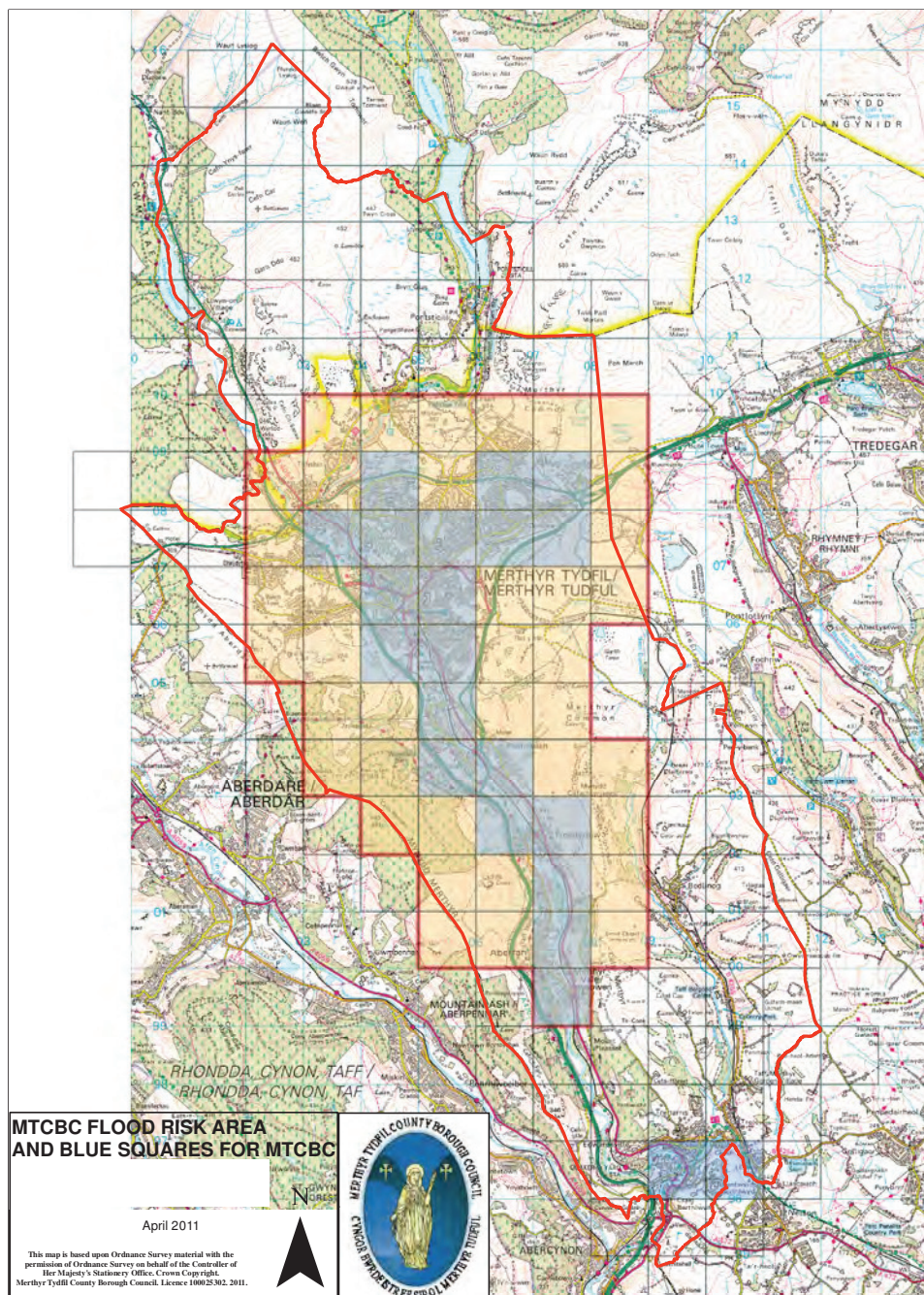


Figure 2. Flood Risk Area and Blue Squares for Merthyr Tydfil CBC

2.5 Summary of the Local Strategy

2.5.1 Local Strategy Objectives

Merthyr Tydfil CBC has set the following overall strategy objective, to:

“Reduce Flood Risk in all of the areas identified as being subject to significant flood risk”

Merthyr Tydfil CBC has developed a set of 16 Detailed Objectives that satisfy the four overarching objectives set out in the National Strategy by the Welsh Government:

Overarching Objective 1 - Reducing the consequences for individuals, communities, businesses and the environment from flooding and coastal erosion

- 1 Reduce distress by reducing the number of people exposed to the risk of flooding;
- 2 Reduce community disruption by reducing the number of residential and commercial properties affected by the risk of flooding;
- 3 Reduce risk to life by reducing the number of people exposed to risk of flooding of significant depth and velocity;
- 4 Reduce disruption to critical infrastructure or prepare plans to allow the operations to be maintained;
- 5 Protect and improve Sites of Special Scientific Interest (SSSIs) and Sites of Importance for Nature Conservation (SINCs);
- 6 Contribute to the delivery of Merthyr Tydfil Biodiversity Action Plan;
- 7 Minimise damage to known historic assets.

Overarching Objective 2 - Raising awareness of and engaging people in the response to flood

- 8 Provide systems to give early warning of potential flooding to individuals and communities;
- 9 Provide efficient systems for the management and maintenance of surface assets;
- 10 Reduce economic damage;
- 11 Endeavour to reduce cost of management.

Overarching Objective 3 - Providing an effective and sustained response to flood events

- 12 Improve naturalness including the creation of natural channels and water bodies with minimal modifications;
- 13 Protect and Improve water quality;
- 14 Provide Flood Risk management Plans for each area subject to flood risk;
- 15 Ensure that measures are designed and constructed in a sustainable way;
- 16 Ensure that MTCBC works in partnership with all other Risk Partners and works collaboratively with adjacent Authorities.

Overarching Objective 4 - Prioritising investment in communities most at risk

- 17 Ensure that investment decisions for the implementation of flood risk management schemes are made on a consistent, defensible basis and are subject to cost benefit analysis.

2.6 Local Strategy Implementation Measures

Welsh Government guidance identifies the following high level themes for the delivery of a Local Strategy:

- development planning and adaptation (encompassing both new and adaptations to existing developments/landscapes);
- flood forecasting, warning and response;
- land, cultural and environmental management;
- asset management and maintenance;
- studies assessments and plans;
- high level awareness and engagement (to increase individual and community resilience);
- monitoring of local flood risk issues

Merthyr Tydfil CBC has identified potential measures under the following three categories:

- Prevention of flooding;
- Preparedness for flooding;
- Protection against flooding.

A measure is defined as an activity which will be undertaken to manage risk and achieve the agreed objectives. A wide range of measures have been considered – both structural and non-structural, with a time scale for implementation on the following basis:

- Short-term (0-20 years)
- Medium-term (20-50 years)
- Long-term (50-100 years)

At this stage, the Local Strategy requires more data and information on local flood risks in the area before considering the most appropriate measures to be employed. Some of these measures are already in place (e.g. the Local Development Plan – which steers development out of areas of flood risk); others may only be employed as a last resort (e.g. relocation).

The full list of measures is identified in the table below.

THEMES AND MEASURES	
6.13	Development Planning and Adaption
6.13.1	Sustainable and Strategic Development Planning
6.13.2	Strategic Flood Risk Assessment (SFRA)/Strategic Flood Consequences Assessment (SFCA)
6.13.3	Water Cycle Strategies
6.13.4	Relocation
6.13.5	Mineral and Waste Plans
6.13.6	Sustainable Drainage (SuDS)
6.13.7	Contaminated Land
6.13.8	Scheduled Ancient Monuments and Historic Buildings
6.14	Flood forecasting, Warning and Response
6.14.1	Flood Awareness
6.14.2	Flood Warning
6.14.3	Flood Forecasting
6.14.4	Emergency Response Plans
6.14.5	Community Flood Plans
6.14.6	Multi-Agency Flood Plans
6.14.7	Major Incident Plans
6.15	Land, Cultural and Environmental Management
6.15.1	Land Management
6.15.2	Resilience
6.15.3	Resistance
6.15.4	Restoration
6.15.5	Environmental Enhancement
6.15.6	Water Level Management Plans
6.15.7	Habitat Creation

THEMES AND MEASURES	
6.16	Asset Management and Maintenance (SAMPs)
6.16.1	System Asset Management Plans
6.16.2	Defence/Structure Management
6.16.3	Channel Maintenance
6.16.4	Culvert Maintenance
6.17	Studies, Assessments and Plans
6.17.1	Investigation
6.17.2	Risk Assessment
6.17.3	Strategy Plan
6.17.4	Local Property-level Flood Mitigation – Resilience
6.17.5	Local Property-level Flood Mitigation – Resilience
6.17.6	Pre-feasibility Studies, Feasibility Studies
6.17.7	Project Plans
6.17.8	Surface Water Management Plans (SWMP)
6.18	High Level Awareness and Engagement
6.18.1	Partnership Working
6.19	Monitoring
6.19.1	Erosion Monitoring
6.19.2	Habitats Monitoring
6.19.3	Topographical Survey
6.19.4	Aerial Photography

2.6.1 Local Strategy Development

In determining objectives and measures, Merthyr Tydfil CBC has worked with other Risk Management Authorities within its area (including Dŵr Cymru – Welsh Water and Environment Agency Wales) to realise the benefits of collaborative working, e.g. shared solutions and funding, and also to ensure that there is a shared vision and agreed outcomes.

In developing objectives and measures Merthyr Tydfil CBC has also considered the impacts of climate change to ensure that the measures are designed and are resilient to the changing climate. Sustainable development is a central core operating principle of the Welsh Government and has and will continue to be reflected through the work of the LLFA, in line with the statutory duty set out in Section 27 of the Act.

3 SEA Objectives, Baseline and Method

3.1 Overview

In general, the assessment has been undertaken with regard to the available guidance and advice outlined in section 3.1.

Welsh Government guidance is clear that:

‘LLFAs will need to ensure that their Local Strategy is proportionate to the risks identified; where the risks are low, the strategy should be simple and concise.’

In parallel, it is anticipated that this principle will apply to the scope and level of detail required for the SEA.

The potential for environmental effects resulting from the strategy is likely to arise from:

- The objectives for managing local flood risk; and
- The measures proposed to achieve these objectives

At this stage – given the current level of information available on local flood risks – the draft Local Strategy is only able to identify a suite of proposed objectives, with a range of potential measures that could be employed in their delivery.

However, it is not likely that measures proposed will actually be identified for implementation until the development of the Flood Risk Management Plans for ‘at risk’ areas (programmed to be completed by June 2015). Beyond identifying the LLFA area and those areas potentially at risk from the PFRA, the Local Strategy gives no indication of where activity or measures are likely to be employed.

The SEA has therefore concentrated on assessing the potential for effects arising from the Local Strategy objectives and the range of potential measures under consideration. The SEA results will flag potential environmental issues that will need to be addressed in the subsequent development of the Flood Risk Management Plans and the appraisals and/or implementation of the individual measures.

There is limited information on which measures will be implemented –and when or where; any appraisal of secondary, cumulative, synergistic, short, medium and long-term permanent and temporary effects would be –at best – speculative. Similarly, attributing a scale to these effects (to determine their significance) would probably be unrealistic. The SEA has therefore concentrated on identifying:

- potential negative effects and how these could be mitigated;
- potential environmental benefits and how these opportunities could realised;
- recommendations for improving the Local Strategy for environmental benefit; and

- recommending how decision-making processes in the next stages of Local Flood Risk Management should incorporate environmental considerations.

In summary of the methodology described in the sections below, the SEA is based on the following:

- Identifying environmental protection objectives set out elsewhere in policy or legislation;
- Identifying the current environmental character of the area and how it may change in the future; and using these to
- Distil the key environmental issues in the area that the Local Strategy will interact with; and
- Developing a set of SEA objectives in a framework, against which the Local Strategy is assessed against.

3.2 Identifying Other Relevant Plans and Programmes and Environmental Protection Objectives

The Local Strategy may be influenced in a range of ways by other plans and programmes, or by environmental protection objectives set out elsewhere in policy or legislation. Identifying and reviewing those plans, policies, programmes and objectives allows any inconsistencies or constraints for the Local Strategy to be addressed and shape the SEA framework.

Analysis of the relationship of the Local Strategy with other plans and environmental objectives helps to:

- Identify external factors that will influence the Strategy development
- Identify other environmental, social or economic objectives influencing the SEA process
- Determine whether policies or objectives in other plans and programmes may produce cumulative or synergistic effects in combination with the Local Strategy.

This review allows the Local Strategy to take advantage of any potential synergies and address any potential conflicts or constraints. This review has been undertaken and is reported on in Appendix B. The plans and programmes in the review have been classified in a hierarchy of influence – from international, national, sub-regional and local.

Those plans, programmes and objectives reviewed that are of direct relevance to flooding are already integral to the Local Strategy and its development. Key additional considerations of the review (in Appendix B) for the Local Strategy are to ensure that it:

- Aligns with the objectives and priorities of the Community Plan and Local Development Plans in the area;

- Contributes toward – and does not compromise – the objectives of the Water Framework Directive and Severn River Basin Management Plan;
- Considers climate change mitigation and adaptation in its development and implementation;
- Contributes toward protecting and improving local biodiversity;
- Protects the landscape and the historic environment;
- Considers the potential effects on (and opportunities for improving) public access to land;
- Safeguards water resource assets in the area;
- Is assessed for potential effects on internationally important wildlife sites.

