AtkinsRéalis

SEA Report Appendices

Neath Port Talbot County Borough Council

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NEATH PORT TALBOT FLOOD RISK MANAGEMENT STRATEGY PLAN

Notice

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Contents

Appendix A. Plans, Policies and Programmes

Table Error! No text of specified style in document.**-1 - Review of Plans, Policies and Legislation**

INTERNATIONAL / UK / WALES	
Please refer to the Welsh Government's National Flood and Coast Erosion Risk Management Strategy, the Wales Flood Risk Management Plan (South West Wales) as well as the Second Cycle Natural Resources Wales Flood Risk Management Plan Strategic Environmental Assessment for further detail. See Strategic Environmental Assessment - Environmental Report (naturalresources.wales)	
REGIONAL / LOCAL	
Local Development Plan 2011-2026	The plan guides the future development of the area, providing a clear vision for the County Borough setting out where, when and how much new development can take place over the next 15 years (2011-2026). The aim is to provide developers and the public with certainty about the planning framework for Neath Port Talbot. Overarching objectives which will inform all areas of the plan have been developed; • Minimise the causes and consequences of climate change through reduced greenhouse gas emissions and adapt to climate change through consideration of its effects in the design and location of new development. • Reduce people's exposure to the determinants of poor health and provide an environment that encourages healthy, active and safer lifestyles. • Deliver sustainable, safe and confident communities and develop vibrant settlements supporting a range and mix of facilities and services. • Maximise accessibility to a range of leisure, recreational, health, social and community facilities in line with the role and function of settlements. • A Strategy is included within the plan and provides the overarching framework to meet the vision, objectives and key issues outlined in the previous sections. The strategy is used to provide a land use structure which focusses on providing sustainable, prosperous communities creating social and economic opportunities.
Joint Transport Plan for South West Wales (2015-2020)	This plan shapes the transport policy between the four local authorities in this region for the period of 2015-2020. The vision is to improve transport and access within and beyond the region to facilitate economic regeneration, reduce deprivation and support the development and use of more sustainable and healthier modes of transport. Objectives include: • To improve the efficiency and reliability of the movement of people and freight within and beyond South West Wales to support economic growth in the City Region • To improve access for all to a wide range of services and facilities including employment and business, education and training, health care, tourism and leisure activities

	• To improve the sustainability of transport by improving the range and quality of, and awareness about, transport options, including those which improve health and well being • To improve integration between policies, service provision and modes of transport in South West Wales • To implement measures which will protect and enhance the natural and built environment and reduce the adverse impact of transport on health and climate change • To improve road safety and personal security in South West Wales There is a replacement LDP (2023-2038) currently being drafted.	
South West Wales Area Statement	The South West Wales Area Statement identifies the key risks, opportunities and priorities to build the resilience of ecosystems and support sustainable management of natural resources and also sets out the methodology to addressing the issues that have been identified. The Area Statement has been prepared against a backdrop of Welsh Government's declaration of a climate and a nature emergency. These two issues are interrelated and are in themselves symptoms of the unsustainable management of natural resources; so much so that many are describing the current period as the "Anthropocene" – the period when the dominant influence on both climate and the environment is human activity. The key 4 key themes and subtopics are : 1. Reducing health inequalities • Open Green Spaces and Urban Green Infrastructure • Recreation activities and use of green and blue active travel • Protecting the environment for our well-being 2. Ensuring sustainable land management • Diversity of agriculture and sustainable production • Hedges and edges • Upland and common management • Pollution of the environment • Management of the public-sector estate 3. Reversing the decline of, and enhancing, biodiversity • Understanding the importance and value of nature • Enhancing species and habitat connectivity 4. Cross-cutting theme: Mitigating and adapting to a changing climate • Land meets sea	Biodiversity, climate change and water

	• Emissions • Climate projections • Climate risks	
Lavernock Point to St. Ann's Head Shoreline Management Plan SMP2 (January 2012)	This plan provides a large-scale assessment of the risks associated with coastal erosion and flooding at the coast. It also presents policies to help manage these risks to people and to the developed, historic and natural environment in a sustainable manner. The SMP2 will: • identify sustainable and deliverable policies for managing coastal risks while working with natural processes wherever possible; • promote management policies for the coastline over the next 100 years, to achieve long-term objectives that are technically sustainable, environmentally acceptable and economically viable; • be realistic and consider known legislation and constraints, both human and natural, and not promise what cannot be delivered. The area of coastline within Neath Port Talbot falls within Policy Scenario 8: Sker Point to Swansea Docks. The following policies are applicable: • For the majority of the shoreline hold the line through the maintenance and upgrading of existing defences. • Managed realignment for the sand dune systems which will allow them to continue to evolve naturally. • A long-term policy of hold the line is also recommended at the former BP tank farm site to the west of Crymlyn Burrows	Water
Policy on flood and coastal defence	This policy provides information on the Council's approach to flood and coastal defence in this area. The policy and approach is consistent with the Government's, which aims to reduce the risk to people and the developed and natural environment from flooding and coastal erosion by encouraging the provision of technically, environmentally and economically sound and sustainable defence measures. The following objectives have been set to meet this aim: • To encourage the provision of adequate and cost effective flood warning systems. • To encourage the provision of adequate, economically, technically and environmentally sound and sustainable flood and coastal defence measures. • To discourage inappropriate development in areas at risk from flooding and coastal erosion.	Water
The Economic Growth Strategy for South West	This strategic framework looks to support South West Wales and future economic development and represents an ambitious new economic growth plan for the region. The strategy found that despite investment into infrastructure within the area, the region is under performing and focusses on the most important strategic challenges the region	Population and Human Health

Wales (2013 - 2030)	faces. The long term vision is for economic success, to allow South West Wales to be a confident, ambitious and connected City Region, recognised internationally for its emerging knowledge and innovation economy. The framework comprises five complementary strategic aims: • Business Growth, Retention and Specialisation. • Skilled and Ambitious for long-term success. • Maximising job creation for all. • Knowledge Economy and Innovation. • Distinctive Places and Competitive Infrastructures.	
Neath Port Talbot Single Integrated Plan (SIP): Working in Partnership (2013-2023)	This plan sets out the steps to take to protect and improve local services and support the community. The vision is to create a Neath Port Talbot where everyone has an equal opportunity to be healthier, happier, safer and prosperous.	Population and Human Health
Neath Port Talbot Replacement Local Development Plan 2023-28	The RLDP will cover the period of 2023 to 2038. When adopted the RLDP will supersede the existing NPT LDP (2011-2026) and will become part of the statutory development plan for the Authority, alongside 'Future Wales: The National Plan 2040' (referred to as Future Wales). The RDLP will be required to include and cover a number of topics, including: ▪ Be in general conformity with Future Wales; ▪ Support the National sustainable placemaking outcomes of Planning Policy Wales (PPW); ▪ Ensure that the RLDP is fully integrated with and reflects other relevant plans and initiatives including the need to be in general conformity with the emerging South West Wales (SWW) Strategic Development Plan (SDP); ▪ Adopt a strategic view of the spatial implications of development decisions and act as a basis for rational and consistent decisions regarding the use and development of land; ▪ Reflect local aspirations, based on a vision agreed by the community and stakeholders; ▪ Guide growth and change, while protecting local diversity, character and sensitive environments; ▪ Guide the location of new public / grant funded projects and co-ordinate the provision of new infrastructure, such as highways and schools.	Cross cutting