3.3 Merthyr Tydfil Environmental Baseline

Collation of baseline information is required under SEA legislation; it is fundamental to provide a background evidence base for identifying environmental problems and opportunities in Merthyr Tydfil, and provides the basis for predicting and monitoring effects of the Local Strategy.

To consider how the developing Local Strategy may affect the environment, it is essential to understand the current environment characteristics of the area and how the environment is likely to change in the future. Given the focussed nature of the Local Strategy – to deal with surface water flooding in the area – the SEA has aimed to collate only relevant and sufficient data on the present and future state of the County Borough, to allow the adequate identification of potential effects of the Local Strategy.

Full details of the environmental baseline are provided in Appendix C. The baseline sought to identify targets and trends, while also summarising the key issues arising for particular environmental topics. A brief overall summary is provided in the paragraphs below.

Merthyr Tydfil is situated in the Heads of the Valleys Region and is the smallest local authority in Wales with an area of around 11,100 hectares. Approximately one fifth of the County Borough lies within the Brecon Beacons National Park to the north. The County Borough's neighbouring authorities are:

- Rhondda Cynon Taf County Borough Council to the west;
- Caerphilly County Borough Council to the east and south; and
- Powys County Council to the north.

Merthyr Tydfil has a population of approximately 59,000, of which approximately 44,000 reside in the main town of Merthyr Tydfil which functions as the main commercial, retail and service centre of the County Borough and the Heads of the Valleys Region. The town includes the administrative centre of the Council, the primary shopping areas, the majority of employment opportunities, a hospital and many other higher order services and facilities which serve surrounding settlements. The remainder of the population are distributed amongst eight interdependent settlements situated further south along the Taff and Taff Bargoed

river valleys. These settlements contain a range of lower order services and facilities serving local needs.

The Welsh Index of Multiple Deprivation (WIMD) 2011 takes information produced for local areas across different factors – including exposure to flood risk for example -which affect the lives of individuals and communities. WIMD brings this information together to paint a picture of relative deprivation across Wales. Merthyr Tydfil has 25% of its local areas in the 10% most deprived in Wales. Merthyr Tydfil has one of the poorest health profiles in Wales with a lower life expectancy than the national average for males and females.

The PFRA identified those areas at potential risk from local flood sources. There are an additional limited number of properties in the Local Strategy area that are at risk from flooding from main rivers.

The area will need to be prepared for climate changes predicted for Wales as a consequence of past and current greenhouse gas emissions. In summary, the expected trend is for:

- A generally warmer, wetter climate; with
- Less precipitation in summer and more in winter; and
- An increase in the frequency and intensity of storm events.

Merthyr Tydfil fulfils a key strategic role at the centre of the Heads of the Valleys region, benefitting from high levels of accessibility through its location at the intersection of the A470 (T) and A465 (T) strategic transport corridors in the north, and the A470 (T) and A472 strategic transport corridors in the south. The County Borough lies just 25 minutes north of Cardiff and the M4 corridor.

The County Borough comprises of a mixture of urban, semi-urban and rural communities living in a rich and varied environment containing exceptional wildlife habitats, historic landscapes and archaeological features. The steeply sloping valley sides with their high ridges and moorland vegetation define the landscape character of the area and provide an environmental and ecological context for the settlements of the County Borough.

More than two thirds of the Local Strategy area is semi-natural in character. It consists of a complex of landscape types including open moorland, common land, broad-leaved and coniferous woodlands, agriculturally productive land, semi-improved grassland, old industrial landscapes and reclaimed areas.

Merthyr Tydfil benefits from a range of environmental resources with a number of sites in the County Borough identified as having particular biodiversity/geodiversity importance. These include 1 Local Nature Reserve, 4 Sites of Special Scientific Interest and more than 60 Sites of Importance for Nature Conservation. There are no European protected sites (Special Areas of Conservation, Special Protection Areas or Ramsar Sites) within the County Borough. A significant proportion of the area comprises semi-natural Biodiversity Action Plan habitats, including broadleaved woodland, grassland, heathland and wetland. Other habitats such as conifer plantation, disused mineral workings/spoil and urban areas also contribute to local biodiversity.

The range of soil types varies across the area, but most are wet acidic soils with peats and clays. The slow permeability of these soils, combined with the steep

valley topography increase the risks of surface water flooding in periods of intense rainfall. The main water environment features of the area are the River Taff and its tributaries ((Taf Fechan, Nant Morlais and Taf Bargoed) and the drinking water reservoirs at the head of the catchment (Lwyn-on, Pentwyn and Pontsticill).

The natural basin at the head of the Taff valley contains an internationally recognised iron and coal industrial landscape of the 18th and 19th centuries. The area includes large ironworks, associated coal mining industry, waste tips power and transportation systems, terraced industrial housing, Cyfartha Castle house and gardens, and important related religious, literary and political associations. Across the County Borough there are two areas on the Register of Landscapes of Historic Interest, seven Conservation Areas, and over 200 Scheduled Monuments and Listed Buildings.

3.4 Key Environmental Issues and Opportunities

It is important to distil the key environmental issues, problems and opportunities relevant to the County Borough (and appropriate to the Local Strategy) from the collated information and consideration of the particular character of the area. These issues are considered to be priorities for consideration through the SEA and its framework objectives.

The following key sustainability issues are considered to be the environmental priorities for the the Local Strategy and SEA to consider, arising from the particular characteristics, pressures and opportunities currently affecting Merthyr Tydfil:

- Addressing local flood risk within the area and seeking opportunities to address flood risk from other sources and in collaboration with other risk partners;
- Reducing/managing flood risks as a contribution to reducing relatively high levels of multiple deprivation in the area compared to Wales as a whole;
- Seeking to improve mental and physical wellbeing of local people through encouraging access to and provision of formal and informal open space;
- Emphasise the safeguarding and enhancing the historic environment;
- Promoting sustainable management of the landscape, and protecting/enhancing existing landscapes;
- Protect recognised biodiversity/ geodiversity features and incorporate opportunities for habitat creation/enhancement;
- Ensures the protection and enhancement of the water environment;
- Promote the effective and sustainable use of land and soils; and
- Take account of predicted climate change and enable the County Borough to adapt to its consequences.

3.5 The SEA Framework

The SEA Framework provides a structure to describe, analyse and compare the environmental effects of the Local Strategy. The framework includes a number of objectives, assisted by some prompting questions.

These have been developed from the information collated during the review of relevant Plans and Programmes (Section 3.2), review of baseline information (Section 3.3) and identification of the key issues (Section 3.4). Consultation with the SEA consultation bodies has also influenced the SEA objectives.

The SEA objectives seek to address and progress the main environmental issues and opportunities identified as important in Merthyr Tydfil. The decision-aiding questions assist by clarifying the detail of the issues, improving objectivity, ensuring that the appraisal is relevant to local flood risk management

The SEA Directive requires that the effects of the Local Strategy on a number of environmental topics. Air Quality is unlikely to be affected by the Local Strategy and has therefore been scoped out of the framework and SEA. The SEA framework shows how the other environmental topics are progressed in which objective.

No.	SEA Objectives by SEA Directive topic area	Does the Local Strategy...?
Population and Human Health; Material Assets		
1	Address and reduce flood risk now and in the future	<ul style="list-style-type: none"> • Manage or reduce local flood risk to people, properties and critical infrastructure • Contribute to reducing flood risk from other sources • Collaborate with other risk partners
2	Improve health and wellbeing of local people	<ul style="list-style-type: none"> • Improve health and well-being through a reduction in exposure to flood risk • Provide opportunities for creating safe open spaces for public use • Constrain public access to existing accessible open space

No.	SEA Objectives by SEA Directive topic area	Does the Local Strategy...?
	Biodiversity (including flora and fauna)	
3	Protect recognised biodiversity/geodiversity features and enhance the diversity, extent and distribution of habitats and species	<ul style="list-style-type: none"> • Protect SSSIs, LNRs and SINC's • Prevent habitat fragmentation and improve connectivity • Create and enhance existing habitats • Discourage the spread of non-desirable species, e.g. Japanese knotweed, Himalayan Balsam
	Water	
4	Protect and enhance the water environment	<ul style="list-style-type: none"> • Safeguard water resource assets in the area • Compromise the achievement of good ecological status/potential of river and lake waterbodies • Seek opportunities to assist in achieving good ecological status/potential • Seek to reduce pollution from point and diffuse sources
	Cultural Heritage	
5	Safeguard and enhance the historic environment	<ul style="list-style-type: none"> • Protect buildings, structures and landscapes of significant interest
	Climatic Factors	
6	Help to minimise the cause and effects of climate change	<ul style="list-style-type: none"> • Reduce greenhouse gas emissions • Protect, enhance or create habitats acting as carbon sinks • Incorporate climate change adaptation measures

	Landscape	
7	Protect and enhance the countryside and landscape character	<ul style="list-style-type: none"> Promote the sustainable management of landscape, geology and ecology Protect and enhance existing landscapes
	Soils	
8	Promote sustainable and effective use of land and soils	<ul style="list-style-type: none"> Encourage control of pollution from contaminated land and mineral workings Conserve quality and extent of soil resources

3.6 Assessment of Objectives and Measures

Each of the Local Strategy objectives and potential measures were assessed against the SEA framework objectives. The framework table results indicate the following assessments in a matrix, each of which is clarified with notes and recommendations:

	Positive effect
0	No identified effect
	Negative effect
?	Effect Uncertain

3.7 Limitations, Data Gaps and Assumptions

Merthyr Tydfil CBC has no information currently available relating to future flooding other than that provided by the EAW. It is the intention to carry out electronic modelling within the Flood Risk Area and including other all other areas at risk of flooding with the Local Strategy area, as part of the preparation of Flood Hazard and Flood Risk Maps and the Flood Risk Management Plan.

There is therefore limited information on which measures will be implemented – and when - or their spatial reference; any appraisal of secondary, cumulative, synergistic, short, medium and long-term permanent and temporary effects would be –at best – speculative. Similarly, attributing a scale to these effects (to determine their significance) would probably be unrealistic.

4 Assessment of Local Strategy Objectives and Measures

4.1 Consideration of Alternatives

The development of the Local Strategy considered three high-level options for the management of flood risk. The three options are:

- **Do nothing** – where existing assets and ordinary watercourses are abandoned;
- **Maintain Current Flood Risk** – where existing assets and watercourses are maintained to keep pace with climate change so that there is no net increase in flood risk. Existing infrastructure is improved over time and all new development will need to take the effects of climate change into account; and
- **Reduce Flood Risk** – Take action to reduce the social, economic and environmental impact due to flooding.

A high-level comparison of these options is only possible at this stage; this is provided in the table on the following pages. However, MTCBC have concluded that the only realistic option is to set its high level strategy is to:

‘ Reduce Flood Risk in all the the areas identified as being subject to significant flood risk’

This conclusion has been taken in the context of:

- the statutory duties of MTCBC as the LLFA;
- WG guidelines on the production of Local Strategies; and
- the overarching objectives provided by the National Strategy for Flood and Coastal Erosion Risk Management.

Implementation of the Local Strategy (through Flood Risk management plans and delivery measures) in subsequent stages may allow consideration of options/alternatives with differing emphasis on delivery themes.

	High-level options and effects		
Objective			Risk
1- Address and reduce flood risk now and in the future	Increased exposure to flood risk from a combination of no management and increasing frequency/intensity of storm events	Maintains current risk levels into the future	Directly compatible option
2- Improve health and wellbeing of local people	Increased exposure to flood risk from a combination of no management and increasing frequency/intensity of storm events	No improvements to health and well being as existing risk maintained	Directly compatible option
3-Protect recognised biodiversity/geodiversity features and enhance the diversity, extent and distribution of habitats and species	Potential for both adverse and beneficial effects, e.g. abandonment of assets/ watercourses may lead to more natural systems in the long term, but leaves problem species (e.g. Japanese Knotweed) to spread	Little/no identified potential change to current baseline	Potential for both adverse and beneficial effects resulting from active management of flood risk
4-Protect and enhance the water environment	Potential for both adverse and beneficial effects, e.g. abandonment of assets/ watercourses may lead to more natural systems in the long term. No management of water quality issues resulting from legacy of extensive mineral workings	Little/no identified potential change to current baseline	Opportunities for managing watercourses and water quality for wider environmental benefit

	High-level options and effects		
SEA Objective			Risk
5-Safeguard and enhance the historic environment	Historic environment assets exposed to damage/deterioration through increased exposure to flood risk	Little/no identified potential change to current baseline	Potential for both adverse and beneficial effects resulting from active management of flood risk
6-Help to minimise the cause and effects of climate change	No adaptation/response to climate change	Maintains management to adapt to climate change	Full consideration of climate change adaptation
7-Protect and enhance the countryside and landscape character	No management that would protect character	Little/no identified potential change to current baseline	Potential for managing and promoting this objective
8-Promote sustainable and effective use of land and soils	No management of land contamination risks and subsequent effects	Little/no identified potential change to current baseline	Potential for managing and promoting this objective

4.2 Assessment of Local Strategy Objectives

The Local Strategy objectives have been considered and cross-checked with those developed for the SEA Framework. This cross-check identifies where there are:

- Local Strategy objectives that are likely to contribute to the delivery of wider environmental objectives;
- Uncertainties and potential tensions between the Local Strategy objectives;
- Clear conflicts that should be addressed.