	The RLDP is structured in 3 parts: ▪ **Part 1 – Introduction and Background:** Outlines the purpose, structure and stages in the preparation of the Delivery Agreement and considers the form and content of the RLDP; matters which will inform the development of the RLDP; opportunities for collaborative working. ▪ **Part 2 – The RDLP Timetable and CIS:** The timetable sets out the various stages of Plan preparation (including definitive and indicative dates), how the Council will manage the process and provides an assessment of the resources required. It also establishes key dates for the preparation and publication of the ISA reports and the Habitats Regulations Assessment (HRA) documents. ▪ **Part 3 – Monitoring and Review:** This section outlines how the DA will be kept under review and the role of the AMR.	
Neath Port Talbot Well Being Plan 2023-2028	This report outlines the vision for the plan, for Neath Port Talbot to be a vibrant and healthy place where people have an equal chance to get on in life – a place where people want to live, learn, work, invest and visit for many generations. A local well-being assessment in 2021/2022 and a Let's Talk questionnaire in 2021 was carried out and the results were used to help inform the Well-being Plan. A summary of considerations for Neath Port Talbot in regard to the well-being plan is outlined, and what needs to be targeted for improvements; ▪ Prosperity ▪ Resiliency ▪ Health ▪ Equality ▪ Cohesive Communities ▪ Culture and Welsh Language ▪ Global Responsibility Goals and objectives are also described within the report, which demonstrate the importance of ensuring the considerations are taken into account. Actions and steps to achieve these goals and meet the targets of the assessment are outlined, and what groups will be involved. Monitoring and evaluation will be determined by a number of indicators that are relevant to well-being.	Population

Western Valleys Strategy (2006)	This strategy was developed to improve the social and economic prospects of people who live in the Neath Port Talbot Western Valleys Strategy. Valley Area Regeneration Plans (VARP) have also been prepared by the council which are more current and address most of the issues during the most recent valleys strategy consultation meetings. They have now been adopted as a vision for development in the valley areas superseding the original Neath Port Talbot Western Valleys Strategy.	Population and Human Health
Local Biodiversity Action Plan (2014)	The focus of the plan is to achieve no net loss of listed habitats and species, and a gain in the (perceived or actual) extent / population of listed habitats and species. It is a tool for securing and focussing the resources needed to protect and enhance the biodiversity of the County Borough. The plan concentrates on actions, which will be informed by regular reviews of the status and pressures on habitats and species.	Biodiversity
Neath Port Talbot Environment Strategy (2008-2026)	The purpose of the Environment Strategy is to provide the framework within which to achieve an environment that is clean, healthy and thriving, has improving economic prosperity and is valued by residents, businesses and visitors alike. The strategy is delivered in five sections, each of which is important for the local environment: • Natural Environment: biodiversity, countryside, coast, greenspaces, community involvement and physical improvements. • Built Environment: planning, buildings, neighbourhoods, environmental health, housing, energy, climate change, renewable energy, economic development and tourism. • Transport & Travel: cars, motorbikes, walking, public transport, cycling, freight, alternative fuels and initiatives. • Environmental Responsibility: sustainable purchasing, social enterprises, buying decisions, food marks, waste, recycling, eco-schools and • Education for Sustainable Development and Global Citizenship (ESDGC). • Environmental Quality: air, land and water. The strategy is supported by an Action Plan which details specific actions aimed at delivering the intended outcomes of the Environment Strategy.	Biodiversity
Neath Port Talbot Decarbonisation and Renewable Energy Strategy 2020	This report outlines the importance of reducing carbon emissions, increasing carbon sequestration and the promotion of renewable energy measures to prevent the rising issue of climate change. The report discusses relevant legislation from the local level to a national, UK wide level that collectively provide the backdrop against which a reduction in CO_2 emissions must be set. The report also includes information about Neath Port Talbot and the climate challenges and target areas for aiming to reduce carbon emissions.	Climate, Air

	The strategy outlines visions and objectives and current progress and future opportunities for individual sectors like transport. Implementation and monitoring of the plan is shown by an action plan, with outlines of partnership, delivery structure and securing external funding also shown.	
Biodiversity Duty Plan 2023-2026	This plan is committed to protecting and enhancing biodiversity in carrying out all its functions, and in doing so, doing its part to help nature to recover. It also has a legal duty to maintain and enhance biodiversity, and in so doing, promote the resilience of ecosystems under the Environment (Wales) Act 2016. The following objectives have been set: • Engage and support participation and understanding to embed biodiversity throughout decision making at all levels. • Safeguard species and habitats of principal importance and improve their management. • Increase the resilience of the natural environment by restoring degraded habitats and habitat creation. • Tackle key pressures on species and habitat. • Improve evidence, understanding and monitoring. • Put in place a framework of governance and support for delivery.	Biodiversity
State of Nature and Nature Recovery Action Plan for NPT	This plan provides an evidence-based assessment of the ecosystem resilience of each broad habitat type in Neath Port Talbot and is linked with a plan to help nature recovery in the country. There are key actions within this plan such as tackling Invasive Non-Native Species, installing green infrastructure solutions and increasing wildflower grassland.	Biodiversity
Neath Port Talbot Public Service Board (PSB) Local Well-being Plan (2023-2028)	The plan sets out a vision of Neath Port Talbot being a vibrant and health place where people have an equal chance to get on in life, a place where people what to live, learn, work, invest and visit for many generations to come. It also identifies the following four well-being objectives and detail on how they can be achieved in accordance with eh sustainable development principle: • All children have the best start in life. • All our communities will be thriving and sustainable. • Our local environment, culture and heritage can be enjoyed by future generations. • There are more green, secure and well-paid jobs and skills across the area are improved.	Population and Human Health
The Decarbonisation	The vision of this strategy is to create a cleaner, more prosperous and healthier county borough. The following actions have been set to maximise the economic, social, health and environmental benefits of decarbonisation through a focus on renewable energy:	Climate Change

and Renewable Energy Strategy	• Reducing the carbon emissions, resulting from delivering the council's work programme. Lessening energy consumption and switching to energy sources that are less harmful to the environment. • Overcoming barriers to renewable energy and encouraging the use of sustainable and renewable resources. • Managing our natural resources so that carbon sequestration is maximised, and carbon release is minimised. • Working with partners and business, sharing good practice, assets and resources. • Promoting the benefits of cleaner energy and emission reduction to council employees and the people of Neath Port Talbot. • Attracting additional funding from Welsh Government and other relevant sources. • The council highlight three areas for these actions to take place: transport, buildings and spaces, and influencing behaviour.	
NPT Air Quality Strategy (2000)	This strategy sets out the Council's strategic policy for achieving cleaner air in partnership with the whole community. It works wit the Council's aims and values specifically relating to "Sustainable Communities and Environment" and "Prosperity for All" which includes improving air quality and regenerating the area's physical and industrial environment. The strategy was more recently reviewed and updated in 2013.	Air Quality
Local Flood Risk Management Strategy	This strategy seeks to reduce the risk and effects of flooding and aims to achieve this by raising awareness in the community and encouraging a partnership approach with the community and external organisations in tackling the challenges that lay ahead. The main aim of the strategy is to reduce the risk of flooding and the social and economic damage that flooding causes, in a sustainable manner. The local strategy recognises the over-arching objectives set out in the National Strategy for Flood and Coastal Erosion Risk Management in Wales and further identifies objectives, some of which are as follows: • The provision of mapping of all sources of flooding. • Development of a register and designation of natural and manmade structures/features which are likely to have an effect on flood risk by 2014. • Review the programme of regular and appropriate maintenance for flood and coastal risk management assets. • Affected groups and vulnerable individuals to be identified within the flood affected area by 2017. • Ensure early and appropriate response to emergency events. • Development of local level emergency plans with Community/Town Councils.	Water

Flood Management Plan (2015)	This document is part of the Flood Risk Regulations 2009 and link closely to the Neath Port Talbot Local Flood Risk Management Strategy. This plan sets out how over the next 6 years, flooding will be managed so that communities the communities most at risk and the environment benefit. It takes forward the objectives and actions set out in the Local Flood Risk Management Strategy but also aims to achieve some of the objectives set out in the Welsh Government's National Flood and Coastal Erosion Risk Management Strategy: • 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. • Prioritising investment in the most at risk communities	Water
The Swansea Bay Abstraction Licensing Strategy	This licensing strategy sets out how water resources in the Neath Port Talbot area will be managed sustainably and notes different water bodies within Neath Port Talbot and the availability (or otherwise) of water for abstraction. Note is made of when an abstraction licence is required and provides information on how this approach can help to achieve objectives under the WFD.	Water
Welsh Opportunity Catchment Areas – South West Wales	Opportunity Catchment areas have been identified within the 3rd cycle of the River Basin Management Plans for Wales. Neath Port Talbot is within the South West Wales Opportunity Catchment. This sets out a number of key themes to reduce health inequalities, ensure sustainable land management, reverse biodiversity decline, as well as mitigate and adapt to a changing climate.	Cross cutting – health, water, biodiversity, climate etc.
NRW Advice note to Local Authorities on the Water Framework Directive	Restoring the water environment of Wales is a priority and key action within Welsh Government's programme for environment & sustainability. It requires an integrated approach to planning and managing our water and the wider ecosystem; balancing environmental, economic and social priorities. The Water Framework Directive (WFD) is a key tool to achieve these priorities and sets a framework to provide substantial benefits for the long-term sustainable management of our waters delivered through River Basin Management Plans (RBMPs). It is noted that Local Authorities have a key role in contributing to the planning, delivery and promotion of the RBMPs in exercising their functions. This note provides further information on how Local Authorities can contribute to meeting these objectives and further background on the WFD.	Water
Heritage Strategy 2024 - 2039	This heritage strategy sets out actions to ensure the sustainable conservation and management of Neath Port Talbot's heritage assets, and measures that can add value to the well-being of the area. The Council secured funding to deliver the Heritage NPT Project that includes producing a Heritage Strategy and secondly focusing on	Historic Environment

	the need to sustain the community heritage groups who play a crucial role championing and conserving our historic environment. The overall vision is to ensure the conservation, protection and sustainability of Neath Port Talbot's Heritage. The strategy focuses on five key themes as follows: Theme 1: Understanding our heritage and its significance. Theme 2: Conserving & Investing in our heritage for future generations. Theme 3: Capitalising & Building on our heritage. Theme 4: Positive Management of our heritage. Theme 5: Celebrating & Promoting our heritage. Each have individual objectives to ensure their delivery.

Appendix B. Baseline data and contextual information

B.1 Biodiversity and Ecosystems

Table 1: Biodiversity and Ecosystems

Sustainability Topic / Baseline	Wales	Plan Area
Biodiversity & Ecosystems: Special Protection Areas (SPAs)	SPAs are protected areas for birds classified under the Conservation of Habitats and Species Regulations 2017 (as amended) in Wales. SPAs are of national and international conservation importance. As the second update following the UK's exit from the EU in 2020, April 2023 saw no updates to the Welsh network[1].	
	The Joint Nature Conservation Committee records total counts of SPAs across the UK. A check of the JNCC register (June 2024) finds a second update to the register has been made in April 2023 recording 17 SPAs in Wales, covering an area of 342,141 ha. There are also two sites crossing the England / Wales border (38,811 ha), one classified as England / Wales / Offshore (251,709 ha) and one classified as Wales / Offshore (166,747 ha)[2] SPAs are located in coastal and estuarine areas of Wales, with several situated in the central and northern highlands. Currently, there are 10 SPAs with marine components designated partly or wholly within Welsh waters.	No SPAs have been identified within the plan area[3].

[1] Joint Nature Conservation Committee (2023) Classified Special Protection Areas (SPAs) in the UK. Available: Special Protection Areas | JNCC - Adviser to Government on Nature Conservation

[2] Joint Nature Conservation Committee (2023) Classified Special Protection Areas (SPAs) in the UK. Available: Special Protection Areas | JNCC - Adviser to Government on Nature Conservation

[3] Data Map Wales Special Protection Areas (SPA) (November 2022) Data Available: Special Protection Areas (SPA) | DataMapWales (gov.wales)

	Supporting trend data: In the UK, the first SPAs were identified and classified in the early to mid-1980s. Classification has since progressed, with regular updating of both the number of classified SPAs and those that are in process of being classified (pSPA). With respect to Article 10, the UKs 11th Article 12 UK Birds Directive Report (2019)[4] Work has continued to consolidate and improve surveillance of birds in the UK (both terrestrial and marine environments), co-funded monitoring schemes made possible through government and non-government sectors working in partnership. Particular emphasis has been given to maintaining levels of surveillance in times of economic constraint which is essential to maintain basic levels of data collection of value for both bird conservation and the wider environmental monitoring needs. Future monitoring programmes for marine birds have now been recommended and if approved it will be implemented during 2019-2025 reporting period. Considerable emphasis has been given to the development and implementation of agri-environment schemes (AES) to address declines of formerly-common farmland birds. Implementation of plans under the UK Biodiversity Action Planning[5] process have helped reverse the formerly negative national trends for several species.
Biodiversity & Ecosystems: Special Areas of Conservation (SAC)	SACs are now part of the newly formed national site network along with SPAs. Prior to the UK's exit from the EU at the end of 2020, SPAs and SACs were part of the Natura 2000 network. Following Brexit, JNCC continue to periodically update the datasets[6]. SACs are protected areas in Wales are designated under the Conservation of Habitats and Species Regulations 2017 (as amended). SACs are of national and international conservation importance.

[4] Joint Nature Conservation Committee (2023) Special protection Areas. Available: Article 12 UK Birds Directive Report (2019) Annex A- General Report
[5] Joint Nature Conservation Committee (2023) UK Biodiversity Action Plan. Available: UK BAP | JNCC - Adviser to Government on Nature Conservation
[6] Joint Nature Conservation Committee (2023) Changes to the UK network of SACs. Available: UK SAC changes | JNCC - Adviser to Government on Nature Conservation

	As the second update following the UK's exit from the EU in 2020, April 2023 saw no updates to the Welsh network.	
	The Joint Nature Conservation Committee records total counts of SACs across the UK. A check of the JNCC register (June 2024) finds a second update to the register has been made in April 2023 recording 85 SACs in Wales, covering an area of 590,915 ha. There are seven across the England / Wales border (95,182 ha), one classified as England / Wales / Offshore (584,989 ha) and one classified as Wales / Offshore (1,062,562 ha)[7]. SACs are widely distributed throughout Wales. There are also currently 12 SACs with marine components designated partly or wholly within Welsh waters.	Coedydd Need a Mellte SAC and Crymlyn Bog / Cors Crymlyn SAC intersect the plan area, covering areas of 378.607 ha and 299.743 ha respectively. Kenfig / Cynffig SAC is adjacent to the southern boundary of the plan area, covering an area of 1190.898 ha[8].
	Supporting trend data: Member States of the European Union are required to report every six years on the conservation status of habitats and species listed on the annexes of the Habitats Directive. Although the UK has now withdrawn from the European Union, monitoring still takes place to provide key data for a report every six years. In general, the status of UK habitats of European importance declined over the reporting period 2007 – 2013 and were identified to have improved in the most recent assessment in 2019. In 2007, 26% of UK habitats listed in Annex I of the EU Habitats Directive were in favourable conservation status, this figure increased to 39% in 2013, before decreasing to 35% in 2019. The conservation status of 18% of the habitats was	