The following table details the results of this assessment. The key points to note from the assessment are:

- As expected from a strategy to manage local flood risks, the Local Strategy objectives are anticipated to make positive contributions to reducing flood risk

and consequential environmental improvements that benefit the local population and human health (SEA objectives 1&2) directly through this reduced risk. Additional benefits could be realised by clarifying how opportunities for integrating public access improvements will be considered in appraisal and delivery;

- Local Strategy objectives 1-10, 12 and 13 give clear commitments to improving wider environmental conditions;
- Uncertainties around objective 11 (Endeavour to reduce the cost of management) result from how this will be applied and the potential for environmental effects. Reducing costs could lead to environmental benefits e.g. less intensive land management (requiring less resources, reducing chemical application and run-off) but may also lead to undesirable effects e.g. less management of invasive species such as Japanese Knotweed. Clarity could be provided around how this objective will be applied in relation to the other Local Strategy objectives and wider environmental issues;
- Local Strategy objective 16 ensures collaboration with other stakeholders and should realise benefits through sharing intelligence, research and best practice;
- Environmental effects of Local Strategy objectives 14, 15 and 17 are uncertain at this stage. These objectives are around delivering the next stages for local flood risk management planning and delivery. The provision of Flood Risk Management Plans for areas at risk (objective 14) will not – in itself – have environmental consequences; however, the management plans will specify what measures are likely to be required to address the flood risks. Subsequent decisions on how these are decided on, developed and constructed may have environmental consequences. These uncertainties can only be resolved through the next stages planning and with further information on local flood risks. However, the Local Strategy could at this stage clarify how the Flood Risk Management Plans, investment decisions and construction of physical measures will assess and address the potential for environmental effects in their development.

Local Strategy Objective	SEA Objective							
	1	2	3	4	5	6	7	8
1 Reduce distress by reducing the number of people exposed to the risk of flooding	+	+				+		
2 Reduce community disruption by reducing the number of residential and commercial properties affected by the risk of flooding	+	+				+		+
3 Reduce risk to life by reducing the number of people exposed to risk of flooding of significant depth and velocity	+	+				+		+
4 Reduce disruption to critical infrastructure or prepare plans to allow the operations to be maintained	+	+		+		+		
5 Protect and improve Sites of Special Scientific Interest (SSSIs) and Sites of Importance for Nature Conservation (SINCS)			+	+		+	+	+
6 Contribute to the delivery of Merthyr Tydfil Biodiversity Action Plan			+	+		+	+	+
7 Minimise damage to known historic assets					+			
8 Provide systems to give early warning of potential flooding to individuals and communities	+	+				+		
9 Provide efficient systems for the management and maintenance of surface assets	+							
10 Reduce economic damage	+					+		
11 Endeavour to reduce cost of management		+	?	?	?	?	?	?
12 Improve naturalness including the creation of natural channels and water bodies with minimal modifications			+	+		+	+	

Local Strategy Objective	SEA Objective							
	1	2	3	4	5	6	7	8
13 Protect and improve water quality				+		+		+
14 Provide Flood Risk management Plans for each area subject to flood risk	+	+	?	?	?	+	?	?
15 Ensure that measures are designed and constructed in a sustainable way	+		?	?	?	+	?	
16 Ensure that MTCBC works in partnership with all other Risk Partners and works collaboratively with adjacent Authorities	+					+		+
17 Ensure that investment decisions for the implementation of flood risk management schemes are made on a consistent, defensible basis and are subject to cost benefit analysis	+		?	?	?	+	?	?

4.3 Local Strategy Proposed Measures

As discussed in Chapter 3, the measures identified in the Local Strategy range from those already in place (e.g. for other reasons and duties) through to those that may never be required or employed only as a last resort.

For the avoidance of doubt, the environmental assessment of these measures is can only be generic at this stage as the Local Strategy does not determine which measures will be employed or in what location. The assessment is aimed at identifying the potential for environmental effects that should require further assessment as the Local Strategy is implemented.

The table on the subsequent pages reports on the assessment of each individual measure. This is followed by an overall table identifying and summarising effects against each SEA objective.

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations	
		1	2	3	4	5	6	7	8		
6.13	Development Planning and Adaption										
6.13.1	Sustainable and Strategic Development Planning	+	+	0	0	0	+	0	0	The LDP is an adopted plan required by planning legislation. The Local Strategy must provide a sound evidence base and objectives must inform and refine the LDP.	
6.13.2	Strategic Flood Risk Assessment (SFRA)/Strategic Flood Consequences Assessment (SFCA)	+	+	0	0	0	+	0	0	Assessments required and already completed for the adopted LDP. Future reviews of the LDP should be informed by the Local Strategy	
6.13.3	Water Cycle Strategies	+	+	+	+		+	+	+	Generally likely to have only positive environmental effects. However, decision to proceed with this measure should include consideration of what ‘added value’ it would bring over and above existing strategies in the area.	
6.13.4	Relocation	+	+	0	0		+	0	0	A last resort measure. If implemented it will remove people from areas of severe flood risk, but likely to cause stress to those people affected. Implementation may also abandon historic features e.g. listed buildings.	
6.13.5	Mineral and Waste Plans	+	+	0	+	0	0	0	+	Minerals and waste planning required and implemented through other legislation and the LDP. The Local Strategy must provide a sound evidence base and objectives must inform and refine the LDP and other strategic planning	

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.13.6	Sustainable Drainage (SuDS)	+	+	+	+	+	+	+	+	SuDS may provide a wide range of direct and indirect environmental benefits. As ‘Adopting and Approving’ body for SuDS, the LLFA could ensure that approval/adoption processes assess each scheme against the full range of potential benefits.
6.13.7	Contaminated Land	0	+	+	+	?	0	?	+	Control of development on – and remediation of – contamination on land is through the LDP and planning process. Measure contributes to the evidence base on land contamination in the area and will refine/prioritise implementation of other areas. Potential uncertainties and tensions around remediation of land and effects on biodiversity/landscape or historic value.

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.13.8	Scheduled Ancient Monuments and Historic Buildings	0	0	0	0	+	+	0	0	Measure assists in identifying and managing local flood risk to historic assets.
6.14	Flood forecasting, Warning and Response									
6.14.1	Flood Awareness	+	+							Suite of measures for improving forecasting, warning and awareness of flood events, aiming to reduce the consequences of flooding. No physical activities causing strategic environmental effects.
6.14.2	Flood Warning									
6.14.3	Flood Forecasting									
6.14.4	Emergency Response Plans	+	+	?	?	?	?	?	?	Emergency planning to implement in response to incidents and support communities during and post-incident. Environmental effects are uncertain, as they will depend on the incident and its location and the response. However response plans could be advised by the Local Strategy to consider environmental effects.
6.14.5	Community Flood Plans									
6.14.6	Multi-Agency Flood Plans									
6.14.7	Major Incident Plans									

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.13.8	Scheduled Ancient Monuments and Historic Buildings	0	0	0	0	+	+	0	0	Measure assists in identifying and managing local flood risk to historic assets.
6.15	Land, Cultural and Environmental Management									
6.15.1	Land Management	+	+	+	+	?	+	+	+	Potential for the Local Strategy to influence land management for flood risk benefit is recognised but accepted as limited. Effects will depend on scale, location and nature of implementation. Reduction of fertiliser and other changes in farming practice may be benign and bring benefits for water quality and biodiversity, but other measures may e.g. woodland planting may have effects on landscape character or historic features.
6.15.2	Resilience	0	0	+	+	?	+	?	+	Measures to assess risks, consequences of (and recovery from) flooding on land, prioritising SINC's and SSSI's. Implementation of physical measures – if required – may have consequences for landscape or historic character.

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.15.3	Resistance									
6.15.4	Restoration	+	?	+	+	?	+	?	+	Measures for restoration of mineral workings/spoil. Measure likely to bring general environmental benefits e.g. water quality improvements, but other effects will depend on location and nature of the restoration. There may be positive or negative effects on local biodiversity, landscape or historic character. The Local Strategy should ensure assessment of these effects is integral to the decision-making process. Opportunities for facilitating public access should also be considered.
6.15.5	Environmental Enhancement	0	?	+	+	0	+	+	+	General environmental benefits arising from this measure. Could be improved by consideration of opportunities for facilitating public access as an environmental enhancement.
6.15.6	Water Level Management Plans	+	+	0	+	0	0	0	0	Measure surveys and maintains database of water bodies to assist in emergency planning and statutory requirements
6.15.7	Habitat Creation	+	+	+	+	?	+	+	+	Effects will depend on scale, location and nature of specific measures. Potential for both positive and negative effects on biodiversity, landscape character or historic features.

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.16	Asset Management and Maintenance (SAMPs)									
6.16.1	System Asset Management Plans	0	0	0	0	0	0	0	0	An asset management database already in use with no expected environmental effects
6.16.2	Defence/Structure Management	+	+	?	?	?	?	0	?	Environmental effects uncertain – dependent on scale, location and nature of management. Ongoing management plans for these assets could consider environmental issues/aspects in their implementation.
6.16.3	Channel Maintenance	+	+	?	?	?	?	?	?	Environmental effects uncertain – dependent on scale, location and nature of management. Ongoing management plans for these assets could consider environmental issues/aspects in their implementation.

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.16.4	Culvert Maintenance	+	+	?	?	?	?	?	?	Environmental effects uncertain – dependent on scale, location and nature of management. Ongoing management plans for these assets could consider environmental issues/aspects in their implementation. Where culverts require replacing, consideration should be given to whether a culvert is still required, e.g. could it be replaced with an open channel, with opportunities for environmental enhancement?
6.17	Studies, Assessments and Plans									
6.17.1	Investigation	0	0	0	0	0	0	0	0	Survey and assessment with no potential for strategic environmental effects.
6.17.2	Risk Assessment	0	0	0	0	0	0	0	0	Assessment of flood risk – no potential for strategic environmental effects.
6.17.3	Strategy Plan	+	+	?	?	?	?	?	?	The Local Strategy, providing the framework for the preparation of Flood Risk Management Plans. Overall uncertainty over environmental effects; prioritisation of measures and preparation of Management Plans should clarify how environmental issues are to be integrated.
6.17.4	Local Property-level Flood Mitigation – Resilience	+	+	0	0	?	0	0	0	Building improvements to individual properties. Implementation of measures should identify if properties are listed buildings or have any historic value/features that may be affected.
6.17.5	Local Property-level Flood Mitigation – Resistance									

Ref	Local Strategy Measures	SEA Objectives								Notes and Recommendations
		1	2	3	4	5	6	7	8	
6.17.6	Pre-feasibility Studies, Feasibility Studies	0	0	0	0	0	0	0	0	Plans and studies that will not directly affect the environment. However their preparation and review processes should incorporate assessment of environmental issues and benefits.
6.17.7	Project Plans									
6.17.8	Surface Water Management Plans (SWMP)									
6.18	High Level Awareness and Engagement									
6.18.1	Partnership Working	0	0	0	0	0	0	0	0	Good working practice with no potential for environmental effects.
6.19	Monitoring									
6.19.1	Erosion Monitoring	0	0	0	0	0	0	0	0	Monitoring and survey activities only, with no potential for environmental effects.
6.19.2	Habitats Monitoring									
6.19.3	Topographical Survey									
6.19.4	Aerial Photography									

No.	SEA objective	Summary conclusion of effects
1	Address and reduce flood risk now and in the future	As expected of a strategy for managing flood risk, none of the measures are considered to have negative effects on this objective.
2	Improve health and wellbeing of local people	<p>Broadly similar to 1, but recognising:</p> <ul style="list-style-type: none"> the potential stress effects of relocation on people affected; and uncertainties over how some measures may affect public access to open space
3	Protect recognised biodiversity/geodiversity features and enhance the diversity, extent and distribution of habitats and species	<p>Positive effects from some topic-specific measures and benefits from wider environmental improvement.</p> <p>Uncertainties largely from a dependency on the location, nature and scale of implementation measures</p> <p>Some potential for negative effects arising from how land is managed/alterd for flood risk reasons if current interest features are not considered</p>
4	Protect and enhance the water environment	No negative effects identified. Uncertainties largely from a dependency on the location, nature and scale of implementation measures
5	Safeguard and enhance the historic environment	<p>Relocation measure may expose/abandon historic buildings and structures to increased flood risk.</p> <p>Uncertainties largely from a dependency on the location, nature and scale of implementation measures.</p>
6	Help to minimise the cause and effects of climate change	No negative effects identified. Uncertainties largely from a dependency on the location, nature and scale of implementation measures.
7	Protect and enhance the countryside and landscape character	<p>Uncertainties largely from a dependency on the location, nature and scale of implementation measures.</p> <p>Some potential for negative effects arising from how land is managed or altered for flood risk reasons if current interest features are not considered</p>
8	Promote sustainable and effective use of land and soils	No negative effects identified. Uncertainties largely from a dependency on the location, nature and scale of implementation measures.

5 Conclusions and Recommendations

5.1 Recommendations and Mitigation

The conclusions of the SEA of the Local Strategy are generally positive. Aligning with the National Strategy and relevant guidance, there has been a clear consideration to integrate environmental issues and opportunities into the objectives of the Local Strategy. Many of the proposed measures have the potential for direct and indirect environmental benefits. However, the SEA makes a number of recommendations to avoid, reduce or otherwise mitigate the potential for negative effects, and ensure the potential for positive opportunities are considered.