[7] Joint Nature Conservation Committee (2023) Special Areas of Conservation (SAC). Available: Special Areas of Conservation | JNCC - Adviser to Government on Nature Conservation

[8] Data Map Wales Special Areas of Conservation (SAC) (November 2022). Available: Special Areas of Conservation (SAC) | DataMapWales (gov.wales)

	unfavourable-improving in 2007, it decreased to 10% in 2013 and 5% in 2019. The conservation status of 14% of the habitats was unfavourable-declining in 2007, this decreased to 15% in 2013 and 17% in 2019[9].	
Biodiversity & Ecosystems: Ramsar Sites	Ramsar Sites are wetlands of international importance that have been designated under the criteria of the Ramsar Convention on Wetlands for containing representative, rare or unique wetland types or for their importance in conserving biological diversity[10]. Ramsar sites are of national and international importance. In the UK, the first Ramsar Sites were designated in 1976. Since then, many more have been designated. Compared to many countries, the UK has a relatively large number of Ramsar Sites, but they tend to be smaller in size[11]. As a party to the Ramsar Convention, the UK are required to submit a report to the Ramsar Secretariat every three years.	
	The Joint Nature Conservation Committee records total counts of Ramsar Sites across the UK. A check of the JNCC register (June 2024) finds this was last updated in January 2022. It records 7 Ramsar sites in Wales, totalling an area of 11,366 ha. There were three sites crossing the England / Wales border, totalling 40,553 ha[12] . Ramsar sites are located in coastal and estuarine areas of Wales, with several situated in the central and northern highlands.	Crymlyn Bog Ramsar is located within the plan area, covering an area of 266.699 ha[13].

[9] Joint Nature Conservation Committee (2023) Special Areas of Conservation (SAC). Available: UKBI - C3b. European species | JNCC - Adviser to Government on Nature Conservation

[10] Joint Nature Conservation Committee (2023) Ramsar convention. Available: Ramsar Convention | JNCC - Adviser to Government on Nature Conservation

[11] Joint Nature Conservation Committee (2023) UK Ramsar sites. Available: Ramsar Sites | JNCC - Adviser to Government on Nature Conservation

[12] Joint Nature Conservation Committee (2023) UK Ramsar sites. Available: Ramsar Sites | JNCC - Adviser to Government on Nature Conservation

[13] Data Map Wales Ramsar (November 2022). Available: Ramsar Wetlands of international importance | DataMapWales (gov.wales)

	Supporting trend data is not available.	
Biodiversity & Ecosystems: National Nature Reserves (NNRs) and Local Nature Reserves (LNRs)	NNRs contain examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in the UK. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. In addition, they may be managed to provide public recreation that is compatible with their natural heritage interests. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981. NNRs are of national conservation importance. Local Nature Reserves (LNRs) are a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities[14]. Parish and Town Councils can also declare LNRs, but they must have the powers to do so delegated to them by a principal local authority. LNRs are places with wildlife or geological features that are of special interest locally. They offer people opportunities to study or learn about nature or simply to enjoy it. They range from windswept coastal headlands, ancient woodlands and flower-rich meadows to former inner-city railways, long abandoned landfill sites and industrial areas now re-colonised by wildlife.	
	Natural Resources Wales records total counts of Ramsar Sites across Wales. A check of the register (June 2024) finds this was last updated in June 2023. It records 76 NNRs in Wales. These cover a wide range of habitats from high	Crymlyn Bog And Pant Y Sais NNR is located within the plan area, covering 130.832 ha[17].

[14] Greenspace Information for Greater London (GiGL) (2023) Statutory Designations. Available: Statutory Designations - GIGL
[17] Data Map Wales National Nature Reserves (NNR) (November 2022). Available: National Nature Reserves (NNR) | DataMapWales (gov.wales)

	mountains, peat bogs and woodlands, to sand dunes, mud flats and remote off-shore islands[15]. As of April 2024, there are 98 LNRs in Wales, designated by the Countryside Council for Wales[16].	There are 5 LNRs within the plan area[18]: • Cwm Du Glen & Glanrhyd Plantation LNR • Eaglesbush Valley LNR • Pant-Y-Sais LNR • Swansea Canal LNR • Bryn Tip LNR Kenfig Pool and Dunes LNR and NNR is adjacent to the south of the plan area.
	Supporting trend data not available.	
Biodiversity & Ecosystems: Sites of Special Scientific Interest (SSSI)	SSSIs are designated in accordance with the duties in law placed upon each of the country nature conservation bodies (CNCBs) to notify as a SSSI any area of land which, in its opinion, is of special interest by reason of any of its flora, fauna, geological, geomorphological or physiographical features[19]. SSSIs were originally notified under the National Parks and Access to the Countryside Act 1949, and then were re-notified under the Wildlife and Countryside Act 1981. The guidelines set out to primarily help CNCB staff in the selection of biological SSSIs, but also as a public statement of the selection principles for all interested parties. Part 1 of the guidelines sets out general principles from which the evaluation and selection procedures and have been developed, as well as explaining background issues and concepts. Part 2 presents the detailed and specific guidance for each of the main habitat types and species groups.	

[15] Natural Resources Wales (2023) National Nature Reserves. Available: https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/national-nature-reserves/?lang=en
[16] Data Map Wales Local Nature Reserves (LNR) (April 2024). Available: Local Nature Reserves (LNR) | DataMapWales (gov.wales)
[18] Data Map Wales Local Nature Reserves (LNR) (April 2024). Available: Local Nature Reserves (LNR) | DataMapWales (gov.wales)
[19] Joint Nature Conservation Committee (2023) SSSI Guidelines. Available: Guidelines for selection of SSSIs | JNCC - Adviser to Government on Nature Conservation

	SSSIs are of national conservation importance.	
	There are more than 1,000 SSSIs in Wales, covering about 12% of the country's surface area[20]. Some of these sites correspond with other designations, such as SACs, SPAs and NNRs. SSSIs are widespread throughout the whole of Wales, and cover a wide variety of habitats and geological features (NRW 2016).	There are 21 SSSIs within the plan area[21].
	Supporting Trend Data: The four country nature conservation bodies in the UK (Natural England, Natural Resources Scotland, Scottish Natural Heritage and the Department of Agriculture, Environment and Rural Affairs, Northern Ireland) produced a revised Common Standards Monitoring Statement in October 2019 (further updated in 2022). This revised statement aims to address site monitoring priorities to incorporate the large amount of information available through new monitoring methods such as satellite imagery and eDNA. These techniques will work alongside traditional field-based monitoring and the Common Standards Monitoring guidance to provide more options for monitoring the UK's protected sites.[22]	
Biodiversity & Ecosystems: Marine	MCZs are a type of marine protected area that can be designated in English, Welsh and Northern Irish territorial and offshore waters.[23] They are established under the Marine and Coastal Access Act (2009).	

[20] Natural Resources Wales (2023) Site of Special Scientific Interest (SSSIs). Available: Natural Resources Wales / Types of protected areas of land and sea
[21] Data Map Wales Sites of Special Scientific Interesnt (SSSI) (May 2024). Available: Sites of Special Scientific Interest (SSSI) | DataMapWales (gov.wales)
[22] Joint Nature Conservation Committee (2023) Common Standards Monitoring Statement. Available: Common Standards Monitoring | JNCC - Adviser to Government on Nature Conservation
[23] Joint Nature Conservation Committee (2019) Marine Conservation Zones. Available: Marine Conservation Zones | JNCC - Adviser to Government on Nature Conservation

<table>
<tr><td rowspan="3">Conservation Zones (MCZs)</td><td colspan="2">MCZs are of national conservation importance.</td></tr>
<tr><td>There is one MCZ in Welsh waters, Skomer, covering 130.2 ha. Skomer MCZ is situated around the island of Skomer and the Marloes Peninsula in Pembrokeshire, south west Wales. Skomer MCZ has species and habitats of national and international importance. These include grey seal, pink seafan, sponge communities, eelgrass and algal communities[24]

In addition, the Welsh Government, with support from NRW and JNCC and other stakeholders are currently working to identify a small number of possible Marine Conservation Zones thus fulfilling a 2017 Ministerial commitment to meet national and international obligations to complete the network of Marine Protected Areas, informed by the 2016 Welsh MPA network assessment.</td><td>No MCZs have been identified within the plan area[25].</td></tr>
<tr><td colspan="2">Supporting Trend Data:

Seal pup production in the Skomer MCZ continued to do well in 2023, with 425 births at island and mainland sites combined. Since 2009 there has been a steady increase in pup production at both the island and mainland sites. Pup production for the past 5 years has shown the highest totals recorded for the area, with annual production averaged for 2019-23 being 429 pups [26].</td></tr>
</table>

[24] Natural Resources Wales (2016) Skomer Marine Conservation Zone. Available: Natural Resources Wales / Skomer Marine Conservation Zone
[25] Data Maps Wales Marine Conservation Zones (MCZ) (November 2022). Available: Marine Conservation Zones | DataMapWales (gov.wales)
[26] Natural Resources Wales (2024) Skomer Marine Conservation Zone Annual Report 2023/24. Available: Skomer Marine Conservation Zone Annual Report 2023-24 (naturalresourceswales.gov.uk)

<table>
<tr><td rowspan="3">Biodiversity & Ecosystems: Nature Conservation Biodiversity & Ecosystems: Marine Protected Areas (MPAs)</td><td colspan="2">The purpose of an MPA is to protect and recover rare, threatened and important habitats and species from damage caused by human activities. In Wales, MPAs are designated to protect specific habitats or species (also known as ‘features’) and have conservation objectives which state what conservation outcomes the MPA is designed to achieve.</td></tr>
<tr><td>Wales has 139 MPAs covering 69% of inshore waters (up to 12 nautical miles)[27].</td><td>The following MPAs intersect the plan area[28]:
Crymlyn Burrows SSSI
Cynffig / Kenfig SSSI and SAC</td></tr>
<tr><td colspan="2">Supporting trend data not available.</td></tr>
<tr><td>Biodiversity & Ecosystems: Ancient Woodland</td><td colspan="2">Ancient Woodland is land that has had continuous woodland cover since at least 1600AD in Wales and is identified within the Ancient Woodland Inventory. As Ancient Woodlands have developed over such long timescales, they have unique features such as relatively undisturbed soils and communities of plants and animals that depend on the stable conditions that Ancient Woodland provides. These are often rare and vulnerable species.

There are two types of Ancient Woodland classification in Wales; Ancient semi-natural woods and plantations on Ancient Woodland sites. Ancient semi-natural woods are woods that have developed naturally and may have existed since woodland first colonised the UK after the last glaciation. Plantations on Ancient Woodland sites are ancient woods that were felled and planted with non-native trees.[29]</td></tr>
</table>

[27] Welsh Marine Conservation Zones | Business Wales - Marine and Fisheries (gov.wales)
[28] Data Maps Wales Marine Protected Areas in Welsh Waters (October 2023). Available: Marine Protected Areas in Welsh Waters | DataMapWales (gov.wales)
[29] Woodland Trust (2023) Ancient Woodland – British Habitats. Available: Ancient Woodland - British Habitats - Woodland Trust

	The Ancient Woodland Inventory 2021 indicates that there are around 95,000ha of Ancient Woodland in Wales (4.6% of total land area)[30].	There is approximately 3375 ha of Ancient Woodland intersecting the plan area[31].
	Throughout the UK, huge areas of ancient woodland remain in critical or threatened condition with restoration progress being slow through plantation on ancient woodlands sites (PAWS) being on private land. In 2012 the condition of the entire c. 19,500ha of ancient woodland on the Public Forest Estate in Wales was assessed using a combination of field-based sampling and desk-based analyses of both threats and ecological potential. Of this, 34% was considered secure, 36% threatened and 30% critical (pers. comm. Natural Resources Wales, 2020). Approximately 3,250ha of PAWS consisted of larch, the majority of which will have been, or will be, felled in the future due to infection with the pathogen Phytophthora ramorum. Natural Resources Wales intends to carry out a full repeat ancient woodland condition assessment in 2025. This will be the first opportunity to fully assess trends against the 2011/12 ancient woodland baseline survey.[32]	
Biodiversity & Ecosystems: Priority Habitats	UK BAP (Biodiversity Action Plan) priority habitats cover a wide range of semi-natural habitat types and were those that were identified as being the most threatened and requiring conservation action due to their decline, rarity and importance. The list contains 65 priority habitats, which span terrestrial, freshwater, and marine environments.[33]	
	There are 55 priority habitats identified in Wales under the Environment (Wales) Act 2016.[34]	There are 14 priority habitats identified within the plan area; Marah Fritillary Habitat, Blanket Bog, Lowland Dry Acid Grassland, Lowland Meadows, Lowland Fens and Reedbeds, Lowland Heathland, Open Mosaic Habitat on Previously

[30] Natural Resources Wales (2023) Ancient Woodland Inventory. Available: Natural Resources Wales / Ancient Woodland Inventory
[31] Data Map Wales Ancient Woodland Inventory 2021 (June 2024). Available: Ancient Woodland Inventory 2021 | DataMapWales (gov.wales)
[32] State of the UK's Woods and Trees 2021 (woodlandtrust.org.uk)
[33] Joint Nature Conservation Committee (2011) *UK Biodiversity Action Plan Priority Habitat Descriptions*. Available: UK Biodiversity Action Plan: Priority Habitat Descriptions (Updated December 2011) (jncc.gov.uk)
[34] Welsh Government (2016) *Environment (Wales) Act 2016 Section 7.* Available: masterss7habitatslistmay 2016.pdf

		Developed Land, Parkland, Traditional Orchards, Purple Moor Grass and rush Pastures, Raised Bog, Upland Flushes Fens and Swamps, Upland Heathland and Wood Pasture[35].
	The UK BAP describes current and potential threats to each of the 65 priority habitats. Habitat Action Plans provide a framework for action to protect the habitats and conserve biodiversity.	
Biodiversity & Ecosystems: Biosphere Reserves	Biosphere reserves are 'learning places for sustainable development'. They are sites for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. They are places that provide local solutions to global challenges. Biosphere reserves include terrestrial, marine and coastal ecosystems[36]. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) Man and the Biosphere (MAB) programme comprises a World Network of Biosphere Reserves. Biosphere Reserves are comprised of three interrelated zones: 1. The Core Area (protected: the 'natural' state of the region's ecosystems). 2. The Buffer Zone (conserves the core area, and can accommodate positive human engagement, including research, education, training, tourism, extensive agriculture, or sustainable forestry). 3. The Transition Area (where most of the region's people live and work, using the natural resources in a sustainable manner). Biosphere Reserves are non-statutory.	