The recommendations are that the Local Strategy should:

- Provide clarification on how opportunities for integrating public access improvements will be considered in appraisal and delivery;
- Ensure that objective 10 (Endeavour to reduce the cost of management) is applied in the context of achieving all other objectives and considers the environmental consequences of management changes;
- Be clear that the processes for developing the next stages of flood risk planning, appraisals, implementation and construction of measures will address the potential for environmental effects;
- Use the results of the SEA as an initial guide to the above processes

Finally, it is unclear at this stage whether subsequent flood risk planning/strategy activities may require SEA. MTCBC should consider the potential for the Flood Risk Management Plans to be a 'plan or programme' requiring SEA under the SEA Regulations.

5.2 Monitoring Recommendations

The SEA Regulations require MTCBC to monitor the significant environmental effects of the implementation of the plan – with the aim of identifying unforeseen adverse effects at an early stage and to allow appropriate remedial action to be taken. The Environmental Report is required to include a 'description of the measures envisaged concerning monitoring' in this regard. These monitoring measures may be those implemented specifically for the monitoring of the Local Strategy or include arrangements already established for other reasons.

Merthyr Tydfil's Local Development Plan (LDP) -adopted May 2011- was subject to a Sustainability Appraisal (incorporating SEA). Welsh Government also require local planning authorities to produce Annual Monitoring Reports to track progress of LDP implementation.

In this context, the Local Strategy/SEA has considered the requirements for monitoring of the Local Strategy with the monitoring already proposed for monitoring the LDP. The table below outlines the monitoring proposals for the Local Strategy; the table identifies meaningful indicators of the SEA

environmental objectives and indicates how these are to be collated/collected. The monitoring proposals will be refined/ finalised as the Local Strategy is finalised.

No.	SEA objective	Proposed Indicator	Information Sources	Update/ Frequency
1	Address and reduce flood risk now and in the future NB - SEA objective delivery is the core purpose of the Local Strategy. Indicators to be developed by the Local Strategy.	Amount of development within C1 and C2 flood zones as defined by TAN 15.	LDP Monitoring MTCBC	Annual
		Percentage of new developments with Sustainable Drainage Systems (SuDS)	LDP Monitoring MTCBC	Annual
		Number of properties at risk of flooding – all sources	Local Strategy Risk Partners	Annual
		Number of flood incidents – all sources	Local Strategy Risk Partners	Annual
2	Improve health and wellbeing of local people	Proportion of the populations living in wards that rank amongst the 100 most deprived in Wales	Wales Index of Multiple Deprivation	3 years (next update 2014)
		Number of properties at risk of flooding – all sources	Local Strategy Risk Partners	Annual
		Number of households within 400m of parks/open space	LDP monitoring MTCBC	Annual
3	Protect recognised biodiversity/geodiversity features and enhance the diversity, extent and distribution of habitats and species	Total area of Local Biodiversity Action Plan (LBAP) Priority habitats	LDP Monitoring MTCBC	5-10 years
		Percentage change in total areas of SINCS	LDP Monitoring MTCBC	5 years

No.	SEA objective	Proposed Indicator	Information Sources	Update/ Frequency
		Favourable condition status of SSSIs	LDP Monitoring MTCBC	5 years
		Total area affected by non-native invasive species	MTCBC	5 years
		Area of successfully eradicated non-native species	LDP Monitoring	Annual
		Areas of habitat lost/gained/enhanced through Local Strategy implementation	Local Strategy MTCBC	3 years
		Changes in populations of selected local characteristic species in the LBAP	LDP monitoring MTCBC	Annual
		Length of linear habitats created/ maintained or enhanced, which increase the connectivity of biodiversity habitats	LDP monitoring MTCBC	Annual
4	Protect and enhance the water environment	WFD waterbodies at 'good ecological status/potential'	Environment Agency	6 years
		Number of projects that: create/enhance naturalness of channels/waterbodies incorporate water quality improvement measures	Local Strategy MTCBC	3 years
5	Safeguard and enhance the historic environment	Proportion of historic environment assets (Scheduled Monuments, Listed Buildings,	Local Strategy MTCBC	3 years

No.	SEA objective	Proposed Indicator	Information Sources	Update/ Frequency
		Conservation Areas) at risk of flooding		
		Number of historic environment assets adversely affected by Local Strategy implementation	Local Strategy MTCBC	3 years
		Number of projects affecting/enhancing Historic landscapes/Registered Parks and Gardens	Local Strategy MTCBC	3 years
6	Help to minimise the cause and effects of climate change	Number of projects incorporating consideration of carbon emissions and adaptation measures	Local Strategy MTCBC	3 Years
7	Protect and enhance the countryside and landscape character	Number of projects affecting/enhancing nationally/locally important landscapes	Local Strategy MTCBC	3 years
8	Promote sustainable and effective use of land and soils	Percentage of contaminated land remediated	LDP Monitoring MTCBC	Annual
		Extent of non-permeable surfaces	LDP Monitoring MTCBC	Annual

5.3 Habitats Regulations Appraisal

In Wales, the Conservation of Habitats and Species Regulations⁵ (referred to as the ‘Habitats Regulations’ in this report), implements the EU ‘Habitats Directive’ (Directive (92/43/EEC) on the Conservation of natural habitats and of wild flora and fauna) and certain elements of the ‘Birds Directive’ (2009/147/EC). This legislation provides the legal framework for the protection of habitats and species of European importance, identifying a network of protected sites.

The protected sites comprise Special Areas of Conservation (SAC) and Special Protection Areas (SPA). The Habitats Regulations are also applied to candidate SACs, potential Special Protection Areas (pSPA) and Ramsar sites (designated under the 1971 Ramsar Convention for their internationally important wetlands). All of these sites are referred to collectively in this report as ‘European sites’.

Regulation 9(5) of the Habitats Regulations requires that a ‘competent authority’ must consider the requirements of Habitats Directive in exercising any of its functions. Article 6(3) of the Habitats Directive defines the requirements for assessment of plans and projects potentially affecting European sites. This requires that:

‘a competent authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project which is likely to have a significant effect on a European site, and is not directly connected with or necessary to the management of that site, must make an Appropriate Assessment of the implications for that site in view of that site’s conservation objectives’

The Local Strategy is likely to set the strategic framework to influence individual flood risk projects, and these could potentially result in significant effects on European sites. It is therefore considered that the Local Strategy does fit within the definitions of a ‘plan’ as defined by the Habitats Directive.

A Habitats Regulations Appraisal (HRA) has been undertaken on the draft Local Strategy and included with this SEA Report in Appendix D. In summary, the HRA concludes that the draft Local Strategy is unlikely to have a significant effect on any European Site, either alone or in combination with other plans or projects.

⁵ The Conservation of Habitats and Species Regulations 2010, SI 490, 2010)

Appendix A

SEA Scoping Consultation Responses

SEA Scoping Consultation Responses		
Cadw (9 August 2012)		
Scoping Report Reference	Comment	Response/Action
2.3	<p>The objectives in the table have been replicated from the guidance but are only examples and there should be one for the historic environment. Cadw would suggest:</p> <ul style="list-style-type: none"> • Minimise damage to known historic assets <p>This would not be limited to designated assets and would encompass currently undesignated assets which represent an important component of the historic environment. It would also enable the landscapes register to be taken into account. Any assets would then need to be mapped before making the flood risk assessments and modify any measures taken to achieve this objective.</p>	Local Strategy amended to include objective
4.2 Review of Plans, Policies and Programmes (p.9)	<p>A number of the national (Welsh) Plans, Policies and Programmes (PPP) are overarching and not just relevant to one environmental topic as shown in the report. The same applies to some of the local PPPs, for example Local Development Plans (LDP). It might be better to show them in the usual hierarchy of plans rather than try and match them to a single topic. Those national policies relevant to the historic environment include in particular Planning Policy Wales, Environment Strategy for Wales and the LDPs are also relevant. In the Cultural Heritage section Cadw suggest adding 'Merthyr Tydfil Built Heritage Strategy (2008)' as this has been adopted by Merthyr Tydfil County Borough Council.</p>	PPP rearranged. National policies relevant to historic environment noted. Merthyr Tydfil Built Heritage Strategy reviewed within the PPP.
4.3 Baseline Environmental Information (p.13)	<p>Cultural Heritage - Historic Wales</p> <p>Cadw suggest amending the second paragraph to read: Glamorgan Gwent and Clwyd Powys Archaeological Trusts' Historic Environment Records. Cadw GIS datasets for Scheduled Monuments, Listed Buildings and Registered Historic Landscapes Parks and Gardens. Reference could also be made to data held by Merthyr Tydfil County Borough Council and Brecon Beacons National Park Authority on conservation areas.</p>	Noted and considered within baseline data review.

SEA Scoping Consultation Responses		
Countryside Council for Wales (13 August 2012)		
Scoping Report Reference	Comment	Response/Action
General	We recognise that this will be the first time that such a Strategy has been produced for the County Borough. Nevertheless, we have significant concerns about the quality of this Scoping Report which currently does not include much of the detailed content that would be expected at this stage of the SEA process. Some of the fundamental components of a Scoping Report, such as baseline environmental data, identification of existing environmental problems of relevance to the Plan and a proposed methodology including a Framework with draft objectives, are missing. As such, it makes a detailed Scoping response from CCW difficult to provide.	Components identified now incorporated within the Environment Report.
General	We are also concerned that there is no recognition within the document of the particular type of flooding that will affect Merthyr Tydfil, no identification of the factors that exacerbate this kind of flood risk and no discussion about how to reduce this type of flooding. We think it imperative that consideration is given to the distinction between flood risk and flood hazard as the SEA and Strategy progress. In seeking to reduce flood risk, it is possible to increase the hazard, for example to people and property. The SEA process could and should play a vital role in clarifying the difference between risk and hazard and in helping decision-makers and communities to understand and distinguish between the potential effects of different flood risk management options in order to make informed decisions.	Addressed in the Local Strategy
2.0 The Local Flood Risk Strategy	We welcome this section as a useful summary of what is required in the Local Flood Risk Management Strategy.	Noted.
2.4 Spatial Scope and Programme	We welcome this reference to the importance of managing flood risk across administrative boundaries and the intention to work collaboratively with other Lead Local Flood Authorities. It is important that flooding is considered at a catchment scale and collaboration with neighbouring Authorities is vital.	Noted.
3.1 Requirements and Guidance for SEA	Reference is made here to the Environment Agency's guidance on 'SEA and Climate Change'. This guidance does not cover the climate change/flooding issues prevalent in a short, steep catchment area such as Merthyr Tydfil. We recommend that you additionally refer to CCW's SEA Topic Guidance for Practitioners, which can be found on CCW's website at:- http://www.ccw.gov.uk/landscape--wildlife/managing-land-and-sea/environmentalassessment/strategic-environmental-assess.aspx?lang=en	Noted and referred to in the SEA process.

SEA Scoping Consultation Responses		
Countryside Council for Wales (13 August 2012)		
Scoping Report Reference	Comment	Response/Action
4.0 SEA Scoping	The guidance used in preparation of this Scoping Report – ‘ <i>A Practical Guide to the Strategic Environmental Assessment Directive</i> ’, ODPM, 2005 – clearly sets out in sections 5.A.1 to 5.A.18 what is expected at this stage of the SEA process and what information should be provided to the consultation bodies during consultation. A Scoping Report should contain baseline environmental data and the identification of existing environmental problems of relevance to the Plan. There should be a proposed methodology for the assessment, including a Framework with draft objectives, as well as at least an outline of the alternatives or options to the proposals put forward in the Plan. A clear indication of what the likely significant effects are and an outline of the content of the Environment Report would also be expected. All of these are missing from this Scoping Report.	All elements of assessment not included within the Scoping Report now present in the Environment Report for further consultation
4.1 Environmental Topics	The environmental topic ‘biodiversity’ should also include reference to geodiversity. We agree with the decision to scope the topic ‘Air Quality’ out of further SEA assessment with respect to this particular Strategy	Now referenced Air Quality scoped out
4.2 Review of Plans, Policies and Programmes	We welcome the reference to a review of Plans, Policies and Programmes. A thorough review of Plans, Policies and Programmes is an essential part of the SEA process in order to help develop the assessment Framework. From the small amount of information here in this section, it is unclear whether this review has yet taken place.	PPP review complete and included in Annex B.
4.2 Review of Plans, Policies and Programmes	While we welcome the identification of some key national, regional and local Plans, we would recommend widening the scope to include International, European and UK Plans and Policies too. We suggest that the following should also be considered (please refer to CCW’s ‘SEA Topic Guidance for Practitioners’ for a more complete list:- International Ramsar Convention on Wetlands of International Importance especially as wildfowl habitat (1971) Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979) Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) The Convention on Biological Diversity, Rio de Janeiro (1992)	Noted and referenced in the PPP.