[35] Data Map Wales WOM21 Priority Habitat – High Sensitivity (October 2021). Available: WOM21 Priority Habitat - High Sensitivity | DataMapWales (gov.wales)
[36] UNESCO 2023) What are Bioshpere Reserves? Available: What are Biosphere Reserves? (unesco.org)

	There is one Biosphere Reserve in Wales, Biosffer Dyfi. The area around the River Dyfi (West Wales) is a special place for its people, It measures 840 square km^2. It hosts some of the finest and most inspiring landscapes and wildlife areas in Europe, as well as a passionate community that care strongly about their magnificent surroundings[37].	No Biosphere Reserve has been identified within the local authority area[38].
	Supporting trend data is not available.	
Biodiversity & Ecosystems: Biodiversity status	Biodiversity is the variety of all life on Earth: genes, species and ecosystems. It includes all species of animals and plants, and the natural systems that support them. The UK biodiversity indicators have been developed in a co-operative fashion, with input from government, statutory agencies and public bodies, non-governmental organisations, and academic institutes[39]. Supporting Trend Data: Biodiversity is under pressure from development and increasing population, in addition to climate change. Overall climate change could lead to: • Changes in phenology (including changes in the timings of seasonal events causing loss of synchronicity and increased competitive advantage for some species at the expense of others); • Shifts in suitable climate conditions for individual species leading to change in species distribution, abundance and range; • Changes in the community structure and ecosystem function of habitats which species occupy; • Changes to the composition and structure of plant and animal communities (including arrival of non-natives, loss of native species and increase in pest species);	

[37] UNESCO (2023) Dyfi Biosphere. Available: UNESCO Dyfi Biosphere Reserve Wales
[38] Data Map Wales Biosphere Reserves (November 2022). Available: Biosphere Reserves | DataMapWales (gov.wales)
[39] Joint Nature Conservation Committee (2023) UK Biodiversity Indicators. Available: UK Biodiversity Indicators | JNCC - Adviser to Government on Nature Conservation

	• Changes to habitats and ecosystems, such as altered water regimes, increased rates of decomposition in bogs and higher growth rates in forests; and • Loss of physical space due to sea level rise and increased storminess40. SoNaRR 2020 concluded that Wales is not yet achieving SMNR and this has an impact on the resilience of ecosystems. There has been a reduction in diversity, the extent of semi-natural habitat is considered low (31%), few habitats are in good condition and connectivity is at its lowest in lowland habitats. It is also worth noting the following infographics which detail opportunities for action and key pressures and impacts that exist. The State of Natural Resources Report (SoNaRR)[41] for Wales has identified the following impacts and pressures:

[40] Joint Nature Conservation Committee (2010) Biodiversity and Climate Change. Available: Biodiversity and Climate Change - a summary of impacts in the UK (jncc.gov.uk)

[41] Natural Resources Wales (2020) SoNARR2020. Available: Natural Resources Wales / SoNaRR2020: Natural resource registers

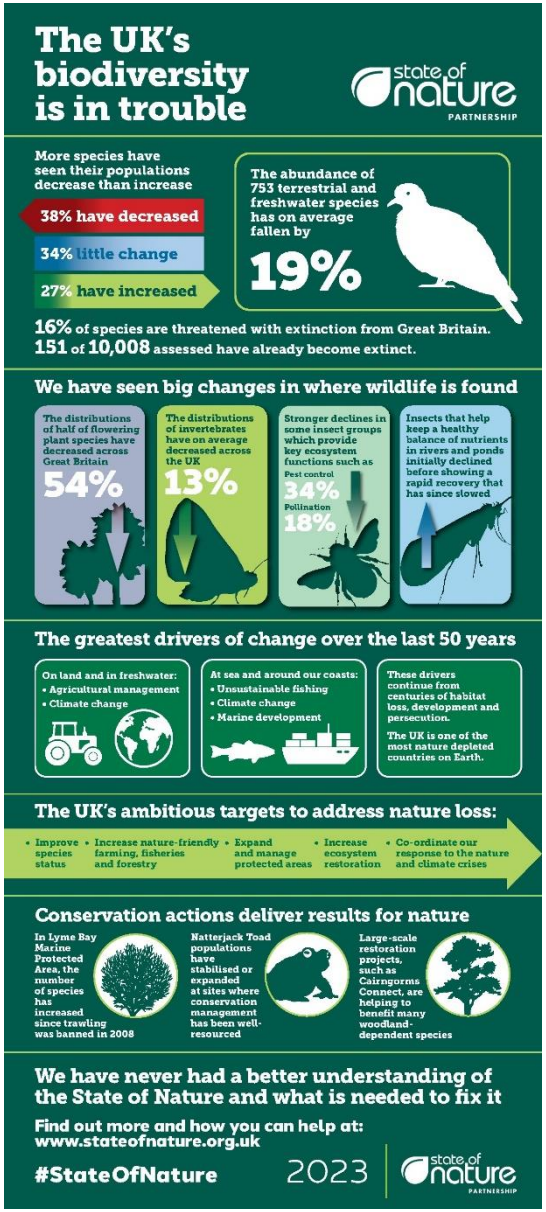
Key impacts and pressures:

Opportunities for action:

The State of Nature 2023[42] report presents an overview of how the nation's wildlife is faring, looking back over 50 years of monitoring to see how nature has changed in the UK. As well as this long-term view, the report focuses on what has happened in the past decade, and whether things are getting better or worse for nature. In addition, we have assessed the pressures that are acting upon nature, and the responses being made, collectively, to counter these pressures.

[42] State of Nature 2023 - report on the UK's current biodiversity

	The State of Nature 2023 report uses data collected by tens of thousands of expert volunteers, analysed using rigorous statistical methods to report on the state of nature across the UK and in the UK's Crown Dependencies and Overseas Territories and at the scale of the UK's constituent nations. The report shows that since careful monitoring of 380 Welsh species began in 1994, the numbers of those species has declined on average by 20%.Further information on the state of nature in the UK, including details of the data and analyses underpinning findings, can be found in the UK State of Nature 2019 report[42]. In the UK, biodiversity is declining as shown below.


The UK's biodiversity is in trouble
state of nature PARTNERSHIP
More species have seen their populations decrease than increase
38% have decreased
34% little change
27% have increased
The abundance of 753 terrestrial and freshwater species has on average fallen by
19%
16% of species are threatened with extinction from Great Britain.
151 of 10,008 assessed have already become extinct.
We have seen big changes in where wildlife is found
The distributions of half of flowering plant species have decreased across Great Britain
54%
The distributions of invertebrates have on average decreased across the UK
13%
Stronger declines in some insect groups which provide key ecosystem functions such as
Pest control
34%
Pollination
18%
Insects that help keep a healthy balance of nutrients in rivers and ponds initially declined before showing a rapid recovery that has since slowed
The greatest drivers of change over the last 50 years
On land and in freshwater:
• Agricultural management
• Climate change
At sea and around our coasts:
• Unsustainable fishing
• Climate change
• Marine development
These drivers continue from centuries of habitat loss, development and persecution.
The UK is one of the most nature depleted countries on Earth.
The UK's ambitious targets to address nature loss:
• Improve species status
• Increase nature-friendly farming, fisheries and forestry
• Expand and manage protected areas
• Increase ecosystem restoration
• Co-ordinate our response to the nature and climate crises
Conservation actions deliver results for nature
In Lyme Bay Marine Protected Area, the number of species has increased since trawling was banned in 2008
Natterjack Toad populations have stabilised or expanded at sites where conservation management has been well-resourced
Large-scale restoration projects, such as Cairngorms Connect, are helping to benefit many woodland-dependent species
We have never had a better understanding of the State of Nature and what is needed to fix it
Find out more and how you can help at:
www.stateofnature.org.uk
#StateOfNature
2023
state of nature PARTNERSHIP

Biodiversity & Ecosystems: Protected species	Many species of plants and animals in Wales and often their supporting features and habitats are protected and assessments must be undertaken to establish whether a planning application would harm or disturb a protected species. European protected species are those protected by the Habitats Directive (as implemented under the relevant regulations in the UK). Article 12 of the Directive sets out the protection that member states should afford to protected animal species and Article 13 does the same but for plants. European protected species include some widespread and familiar UK species such as otters, great crested newts and all species of bat. For most other protected species, the most important legislation in Wales is the Wildlife and Countryside Act 1981, as amended. Protected species are likely to be present at the habitats set out in Table below[43].

[43] https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications

Table 1. Likely habitat for protected species.

Habitat, building or land	Species to look for
Ancient or veteran trees or those with significant decay features	Bats, breeding birds, dormice
Cellars, ice houses, old mines and caves	Bats
Buildings with features suitable for bats, or large gardens in suburban and rural areas	Bats, breeding birds, badgers, reptiles and great crested newts
Traditional timber-framed building (such as a barn or oast house)	Bats, breeding birds including barn owls
Lakes, rivers and streams (on the land or nearby)	Breeding birds, fish, otters, water voles and white-clawed crayfish
Heathland on, nearby or linked to the site (by similar habitat)	Breeding birds, badgers, dormice, reptiles, invertebrates, natterjack toads and protected plants
Meadows, grassland, parkland and pasture on the land or linked to the site (by similar habitat)	Bats, badgers, breeding birds, great crested newts, invertebrates, reptiles and protected plants
Ponds or slow-flowing water bodies (like ditches) on the site, or within 500m and linked by semi-natural habitat such as parks or heaths	Breeding birds, fish, great crested newts, water voles, invertebrates and white-clawed crayfish
Rough grassland and previously developed land (brownfield sites), on or next to the site	Breeding bird, reptiles, invertebrate and protected plants
Woodland, scrub and hedgerows on, or next to the site	Bats, breeding birds, badgers, dormice, invertebrates, great crested newts, reptiles and protected plants
Coastal habitats	Breeding birds, fish, natterjack toads, otters and invertebrates

Biodiversity & Ecosystems: Marine Mammals	Species which are likely to be seen in Welsh waters include the grey seal, bottlenose dolphin, Risso's dolphin, common dolphin, minke whale and harbour porpoise, and the rather more elusive European otter found at the coast. There are 14 species of cetacean on the Environment (Wales) Act Section 7 list, plus the European otter[44]. Most recent data available on the populations of marine mammals in the OSPAR region III Celtic Seas (OSPAR 2016) indicates that generally populations of cetaceans and seals have been increasing, however some populations have remained stable, including species such as bottlenose dolphins and harbour porpoise. Within this region, dolphins, porpoises and grey seals are impacted through fisheries by-catch. Across the Celtic Seas region, grey seals and harbour seals are generally counted every five years (the minimum to assess their status). Other marine mammals have little systematic recording and are infrequently assessed through combined aerial and ship surveys. The most recent of these aerial and ship surveys, the SCANS-III in 2016, yielded population abundance estimates for harbour porpoise, common dolphin, striped dolphin, white-beaked dolphin, bottlenose dolphin, fin whale, minke whale, pilot whale, sperm whale and beaked whales. The latest report[45] (June 2023) provides new estimates of abundance which will be integral to cetacean assessments undertaken for the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) quality status report and for the UK Marine Strategy assessments of Good Environmental Status (GES).
Biodiversity & Ecosystems: Seabed habitats	Significant damage has occurred to shallow sediment and seafloor habitats as a result of bottom-contacting fishing practices, especially beam trawling (OSPAR 2017). Around the UK, coastal and offshore seabed sediment habitats such as sands and muds are impacted by a range of activities, however the spatial extent of damage generated by bottom trawling activity, which may damage ecosystem functioning, is considered to the main source of pressure on benthic environments with an appropriate indicator developed for the updated assessment of GES (Defra 2022). In 2018, the levels of physical damage to soft sediment habitats were consistent with the achievement of GES in UK waters to the West of the Celtic Seas, but not in the Celtic Seas or in the Greater North Sea.

[44] Wales Biodiversity Partnership - Marine Mammals (biodiversitywales.org.uk)
[45] Protecting Marine Mammals in the UK and Abroad - Environment, Food and Rural Affairs Committee (parliament.uk)

Biodiversity & Ecosystems: Seabirds	The fourth Breeding Seabird census (2023) counted over eight million seabirds breeding in Britain and Ireland. Overall, the results from Seabirds Count show a mixed picture when looking at the direction and extent of population change in Britain and Ireland's breeding seabird populations. The overall picture is one of decline. Eleven of the 21 species have declined by over 10% since the previous census. However, the breeding populations of five species have increased by over 10% and a further five have remained stable.[46] A report[47] released by the RSPB quantifies the impact of Highly Pathogenic Avian Influenza (HPAI) on UK seabirds since it was first recorded in the country in summer 2021. The report highlights significant declines in numbers of Gannets, Black-headed Gulls, Lesser Black-backed Gulls, Common Terns and Sandwich Terns across Wales. Populations of some waterbird species continue to decline, with numbers reduced at principal sites (those supporting more than 75,000 birds) on both the east and west coasts of the UK. Climate change is thought to be one of the biggest drivers of broad scale changes in wintering numbers and distributions; milder weather around the Baltic is likely shortening time many species spend in the UK, low numbers and poorer breeding success could be the result of adverse weather at breeding locations in Russia, while climate change is also thought to be leading to short-stopping in migration journeys of some species (e.g. European white fronted goose and goldeneye) and influencing colonisation by egrets. At a site-specific level, pressures such as coastal human disturbance and development at estuaries can affect numbers (Frost et al. 2020).
Biodiversity & Ecosystems: Fish Stocks	The latest updated assessment towards achieving good environmental status was produced in 2019 (DEFRA) and reported that demersal fish communities were recovering from over-exploitation in the past, but GES had not yet been achieved in either the Greater North Sea or the Celtic Seas, nor would be achieved for all fish communities by 2020. A partial assessment of pelagic shelf fish did not provide a clear result. ICES advise that several North Sea stocks are harvested unsustainably (e.g. cod, whiting, haddock, mackerel, and blue whiting). However, in both regions, recent trends in the number of sensitive species increasing in abundance suggest an improving situation and further decline in the population abundance of sensitive fish species has been halted (OSPAR Intermediate Assessment, 2017[48]).