SEA Scoping Consultation Responses		
Countryside Council for Wales (13 August 2012)		
Scoping Report Reference	Comment	Response/Action
	<p>EU Directive on the Conservation of Wild Birds (79/409/EEC)</p> <p>EU Habitats Directive (92/43/EEC)</p> <p>EU Biodiversity Strategy (EU, 1998)</p> <p>European Landscape Convention</p> <p>World Heritage Convention</p> <p>National</p> <p>Countryside Rights of Way Act (2000)</p> <p>Future Biodiversity Action in Wales, The Wales Biodiversity Group (May 2002)</p> <p>Woodland Trust – Space for Nature (2002)</p> <p>Woodlands for Wales (Forestry Commission, 2009)</p> <p>Register of Landscapes of Historic Interest</p> <p>Relevant Water Resources Management Plan</p> <p>Regional</p> <p>Regional Transport Plan</p> <p>Regional Waste Plan</p>	
4.3 Baseline Environmental Information	<p>In CCW's opinion, no baseline environmental information is presented here. Instead a list of potential sources of information is presented. Baseline environmental information is vital in providing the basis for predicting and monitoring environmental effects and helping to identify issues and alternatives for dealing with those issues. Aspects of baseline information to be considered are contained within Annex 1 of the SEA Directive. Sections 5.A.5 and 5.A.9 of '<i>A Practical Guide to the Strategic Environmental Assessment Directive</i>', ODPM, 2005, will also be informative.</p> <p>At the very least, this section should include:-</p> <ul style="list-style-type: none"> • Identification of rivers/watercourses within the Plan area with identification of flood risk • Identification of essential public infrastructure and housing in relation to flood risk • Identification of designated biodiversity sites and a description of biodiversity 'challenges' • Identification of differing soil types and contaminated land within the County Borough • Identification of water-related infrastructure (abstractions, discharges, sewage treatment works) • There should be a clear description of the particular nature of Merthyr Tydfil's flooding issues and the factors that exacerbate flood risk <p>Identification of designations relating to landscape and cultural/historic heritage</p> <p>For those sources of data that are identified, we would add the Register of Landscapes of Historic Interest to the Landscape topic.</p>	<p>Baseline information present in Annex C of the Environment Report.</p> <p>However, further strategy work is required to identify what features are at risk from local flood sources</p>

SEA Scoping Consultation Responses		
Countryside Council for Wales (13 August 2012)		
Scoping Report Reference	Comment	Response/Action
4.4 Habitats Regulations Assessment	<p>We welcome and support the intention to undertake a Habitats Regulations Assessment of the LFRM Strategy. However, in CCW's opinion, it is not best practice for the HRA process to be reported on within the SEA Environment Report. The HRA process needs to be undertaken in accordance with the process set out in the Annex to TAN 5 and in accordance with CCW guidance on the HRA of plans which can be found at:-</p> <p>http://www.ccw.gov.uk/landscape--wildlife/managing-land-and-sea/environmentalassessment/habitats-regulations-assessmen.aspx?lang=en</p>	<p>HRA process is recognised as discrete and stand-alone in the SEA Scoping Report. HRA screening conclusions referred to in Environment Report and HRA Report included as a stand-alone Annex (D).</p>

SEA Scoping Consultation Responses		
Environment Agency Wales (received 16/08/12)		
ODPM SEA Guidance reference	Comment	Response/Action
1: Identifying other relevant Policies, Plans and Programmes, and SA objectives.	<p>This is covered in Section 4.2 of the report where we recommend that you consider inclusion and review of other plans and programmes at International / European/National and Local levels. The following list does not appear to be included but will be relevant to your SEA Local Flood Risk Management Strategy (LFRMS) and should be considered by your Authority/Consultant (Arup);</p> <p>International Plans & Programmes EU Floods Directive – Directive 2007/60/EC EU Water Framework Directive – Directive 2000/60/EC UN Framework Convention on Climate Change</p> <p>National Plans & Programmes</p> <ul style="list-style-type: none"> • Flood & Water Management Act 2010 • Flood Risk Regulations 2009 • Water Resources Act 1991 • Land Drainage Act 1994 • Environment Act 1995 • Welsh Government National Strategy for Flood and Coastal Erosion Risk Management November 2011; Summary April 2012 • Welsh Government Local Flood Risk Management Strategies; Local Strategy November 2011 • Welsh Government Adapting to Climate Change; Guidance for Flood & Coastal Management Authorities in Wales December 2011 • Welsh Government Flood Risk Management; Community Engagement Toolkit October 2011 • Welsh Government Guidance for the Transfer of Ordinary Watercourse Regulatory Powers for Lead Local Flood Authorities in Wales (including the Appendices) February 2012 • Environment Agency's National Coastal Erosion Risk Mapping Project • Dwr Cymru/Welsh Water (DCWW) Water Resources Management Plan October 2011 • Current Planning Appraisal Guidance (PAG) Guidance <ul style="list-style-type: none"> ▪ Climate Change Act 2008 ▪ Strategic Environmental Assessment and Climatic Change for Practitioners. • CIRIA C687 Planning for SuDS • CIRIA C690 Guidance for Water Cycle Management for New Developments 	<p>Reviewed and consider appropriately. Many of the identified plans and guidance are directly relevant to the Local Strategy rather than the SEA.</p> <p>The National Coastal Erosion Risk mapping project is not relevant to the Merthyr Area</p>

SEA Scoping Consultation Responses		
Environment Agency Wales (received 16/08/12)		
ODPM SEA Guidance reference	Comment	Response/Action
	<ul style="list-style-type: none"> CIRIA C697 The SuDS Manual <p>Local Plans & Programmes</p> <ul style="list-style-type: none"> Preliminary Flood Risk Assessment (PFRA); Caerphilly CBC, Rhondda Cynon Taff CBC, Powys CBC Other relevant documents including local studies/modelling work 	
	<p>We also note and welcome the reference to the objectives as per the National Strategy for Flood and Coastal Erosion Risk Management in Wales (November 2011).</p> <p>Within the Table in Section 4.2 under the heading Soil and Land-use, it is stated that “no topic specific plans identified”. We recommend that as your Authority have a Contaminated Land Inspection Strategy, this is referred to as it may provide useful information on potential sources of pollution (as per the “Water” section of the other Table shown in Section 4.1).</p>	<p>Noted</p> <p>Inspection Strategy referenced.</p>
<p>Task A2: Collecting baseline information Section 4.3 –</p>	<p>There is no analysis of available baseline data within the Report. This is a significant omission. Without this, it is not possible to identify the environmental issues / problems within the Local Authority area and therefore set appropriate objectives for the SEA.</p> <p>As a point of detail, under the Population and Human Health topic, we suggest including the PFRA data from neighbouring Authorities (ref. Section 2.4 of the Report).</p>	<p>Baseline data now included in Annex C and informs the SEA objectives</p> <p>MTCBC are consulting adjacent LLFAs on interactions between areas</p>
<p>Task A3 Environmental Issues and Problems Section 4.1 –</p>	<p>We note that environmental topics have been defined for consideration in the Environmental Report. However, these topics and the notes made on their Relevance to the Local Strategy are entirely generic in nature. No environmental issues / problems have been identified specific to the Local Authority area. This is an omission, which should be corrected.</p> <p>Also, with regards to the notes on Relevance to the Local Strategy, under the topic Population and Human Health, we question why the only reference is to access during flood events. The relevance is far more wider reaching and should recognise the potential illness, injury, risk to life, stress and anxiety associated with flood events.</p>	<p>Environmental issues identified.</p> <p>Noted and incorporated into assessment and directly in the Local Strategy.</p>

SEA Scoping Consultation Responses		
Environment Agency Wales (received 16/08/12)		
ODPM SEA Guidance reference	Comment	Response/Action
Task A4 Developing the SA Framework	Doesn't appear to be clear in this report – there is no analysis of baseline data and no environmental problems identified (as per comments above), there are also no objectives set for the SEA and no monitoring indicators or targets. We are concerned that without these fundamentals, it will be very difficult to produce a sound Environmental Report and properly assess the likely significant effects of the LFRMS on the environment. These omissions should be addressed before work progresses to the Environmental Report.	Framework developed and identified in the Environment Report. However, assessment of effects is limited and proportionate to the Local Strategy. Refer to Chapter 3 of the Environment Report.

SEA Scoping Consultation Responses		
Environment Agency Wales (received 16/08/12)		
ODPM SEA Guidance reference	Comment	Response/Action
1: Identifying other relevant Policies, Plans and Programmes, and SA objectives.	<p>This is covered in Section 4.2 of the report where we recommend that you consider inclusion and review of other plans and programmes at International / European/National and Local levels. The following list does not appear to be included but will be relevant to your SEA Local Flood Risk Management Strategy (LFRMS) and should be considered by your Authority/Consultant (Arup);</p> <p>International Plans & Programmes EU Floods Directive – Directive 2007/60/EC EU Water Framework Directive – Directive 2000/60/EC UN Framework Convention on Climate Change</p> <p>National Plans & Programmes</p> <ul style="list-style-type: none"> • Flood & Water Management Act 2010 • Flood Risk Regulations 2009 • Water Resources Act 1991 • Land Drainage Act 1994 • Environment Act 1995 • Welsh Government National Strategy for Flood and Coastal Erosion Risk Management November 2011; Summary April 2012 • Welsh Government Local Flood Risk Management Strategies; Local Strategy November 2011 • Welsh Government Adapting to Climate Change; Guidance for Flood & Coastal Management Authorities in Wales December 2011 • Welsh Government Flood Risk Management; Community Engagement Toolkit October 2011 • Welsh Government Guidance for the Transfer of Ordinary Watercourse Regulatory Powers for Lead Local Flood Authorities in Wales (including the Appendices) February 2012 • Environment Agency's National Coastal Erosion Risk Mapping Project • Dwr Cymru/Welsh Water (DCWW) Water Resources Management Plan October 2011 • Current Planning Appraisal Guidance (PAG) Guidance <ul style="list-style-type: none"> ▪ Climate Change Act 2008 ▪ Strategic Environmental Assessment and Climatic Change for Practitioners. • CIRIA C687 Planning for SuDS • CIRIA C690 Guidance for Water Cycle Management for New Developments 	<p>Reviewed and consider appropriately. Many of the identified plans and guidance are directly relevant to the Local Strategy rather than the SEA.</p> <p>The National Coastal Erosion Risk mapping project is not relevant to the Merthyr Area</p>

SEA Scoping Consultation Responses		
Environment Agency Wales (received 16/08/12)		
ODPM SEA Guidance reference	Comment	Response/Action
	<p>We also note and welcome the reference to the objectives as per the National Strategy for Flood and Coastal Erosion Risk Management in Wales (November 2011).</p> <p>Within the Table in Section 4.2 under the heading Soil and Land-use, it is stated that “no topic specific plans identified”. We recommend that as your Authority have a Contaminated Land Inspection Strategy, this is referred to as it may provide useful information on potential sources of pollution (as per the “Water” section of the other Table shown in Section 4.1).</p>	
Task A2: Collecting baseline information Section 4.3 –	<p>There is no analysis of available baseline data within the Report. This is a significant omission. Without this, it is not possible to identify the environmental issues / problems within the Local Authority area and therefore set appropriate objectives for the SEA.</p> <p>As a point of detail, under the Population and Human Health topic, we suggest including the PFRA data from neighbouring Authorities (ref. Section 2.4 of the Report).</p>	<p>Baseline data now included in Annex C and informs the SEA objectives</p> <p>MTCBC are consulting adjacent LLFAs on interactions between areas</p>
Task A3 Environmental Issues and Problems Section 4.1 –	<p>We note that environmental topics have been defined for consideration in the Environmental Report. However, these topics and the notes made on their Relevance to the Local Strategy are entirely generic in nature. No environmental issues / problems have been identified specific to the Local Authority area. This is an omission, which should be corrected.</p> <p>Also, with regards to the notes on Relevance to the Local Strategy, under the topic Population and Human Health, we question why the only reference is to access during flood events. The relevance is far more wider reaching and should recognise the potential illness, injury, risk to life, stress and anxiety associated with flood events.</p>	<p>Environmental issues identified.</p> <p>Noted and incorporated into assessment and directly in the Local Strategy.</p>

SEA Scoping Consultation Responses		
Environment Agency Wales (received 16/08/12)		
ODPM SEA Guidance reference	Comment	Response/Action
Task A4 Developing the SA Framework	Doesn't appear to be clear in this report – there is no analysis of baseline data and no environmental problems identified (as per comments above), there are also no objectives set for the SEA and no monitoring indicators or targets. We are concerned that without these fundamentals, it will be very difficult to produce a sound Environmental Report and properly assess the likely significant effects of the LFRMS on the environment. These omissions should be addressed before work progresses to the Environmental Report.	Framework developed and identified in the Environment Report. However, assessment of effects is limited and proportionate to the Local Strategy. Refer to Chapter 3 of the Environment Report.

Appendix B

Review of Plans and Programmes

International Plans and Programmes
EU Floods Directive – Directive 2007/60/EC on the assessment and management of flood risks (2007)
EU Water Framework Directive - Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (2000)
UN Framework Convention on Climate Change
Ramsar Convention on Wetlands of International Importance especially as wildfowl habitat (1971)
Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979)
Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)
EU Habitats Directive (92/43/EEC)
The Convention on Biological Diversity, Rio de Janeiro (1992)
EU Directive on the Conservation of Wild Birds (79/409/EEC)
EU Habitats Directive (92/43/EEC)
EU Biodiversity Strategy (EU, 1998)
European Landscape Convention
World Heritage Convention
National (UK and Wales) Plans and Programmes
Flood and Water Management Act (2010)
Flood Risk Regulations (2009)
Environment Act (1995)
Climate Change Act (2008)
Countryside and Rights of Way Act (2000)
Wales Biodiversity Framework (2010)
Woodland Trust – Space for Nature (2002)
Woodlands for Wales (Forestry Commission (2009)
Planning Policy Wales, Edition 4 (2011)
Welsh Government: National Strategy for Flood and Coastal Erosion Risk Management in Wales (2011)
Welsh Government: Local Flood Risk Management Strategies (2011)
Welsh Government. Adapting to Climate Change: Guidance for Flood and Coastal Management Authorities in Wales (2011)
Welsh Government. Flood Risk Management: Community Engagement Toolkit (2011)
Welsh Government. Guidance for the Transfer of Ordinary Watercourse Regulatory Powers for Lead Local Flood Authorities in Wales (2012)
Dwr Cymru Welsh Water . Water Resources Management Plan (2011)
Register of Landscapes of Historic Interest in Wales
Technical Advice Note (TAN) 15: Development and Flood Risk (2004)
Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)
Conservation of Habitats and Species Regulations (2010)
Technical Advice Note (TAN) 12: Design (2009)
Technical Advice Note (TAN) 22: Planning for Sustainable Buildings (2011)
Environment Strategy for Wales (2006)
Cadw Priorities 2011-16 (2011)
EA Policy: Sustainable Urban Drainage Systems (2002)
Land Drainage Act (1991, as amended)
Civil Contingencies Act (2004)
Water Act (2003)
Sub-Regional Plans and Programmes
Environment Agency Wales: Taff and Ely Catchment Flood Management Plan (2010)
Environment Agency: Severn River Basin Management Plan (2009)

The Taff and Ely Catchment Abstraction Management Strategy (2006, update report 2010)
South East Wales Regional Transport Plan. SEWTA
Regional Waste Plan
Local Plans and Programmes
The Community Plan for Merthyr Tydfil (2011)
Merthyr Tydfil Biodiversity Action Plan (2008)
Merthyr Tydfil Local Development Plan (2011)
Brecon Beacons National Park Local Development Plan (2011)
Brecon Beacons National Park Management Plan (2010)
BBNP Biodiversity Action Plan
Merthyr Tydfil Built Heritage Strategy (2008)
Preliminary Flood Risk Assessments (PFRA) for adjacent LLFA areas – Caerphilly, Rhondda Cynon Taf, Powys.
Merthyr Tydfil Contaminated Land Inspection Strategy

International Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
EU Floods Directive – Directive 2007/60/EC on the assessment and management of flood risks (2007)	Requires Member States to: assess if all water courses and coast lines are at risk from flooding; map the flood extent and assets and humans at risk in these areas; and take adequate and coordinated measures to reduce this flood risk. Aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity.	Local Strategy will contribute to delivery of the Directive Requirements
EU Water Framework Directive - Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (2000)	Prevents deterioration of aquatic ecosystems and associated wetlands by setting out a timetable until 2027 to achieve good ecological status or potential. Requires Member States to manage the effects on the ecological quality of water which result from changes to the physical characteristics of water bodies. It requires action in those cases where these pressures have an ecological impact which will interfere with delivery of the Water Framework Directive objectives.	The Strategy will need to consider the requirements of the WFD and ensure that it does not cause deterioration of waterbodies and should consider opportunities to improve waterbodies in conjunction with local flood risk management. The Local Strategy should promote sustainable management of the water environment by considering current land use and future climate scenarios, to minimise the effects of flooding and drought events and to facilitate long term improvements in water quality, including the protection of groundwater near landfill sites and minimise agricultural runoff.
UN Framework Convention on Climate Change	International Convention with the aim of preventing dangerous human interference with the climate system	Ensure Local Strategy considers climate change mitigation and adaptation in its development and implementation
Ramsar Convention on Wetlands of International Importance especially as wildfowl habitat (1971)	Allows for the identification and protection of wetlands of international importance. Protection of these sites in the UK is implemented through the Habitats Regulations	The Local Strategy must consider the requirements of the Habitats Regulations.
Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979)	Aims to to conserve migratory species and their habitats by providing strict protection for endangered migratory species. Implemented in the UK through the Wildlife and Countryside Act (1981, as amended) and supplemented by parts of the CRoW Act 2000.	Local Strategy to consider the implications of the Wildlife and Countryside Act
Bern Convention on the Conservation of	Aims to ensure conservation and protection of wild plant and animal	Local Strategy to consider the implications of the

International Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
European Wildlife and Natural Habitats (1979)	species and their natural habitats. Implemented in the UK through the Wildlife and Countryside Act (1981, as amended)	Wildlife and Countryside Act
EU Habitats Directive (92/43/EEC)	The Habitats Directive contribute towards protecting biodiversity - the variety of life - through the conservation of natural habitats and wild plants and animals. The Directive provides for the creation and protection of a network of protected areas across the European Union to be known as 'Natura 2000' sites. Maintain or restore in a favourable condition habitats and species of European importance. Linear structures such as rivers/streams, hedgerows, field boundaries, ponds, etc., that enable movement and migration of species should be preserved.	Consider the implications of the Directive on the Local Strategy.
The Convention on Biological Diversity, Rio de Janeiro (1992)	Sets out commitments to maintaining the world's biodiversity so to achieve a more sustainable economic development. The Convention establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources.	The Local Strategy should consider biodiversity impacts within its objectives. It should take a holistic view of ecosystems rather than a focusing on 'islands' of protected species. The Local Strategy should not consider the objectives of national conservation strategies as stated in the UK Biodiversity Action Plan and their local implementation mechanisms- Merthyr Tydfil Biodiversity Action Plan, Brecon Beacons Biodiversity Action Plan
EU Directive on the Conservation of Wild Birds (79/409/EEC)	Member States must sustain populations of naturally occurring wild birds by sustaining areas of habitats in order to maintain populations at ecologically and scientifically sound levels. Member States are required to designate Special Protection Areas (SPAs) for the 194 threatened species and all migratory bird species.	Consider the implications of the Directive on the Local Strategy.
EU Biodiversity Strategy (EU, 2011)	Aimed at reversing biodiversity loss and speeding up the EU's transition towards a resource efficient and green economy. Current resolutions stress the need to integrate biodiversity concerns into all EU and national sectoral policies, to reverse the continuing trends of	Local Strategy to consider how it should intergrate with policies to protect and improve biodiversity

International Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
	biodiversity loss and ecosystem degradation.	
European Landscape Convention	Promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues	Local Strategy/SEA to consider potential for protecting and enhancing landscape in the area
Unesco World Heritage Convention (1972)	Promotes the protection of world cultural and natural heritage	SEA to consider any implications for the Local Strategy

National (UK and Wales) Plans and Programmes		Relevance to the Local Strategy/SEA
Flood and Water Management Act (2010)	Lead Local Flood Authority (LLFA) 'must develop, maintain, apply and monitor a strategy for flood risk management in its area' including flood risk from surface runoff, groundwater and ordinary watercourses.	Implemented by the Local Strategy
Flood Risk Regulations (2009)	<p>The Flood Risk Regulations implement the requirements of the European Floods Directive, which aims to provide a consistent approach to managing flood risk across Europe. The approach consists of a six year cycle of planning based on a four stage process of:</p> <ul style="list-style-type: none"> • Undertaking a Preliminary Flood Risk Assessment (PFRA). • Identifying flood risk areas. • Preparing flood hazard and risk maps. • Preparing flood risk management plans. <p>LLFAs are responsible for managing the flood risk caused by precipitation. The Environment Agency covers flooding from the sea, main rivers and reservoirs.</p>	Local Strategy will contribute to delivery of the Directive Requirements
Environment Act (1995)	Created a number of new agencies (including the Environment Agency and National Park Authorities) and set new standards for environmental management, including for air quality and waste.	Limited relevance for the the Local Strategy
Climate Change Act (2008)	<p>Aims to manage and respond to climate change in the UK, by:</p> <ul style="list-style-type: none"> • setting ambitious, legally binding targets taking powers to help meet those targets • strengthening the institutional framework • enhancing the UK's ability to adapt to the impact of climate change • establishing clear and regular accountability to the UK Parliament and devolved government. 	Ensure Local Strategy considers climate change mitigation and adaptation in its development and implementation
Countryside and Rights of Way Act (2000)	Creates a new statutory right of access to open country and registered common land, updates the Rights of Way system, give greater protection to Sites of Special Scientific Interest (SSSIs), provide better management arrangements for Areas of Outstanding Natural Beauty (AONBs), and strengthens wildlife enforcement	The Local Strategy/SEA should consider potential effects public access to open country

National (UK and Wales) Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
	legislation.	
Wales Biodiversity Framework (2010)	Explains the roles, remits and processes essential to biodiversity conservation and enhancement in Wales	Ensure that the Local Strategy considers how it can contribute to the protection and enhancement of biodiversity in the area
Woodland Trust – Space for Nature (2002)	Promoting landscape scale action for conservation of woodland biodiversity	Consider how the Local Strategy can contribute to woodland biodiversity in the area
Woodlands for Wales Welsh Government (2009)	50 year plan for developing and using Welsh woodlands and trees to bring maximum benefit to the people of Wales. Four key themes: <ul style="list-style-type: none"> •Responding to climate change •Woodlands for people •A competitive and integrated forest sector •Improving environmental quality 	Consider how the Local Strategy can contribute toward the woodland strategy, e.g. through the provision of regulating services such as the protection of water and soil resources, prevention of flooding
Planning Policy Wales, Edition 4 (2011)	Sets the national framework and policies for Wales.	Sets the national framework and policies for Wales. Planning of developments should take account of the likely frequency and severity of floods expected.
Welsh Government: National Strategy for Flood and Coastal Erosion Risk Management in Wales (2011)	Sets the framework and overarching principles flood risk management in Wales.	Sets a higher level framework for the Local Strategy
Welsh Government: Local Flood Risk Management Strategies (2011)	Guidance for LLFAs preparing local strategies	Guidance to be followed in preparation of the Local Strategy
Welsh Government. Adapting to Climate Change: Guidance for Flood and Coastal Management Authorities in Wales (2011)	Provides advice for Risk Management Authorities to account for climate change within their Flood and Coastal Management investment decisions.	Guidance to be followed in preparation of the Local Strategy
Welsh Government. Flood Risk Management: Community Engagement Toolkit (2011)	Best practice for community involvement in flood and coastal erosion risk management	Guidance to be considered in preparation and consultation on the Local Strategy
Welsh Government. Guidance for the Transfer of Ordinary Watercourse Regulatory Powers for Lead Local Flood	Guidance to help the transfer of powers from Environment Agency Wales to Lead Local Flood Authorities (LLFA)	Guidance to be considered in preparation and consultation on the Local Strategy

National (UK and Wales) Plans and Programmes		Relevance to the Local Strategy/SEA
Authorities in Wales (2012)		
Dwr Cymru Welsh Water Water Resources Management Plan (2011)	Revised draft water resources plan setting out intentions to deliver water supply/demand balance	Consider the interactions of the Local Strategy with key water resource assets in the area
Register of Landscapes of Historic Interest in Wales	Advisory and non-statutory document highlights what are considered to be the best examples of different types of historic landscape in Wales.	SEA to advise Local Strategy on the areas identified in the Register. Local Strategy should avoid effects on Register areas.
Technical Advice Note (TAN) 15: Development and Flood Risk (2004)	Aims to restrict development within areas at risk of flooding.	Advises caution in respect of new development in areas at high risk of flooding, by setting out a precautionary framework to guide planning decisions.
Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)	TAN5 provides guidance on how local authorities should integrate nature conservation issues in development plans and in assessing development proposals.	Accept the primacy of nature conservation objectives, and take appropriate account of designations in setting Local Strategy objectives and options. Consider how the Local Strategy can conserve and enhance the biodiversity of the County Borough.
Conservation of Habitats and Species Regulations (2010)	Implements the Habitats Directive in Wales. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.	The Local Strategy must consider the requirements of the Habitats Regulations.
Technical Advice Note (TAN) 12: Design (2009)	The design of development in the environment is significant to the quality of our lives and is a major factor in sustaining a positive image for Wales. Good design has the potential to assist environmental sustainability, economic growth, and social inclusion.	Measures and projects developed under the Local Strategy should use design as a mechanism to achieve sustainability objectives by: by making prudent use of natural resources, incorporate sustainable energy use, waste control measures and provide the means for effective long-term maintenance, efficient operation and management, encouraging local distinctiveness and adopting inclusive design principles.

National (UK and Wales) Plans and Programmes		Relevance to the Local Strategy/SEA
Technical Advice Note (TAN) 22: Planning for Sustainable Buildings (2011)	Advice to local planning authorities and developers to implement the national planning policy on sustainable buildings	
Environment Strategy for Wales (2006)	Recognises the importance of our environment and explains how the Welsh Government will tackle the challenges facing it over the next 20 years	<p>Five main environmental themes all of relevance to the Local Strategy/SEA:</p> <ul style="list-style-type: none"> • Addressing climate change • Sustainable resource use • Distinctive biodiversity • Our local environment • Environmental hazards
Cadw Priorities 2011-16 (2011)	Identifies priorities for an accessible, well-protected historic environment in Wales.	SEA/Local Strategy to consider interactions with Cadw priorities
EA Policy: Sustainable Urban Drainage Systems (2002)	Guidance on design and implementation of systems. Not appropriate for SEA review.	Not reviewed
Land Drainage Act (1991, as amended)	Gives operating authorities (including the Environment Agency) authorisation to carry out works on watercourses for certain purposes. Also places environmental and recreational duties on the Environment Agency.	Should take account of the duties and powers resulting from this Act.
Civil Contingencies Act (2004)	Sets out a single framework for Civil Protection for a wide range of emergencies. The Act moves the emphasis of civil protection from being one of just planning and responding to emergencies towards resilience planning arrangements (which also includes response arrangements). This has placed a range of new duties and responsibilities on Local Authorities such as assessing the risks of an emergency occurring, which includes the need to carry out a risk assessment on past incidents and likely incidents happening in the future.	The Local Strategy should take account of the duties and powers resulting from this Act.
Water Act (2003)	<p>This Act:</p> <ul style="list-style-type: none"> • amends the Water Resources Act 1991 and the Water Industry Act 	The Local Strategy should take account of the duties and powers resulting from

National (UK and Wales) Plans and Programmes		Relevance to the Local Strategy/SEA
	<p>1991;</p> <ul style="list-style-type: none"> • makes provision with respect to compensation under section 61 of the Water Resources Act 1991; • provides for the establishment and functions of the Water Services Regulation Authority and the Consumer Council for Water; to make provision in connection with land drainage and flood defence; • makes provision about contaminated land so far as it relates to the pollution of controlled waters 	<p>this Act.</p>

Sub-Regional Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
Environment Agency Wales: Taff and Ely Catchment Flood Management Plan (2010)	Assessment of flood risk from rivers, groundwater, surface water and tidal flooding. Identifies flood-risk management policies to assist decision-makers in the catchment.	The Local Strategy will need to take into consideration the policies set out in the CFMP.
Environment Agency: Severn River Basin Management Plan (2009)	This plan focuses on the protection, improvement and sustainable use of the water environment. It details the pressures facing the water environment in the Severn River Basin District, and the actions that will address them. Prepared under the Water Framework Directive, and is the first of a series of six-year planning cycles.	Implementing the Water Framework Directive. Protection, improvement and sustainable use of the water environment in the Severn River Basin. Identifies key water management issues, and waterbody quality objectives in MTCBC. Local Strategy SEA should identify potential effects on water bodies.
The Taff and Ely Catchment Abstraction Management Strategy (2006, update report 2010)	This strategy sets out how much water is available in the Taff and Ely catchment and the proposed options for managing this water now and in the future.	The Local Strategy/SEA should safeguard water resources, manage and use water efficiently and protect the environment.
South East Wales Regional Transport Plan SEWTA (2009)	Statutory plan which sets out an integrated and sustainable transport strategy for South East Wales. The plan includes : <ul style="list-style-type: none"> •a strategic framework, setting out the issues, analysis, vision, aims, and policies •an implementation programme identifying actions, proposals and a five year programme •a monitoring and review mechanism 	Limited interaction with the Local Strategy/SEA. Main interactions on transport will be through objectives in the LDP.
Regional Waste Plan	Long-term strategic waste management strategy and land-use planning framework for the sustainable management of wastes and recovery of resources in South East Wales	Limited relevance to the Local Strategy. Framework for identifying areas for facilities will be implemented through the LDP

Local Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
The Community Plan for Merthyr Tydfil (2011)	Sets objectives and priorities for the delivery of local services	The Local Strategy should be aligned with the Community Plan
Merthyr Tydfil Biodiversity Action Plan (2008)	Aims to conserve, protect and enhance biodiversity in the County Borough of Merthyr Tydfil for current and future generations.	The Local Strategy should consider how its objectives and measures can contribute toward achievement of BAP objectives to conserve and enhance biodiversity.
Merthyr Tydfil Local Development Plan (2011)	Adopted plan setting the framework for land use and planning decisions for the area in the area, including minerals planning. Planning of developments should take account of the likely frequency and severity of floods expected. Covers a wide range of environmental protection objectives at the relevant local level, including landscape, biodiversity, and cultural heritage.	The Local Strategy should align with the LDP and consider how it can assist in delivery of LDP objectives
Brecon Beacons National Park Local Development Plan (2011)	Deposit plan setting the framework for land use and planning decisions for the area in the area, including minerals planning. Planning of developments should take account of the likely frequency and severity of floods expected. Covers a wide range of environmental protection objectives at the relevant local level, including landscape, biodiversity, and cultural heritage.	The Local Strategy should align with the LDP and consider how it can assist in delivery of LDP objectives
Brecon Beacons National Park Management Plan (2010)	The National Park Management Plan is the National Park Authority's leading document, prepared under the 1995 Environment Act. It sets out a vision for the Park and includes aims and objectives for all the National Park's activities.	The Local Strategy should not conflict with these plan aims and objectives
BBNP Biodiversity Action Plan	Aims to conserve, protect and enhance biodiversity in the National Park.	The Local Strategy should consider how its objectives and measures can contribute toward achievement of BAP objectives to conserve and enhance biodiversity.
Merthyr Tydfil Built Heritage Strategy (2008)	Aims to improve the way that heritage assets are identified, protected, managed and promoted within the County Borough	Local Strategy should not conflict with the Heritage Strategy aims and objectives
Preliminary Flood Risk Assessments (PFRA) for adjacent LLFA areas – Caerphilly, Rhondda	Identification of flood risk areas in adjacent LLFAs.	Local Strategy to consider how local flood risk sources and receptors interact across

Local Plans and Programmes	Summary of Aims and Objectives	Relevance to the Local Strategy/SEA
Cynon Taf, Powys		administrative boundaries, i.e. managing flood risk sources within Merthyr Tydfil affecting areas covered by adjacent strategies, and <i>vice versa</i>
Merthyr Tydfil Contaminated Land Inspection Strategy	Contaminated Land (Wales) Regulations 2001 require Local Authorities to inspect land for contamination to ensure adequate protection of people, property and the environment. The Strategy demonstrates the Council's general approach for meeting its primary responsibility for enforcing the regulations	Local Strategy/SEA to incorporate this Strategy and any information arising

Appendix C

Baseline Environment

SEA information topic: Population and Human Health

Data sources:

Welsh Index of Multiple Deprivation (WIMD) 2011, Statistics Wales

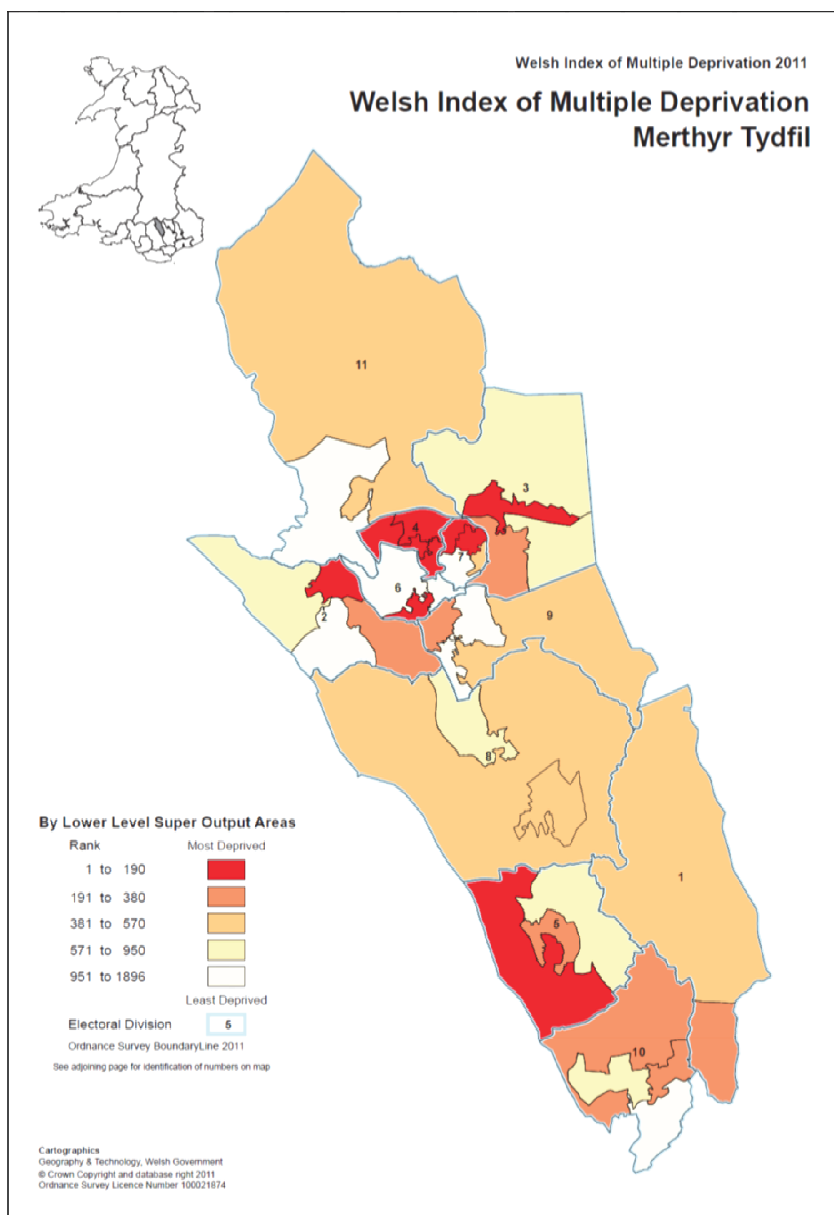
Merthyr Tydfil Preliminary Flood Risk Assessment (PFRA) and associated data sources

Census data (2001, 2011- where available), Merthyr Tydfil LDP.

			Indicators/Targets/ Implications	Relevance for the Local Strategy and SEA
Population	Merthyr is the local authority with the smallest population in Wales. 58800 people were recorded as normally resident in the area in the 2011 census.	The census population was 59000 in 1991. In 2001 this had fallen to 56000, with mid-term estimates (2002-2005) indicated that Merthyr Tydfil experienced greater population decline than any other Local Authority Area in Wales.	Primary stated aim of the LDP is 'to facilitate a reduction in current levels of out migration from the County Borough so that population levels stabilise by 2011 and a 10-year period of enhanced growth is achieved thereafter'	Increase in population should not result in an increase in the numbers of people/properties at risk of flooding.
Welsh Index of Multiple Deprivation	Merthyr Tydfil has a higher proportion of Lower Super Output Areas (LSOAs) in the most deprived 10% and 20% than any other local authority area in Wales. Figure 1 shows the Lower Level Super Output Areas (LSOAs) in Merthyr Tydfil. The County Borough compares poorly other areas in Wales in respect of all key socio-economic indicators			The Strategy should aim to help reduce the risk of flooding in deprived communities and improve public awareness for those most at risk.
Flood Risk	Current uncertainties around levels of flood risk from local sources are the subject of the Local Strategy		MTCBC has set the key flood risk indicator of people at risk of flood at a threshold of 200 (equivalent to 85 properties), a minimum of 200 businesses	The SEA should include an objective to reduce the impact on the population where there are

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
			and 2 or more critical services in 1km square to decide if a flood is of local significance. An area of 58km ² has been identified as an indicative flood risk area based on the identification of critical services in this area	higher numbers identified and an objective to improve public awareness for those most at risk.
Welsh Index of Multiple Deprivation	Merthyr Tydfil has a higher proportion of LSOAs in the most deprived 10% and 20% than any other local authority area in Wales as shown in Figure 2 below.		<p>The measures of deprivation are based on the following indicators:</p> <ul style="list-style-type: none"> • Access to services • Community safety • Education • Employment • Physical environment • Health • Housing • Income 	The Strategy should identify if deprivation could be reduced through a reduced exposure to flood risk to those communities.

Figure 1 Welsh Government (2011) Welsh Index of Multiple Deprivation



SEA information topic: Biodiversity (including Geodiversity)

Data sources:

MAGIC Map

CCW Special Sites Project

Merthyr Tydfil/BBNP Local Biodiversity Action Plans

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
International Designations (Special Areas of Conservation, Special Protection Areas, Ramsar Sites)	None in the Strategy Area	----	----	Strategy unlikely to interact or affect international sites; refer to Annex D
Sites of Special Scientific Interest (SSSIs)	<ul style="list-style-type: none"> Cwm Taf Fechan (also Taf Fechan Local Nature Reserve) Cwm Glo a Glyndyrys Daren Fach Nant Glais Caves Special interest features include both biological and geological/geomorphological features	None identified	CCW undertake periodic condition assessments.	Local Strategy should identify where SSSI features may be affected by flood risk (or potentially affected by Strategy Measures)
Local Wildlife Sites	The Merthyr Tydfil Local Development Plan includes provision for protection for 60 Sites of Interest for Nature Conservation (SINCs) local nature conservation sites designated for their local importance. There are no SINCs in the BBNP LDP for the Merthyr Tydfil area.			The SEA/Local Strategy should include an objective to protect and enhance biodiversity and should ensure local nature sites are protected and enhanced

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
Local Biodiversity Action Plan Habitats and Species	<p>A significant proportion of the area comprises semi-natural Biodiversity Action Plan habitats, including broadleaved woodland, grassland, heathland and wetland types. Other habitats such as conifer plantation, disused mineral workings/spoil and urban areas also contribute to local biodiversity. There are also a range of species (including otter, great crested newt and lapwing) that are recognised as of local priority</p>		<p>Actions reported through LBAP and UKBARS: http://ukbars.defra.gov.uk/</p>	<p>The SEA/Local Strategy should include an objective to protect and enhance biodiversity and should ensure local biodiversity features (both habitats and species) are protected and enhanced through objectives and measures</p>

SEA information topic: Soil and Land-use SEA

Data sources:

LandIS (Land Information System) – Soil Resource Institute

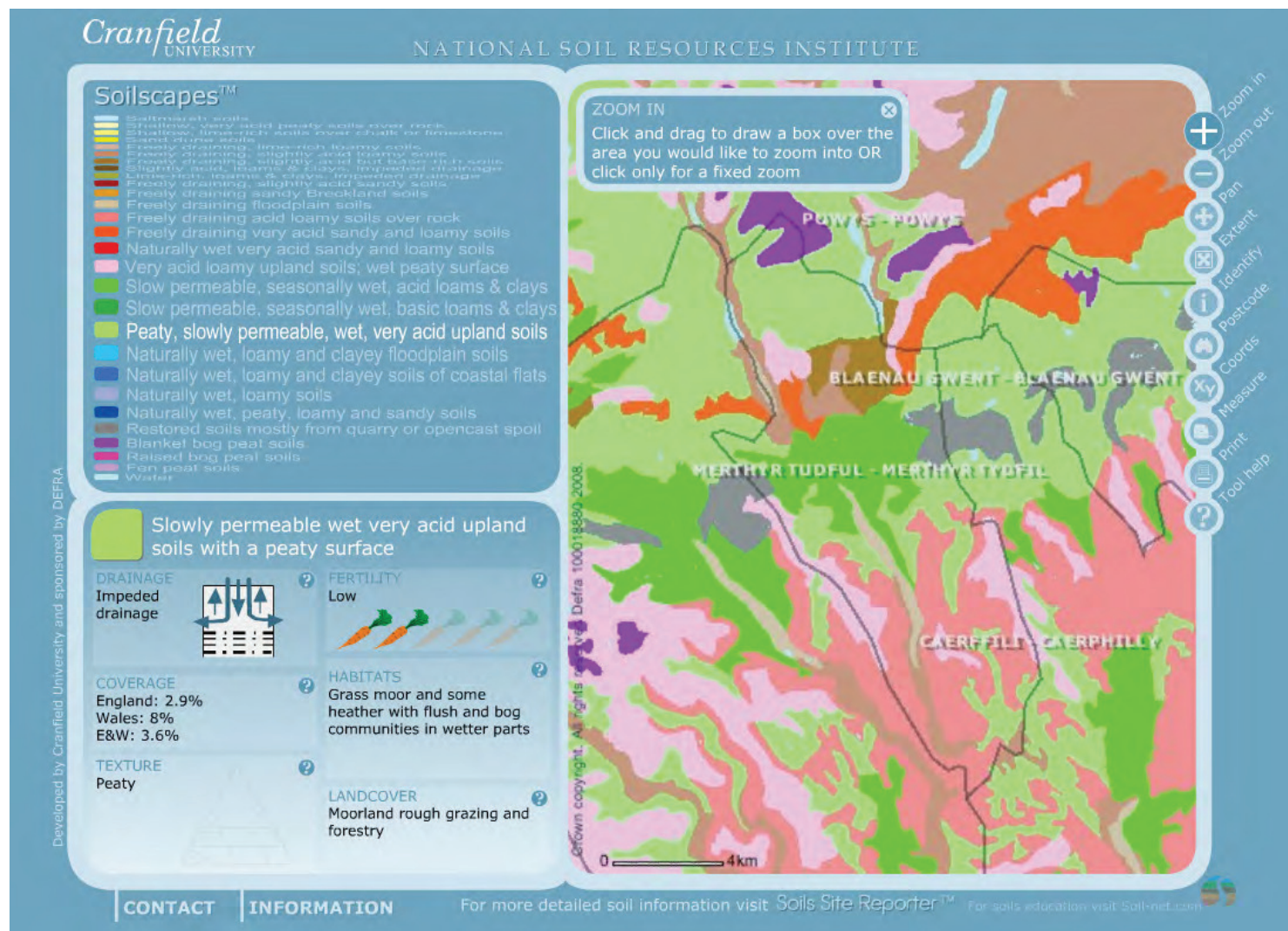
Wales Agricultural Land Classification

EA website – historic landfill

			Indicators/Targets/ Implications	Strategy and SEA
Soil types	<p>The area of Merthyr Tydfil is made up of a mix of soil types mainly of slow permeability and wet acid soils. The general land cover consists of moorland rough grazing and forestry containing mainly habitats of grass moor and heather moor with flush and bog communities in wetter parts.</p> <p>The south of the district has a mix of very acid and loamy upland soils with a wet peaty surface and fen peat soils.</p> <p>The majority of the northern and central area of the district contains mainly slow wet acid permeable soils with a peaty surface and clayey soils mainly in the centre. The land use for these soils is grazing and forestry.</p> <p>Part of the northern area of the district containing water bodies and rivers, contains a mix of freely draining acid and rich based soils.</p>	Soil types found in Merthyr Tydfil are of similar resources to the surrounding districts and typical of the South Wales valleys - a mix of low permeability peaty soils and acid loamy upland soils.	Due to the slow permeability of the soils the areas of loamy and clayey soils are at greater risk of surface water flooding in periods of intense heavy rain.	The strategy should take into account strategies to restrict building areas where there are free draining rich soils and locate the areas of low permeability to be targeted for protection from flooding.

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
	There is no high quality agricultural land (Grades 1-3a) in the County Borough)			
Historic landfill, mineral workings	<p>The area has an intense history of significant industrial activity. There is extensive evidence of mining, quarrying, metal production and processing and other heavy industry. There is a legacy of abandoned mineral workings – both known and unrecorded.</p> <p>Large areas of active opencast mining are in operation on the east side of the town.</p>	Partial records of land contamination exist, but no comprehensive record of areas/issues		<p>Both known and unknown land contamination sources will discharge into the watercourse network and may affect water quality. Local Strategy/SEA should consider potential for effects and how the Strategy could contribute toward improvement (See Water Environment, below)</p>

Figure 2 SoilScapes Viewer, Source: National Soil Resources Institute



SEA information topic: Water Environment
Data Sources: Severn River Basin Management Plan (RBMP)

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
General	<p>Merthyr Tydfil is situated in the uplands catchment. The tributaries in this area support a diverse range of ecology associated with good water quality. However, the headwaters of many streams along the western uplands are impacted by acid runoff or drainage from abandoned metal mines.</p>	<p>Merthyr Tydfil is situated in the River Severn basin. The Severn River Basin District covers an area of 21,590km², with about one third of the district in Wales.</p> <p>Severn River Basin: 29% of surface waters are at good or better ecological status now. 37% of assessed water bodies are at least good biological status now.</p> <p>Excessive phosphate levels from agriculture, water treatment works, urbanisation, land drainage, and modification of flood protection and water storage are key issues for the basin not achieving good ecological status or potential.</p>	<p>RBMP reviewed on 6 year cycle</p>	<p>The Local Strategy should include policies to ensure that that development does not exacerbate existing river and water quality issues. The SEA should include objectives to encourage the protection of the water environment where water quality is low.</p>

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
River Waterbodies	<p>There are four river waterbodies in the Local Strategy area:</p> <ul style="list-style-type: none"> • River Taf • Taf Bargoed • Nant Morlais • Taf Fechan <p>The Taf Bargoed is currently assessed as being at poor ecological status; all other rivers are classified as moderate status/potential.</p>	<p>25 per cent of rivers in the South East Valleys currently achieve good ecological status. 31 per cent of rivers assessed for biology are at least good biological status now.</p>	<p>Targets to achieve Good Ecological Status/Potential on all water bodies</p>	<p>Consider how the Local Strategy can assist in recovery of waterbodies.</p>
Groundwater	<p>For groundwater, good status has a quantitative and a chemical component. Together these provide a single final classification: good or poor status.</p> <p>Groundwater bodies in the area have been classified as having quantitative status.</p> <p>However the SE Wales Valleys area is considered to be of poor chemical status, indicating that there are issues of widespread diffuse pollution within the groundwater body, the quality of the groundwater is having an adverse impact on wetlands or surface waters or the quality of water used for potable supply is deteriorating significantly.</p>	<p>For groundwater quality, the main reasons for poor status are high or rising nitrate concentrations, with some failures for pesticides and other chemicals. The main reason for poor quantitative status in groundwater is that abstraction levels – mainly for drinking water exceed the rate at which aquifers recharge. Unsustainable abstraction from groundwater is an important issue for the river basin district. The majority of the 25 per cent of ground waterbodies at poor quantitative status are the principal aquifers used for drinking water.</p>		<p>The SEA should implement actions and assess the Local Strategy in terms of preventing the deterioration of (and to improve) groundwaters elements.</p> <p>The Strategy should not interfere with the sustainable abstraction of groundwaters.</p>

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
Lakes	The Lwyn-Onn and Pontsticill Reservoirs on the periphery of the Local Strategy area supply drinking water to South Wales. They are classified as highly modified waterbodies for this reason and are both considered to be at Moderate Ecological Potential		Targets to achieve Good Ecological Potential on all water bodies	
Ordinary watercourses and other waterbodies	No data available to the SEA on these features.			Local Strategy includes consideration of collecting relevant data on these features

SEA information topic: Climatic Factors

Data Sources:

Changing Climate, Challenging Choices: The impacts of climate change in Wales from now to 2080 (2002)
MTCBC Local Development Plan

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
Climate Change		<p>The future climate change impacts in Wales by 2080 are predicted to be:</p> <ul style="list-style-type: none"> • Greater warmth all year round by 1.1-2.9 oC • more precipitation in winter by 7-24 % • less precipitation in summer by 7-14 % • greater annual precipitation by 2-9 % • a rise of sea level of 18-79 cm • a higher mean windspeed by 1-4 % • more evapotranspiration by 13-27 % • more variability from year to year the number of extreme years will increase • more frequent and more rain in violent storms and intense storms • more drought years by 10 % • more very severe gales 		<p>The need for adaption and mitigation to flooding will need to be central to the objectives and will need to contribute to provide effective measures to enhance and adapt to the increase risk of flooding.</p> <p>To align with the LDP and other strategic documents, the Local Strategy should consider the highest standards of resource / energy efficiency and achieve reduced CO2 emissions arising from construction and operation.</p>

SEA information topic: Cultural Heritage

Data sources:

Historic Wales (map enabled portal for historic environment information in Wales)
 Glamorgan Gwent and Clwyd Powys Archaeological Trusts' Historic Environment Records, Cadw GIS datasets for Scheduled Monuments, Listed Buildings and Registered Historic Landscapes Parks and Gardens.
 Conservation Area information in Merthyr Tydfil County Borough Council and Brecon Beacons National Park Authority

		Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
Listed Buildings	More than 200 Listed Buildings throughout the area. Mostly Grade II, but Cyfartha Castle (former home of the Crawshay Ironmasters) is Grade I.	None identified	Number/proportion of Listed Buildings in good condition and/or at risk of flooding	Listed buildings should be protected from flooding and from damage from Local Strategy measures
Scheduled Monuments	There are 43 Scheduled Monuments in the County Borough, ranging for prehistoric burial sites through to industrial age heritage sites.	None identified	Number/proportion of Scheduled Monuments in good condition and/or at risk of flooding	Scheduled Monuments should be protected from flooding and from damage from Local Strategy measures
Historic Landscapes, Registered Parks and Gardens	Merthyr Tydfil historic landscape is mainly industrial due to its history in iron-making. The primarily late 18th to 19th centuries landscape comprises numerous relict elements and foci set within the present landscape. These individual elements consist of the remains of large ironworks, remnants of the associated coal mining industry, water power eats, an early iron bridge, communication systems, including early tramroads, tips, terraced			Local Strategy could assess potential risks and consequences for both Historic Landscapes

	<p>industrial housing, and the ironmasters house, Cyfarthfa Castle. Cyfarthfa Castle Garden is the single entry of Registered Parks and Gardens in the area.</p> <p>Gelli Gaer Common historic landscape varies considerably from the moorland plateau of the Common in the north west, with isolated farms and improved, enclosed pasture on its western and eastern flanks, to the enclosed farmland of the south east and the pleasant rural village of Gelligaer which is now adjacent to a primarily industrial urban landscape of the Rhymney Valley. The landscape is diverse both in its form and in its archaeological and historical content, which displays a remarkable continuity of occupation.</p>				
Conservation Areas	<p>There are seven Conservation Areas within Merthyr Tydfil (none in the BBNP section):</p> <p>Cyfarthfa Dowlais Cwmfelin Merthyr Tydfil Town Centre Morganstown Thomastown Treharris</p>			Further Conservation Areas to be identified through the Built Heritage Strategy and Action Plan.	Local Strategy could identify those Conservation Areas within flood risk areas and assess implications.

SEA information topic: Landscape

Data sources: LANDMAP

Data/Information	Baseline	Comparators and Trends	Indicators/Targets/Implications	Relevance for the Local Strategy and SEA
Brecon Beacons National Park	One fifth of the area of the County Borough is within the Brecon Beacon National Park.			Local Strategy and its implementation should consider potential effects on the BBNP.
LANDMAP	<p>The LANDMAP Landscape Assessment sets a context for an ongoing programme of managing and improving the landscape in Merthyr Tydfil. Human history in the area has extended over many centuries and has served to influence the natural environment, often, in very significant ways. Human activity, particularly during the industrial revolution, produced a rural and urban landscape of great interest including a variety of landforms, buildings and other features that today hold considerable historic value.</p> <p>The County Borough comprises of a mixture of urban, semi-urban and rural communities living in a rich and varied environment containing exceptional wildlife habitats, historic landscapes and archaeological features. The steeply sloping valley sides with their high ridges and moorland vegetation define the landscape character of the area and provide an environmental and ecological context for the settlements of the County Borough.</p>			A suite of landscape data/assessment that can be used as a baseline to inform future strategy and project works.