[46] Seabirds Count | JNCC - Adviser to Government on Nature Conservation
[47] RSPB HPAI seabird counts report_Feb24.pdf
[48] https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/biodiversity-status/fish-and-food-webs/recovery-sensitive-fish/

Biodiversity & Ecosystems: Nature Recovery Network	The Welsh Government's Nature Recovery Action Plan for Wales has as one of its five themes, "Maintaining and Enhancing Resilient Ecological Networks". The plan identifies a broad range of initiatives, including mapping opportunities for the restoration of habitat.
Biodiversity & Ecosystems: Climate change adaptation risks and opportunities for biodiversity	Supporting Trend Data: The Independent Assessment used to help inform the third UK Climate Change Risk Assessment (CCRA3) assesses 61 risks and opportunities from climate change to Wales, including to business, infrastructure, housing, the natural environment, our health and risks from the impacts of climate change internationally. Risks categorised as "More action needed" and "Further investigation" are more urgent than "Watching brief" and "Sustain current action." Of these 61 risks and opportunities, more action is needed in Wales now to address 32 of them, with sustaining current action only deemed appropriate in five cases. Of the 61, six issues are deemed to be both a risk and opportunity, four of which are associated with the natural environment and each of these require more action or further investigation. There are also eight opportunities that could arise from climate change in Wales, with half of these also related to the natural environment.[49]

[49] CCRA-Evidence-Report-Wales-Summary-Final.pdf (ukclimaterisk.org)

B.2 Water Quality and Resources

Table 2: Water Quality and Resources

Sustainability Topic / Baseline	Wales	Plan Area
Water Quality and Resources: Protection of waterbodies	The EU WFD is transposed into Welsh law through The Water Environment (WFD) (England and Wales) Regulations 2017. Since the UK left the EU, these regulations have remained in place. The purpose of the Directive is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. Groundwater is an important natural resource that supports river flows as well as ecological diversity in rivers, lakes and wetlands. It is also available for use, across Wales, for water supply by abstraction from boreholes, wells and springs. All EU member states, and the UK, aim to ensure that all aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands reach 'good' chemical and ecological status by 2027. The WFD specifies the quality elements that can be used to assess the surface water status of a water body. Quality elements can be biological (e.g. fish, invertebrates, plants), chemical (e.g. heavy metals, pesticides, nutrients) or indicators of the condition of the habitats and water flows and levels (e.g. presence of barriers to fish migration, modelled lake level data) (JNCC 2021[50]).	
	The latest data available (2023) finds that, in Wales, the quality status of water bodies assessed under the WFD were[51]:	There are 29 river waterbodies within the plan area with the following overall quality status'[54]:

[50] Joint Nature Conservation Committee (2021) B7. Surface water status. Available: UKBI - B7. Surface water status | JNCC - Adviser to Government on Nature Conservation

[51] UK Biodiversity Indicators 2023. Indicator B7: Surface water status | JNCC Resource Hub

[54] Data Map Wales (2023) Water Framework Directive (WFD) River Waterbody Catchments Cycle 3 (2023)Water Framework Directive (WFD) River Waterbody Catchments Cycle 3 | DataMapWales (gov.wales)

	Lakes: High – 1% Good – 18% Moderate – 65% Poor – 15% Bad – 2% Rivers and Canals: High – 0% Good – 44% Moderate – 47% Poor – 8%	High - 0 Good - 15 Moderate - 12 Poor - 2 Bad – 0 There is one lake waterbody within the plan area which has an overall waterbody quality status of moderate[55]. There are three canals within the plan area which all have an overall quality status of moderate[56].

[55] Data Map Wales (2023) Water Framework Directive (WFD) Lake Waterbodies Cycle 3. Available: Water Framework Directive (WFD) Lake Waterbodies Cycle 3 | DataMapWales (gov.wales)
[56] Data Map Wales (2023) Water Framework Directive (WFD) Canal Waterbodies Cycle 3. Available Water Framework Directive (WFD) Canal Waterbodies Cycle 3 | DataMapWales (gov.wales)

	Bad – 1% Estuaries and Coastal: High – 2% Good – 20% Moderate – 75% Poor – 4% Bad – 0% As of 2021, in Wales, the quality status of groundwater bodies assessed under the WFD were: Quantitative Status[52]: Good - 100%	

[52] Natural Resources Wales / The state of our groundwater in Wales – why we monitor it and what it is telling us about groundwater levels

	Poor – 0% Chemical Status[53]: Good – 56% Poor – 44%	
	Supporting Trend Data: In the UK, there was little or no overall change in surface water status in the long-term (2009-2022) and in the short-term (2017-2022). In Wales, 40% of all surface water bodies were at good or better ecological status in 2021, compared to 31% in 2009. Across Wales, the overall trend is that groundwater levels are becoming more variable. There are fewer months recording average levels for the time of year with more evidence of extreme events (drought or wet). This suggests there is a changing resilience in resource, and effects upon contributions to river flow and water supplies may be more severe in future.[57]	
Water Quality and Resources:	River basin management plans (RBMPs) set out how organisations, stakeholders and communities will work together to improve the water environment. A RBD covers an entire river system, including river, lake, groundwater, estuarine and coastal water bodies. RBD RBMPs are designed to protect and improve the quality of the water environment. Good quality water is essential for wildlife, agriculture and businesses to thrive. It boosts regeneration (both structural and economic), recreation and tourism.	

[53] Natural Resources Wales / The state of our groundwater in Wales – An assessment of groundwater quality
[57] Natural Resources Wales / The state of our groundwater in Wales – why we monitor it and what it is telling us about groundwater levels

River Basin Management Plans	In Wales RBMPs are updated on a six yearly cycle and are prepared in consultation with a wide range of organisations and individuals. The Western Wales and River Dee 2021-2027 RBMPs were published in July 2022 noting that the River Dee is a cross-border Plan[58].	The plan area falls within the Western Wales River Basin District (RBD) Boundary. The following have been identified as the most important issues believed to threaten the current and potential future uses of the water environment[59]: • Physical modifications made to the natural environment such as poorly designed / redundant flood defences could cause changes to natural flow levels, sediment build-up and loss of habitat, • Pollution from sewage and wastewater, • Pollution from towns, cities and transport, • Pollution from rural areas, • Pollution from mines, • Changes to the natural flow and levels of water, • Invasive Non-Native Species. There are 53 surface water Drinking Water Protected Areas (DrWPA), 22 of which are at risk. There are 25 groundwater DrWPA, 4 of which are at risk.
Water Quality and Resources: Eutrophication of marine waters	The UK has mostly achieved its aim of Good Environmental Status for eutrophication. The majority of UK waters do not experience significant eutrophication – the eutrophication problems are restricted to a small number of areas in coastal waters, primarily estuaries and embayments with restricted water circulation.	

[58] Natural Resources Wales (2022) Dee and Western Wales river basin management plans 2021-2027. Available: Natural Resources Wales / Dee and Western Wales river basin management plans 2021-2027

[59] Natural Resources Wales (2022) Western Wales RBMP 2021-2027. Available: Western Wales RBMP 2021_2027 Summary (naturalresourceswales.gov.uk)

	In Wales there are a limited number of areas on the south-west coast where inputs of nutrients of anthropogenic origin (notably nitrate and phosphate from agriculture and urban waste water sources) have resulted in nutrient enrichment in some small estuaries and bays. In general, changes in nitrogen and phosphorus inputs, concentrations of contaminants, chlorophyll concentrations and oxygen levels show improvements. Where measures have been taken to reduce nutrient inputs, it may take a long time to result in the desired outcome due to time lags between taking measures and change in the large reservoirs of nitrogen that have built up in soils and ground-waters in previous decades. However, the existing programmes for assessing the eutrophication status for coastal and marine waters developed under the WFD and the OSPAR Convention have to a large extent already been applied successfully with the UK largely achieving GES in the latest 2018 assessment[60].
Water Quality and Resources: Hazardous substances in marine waters	The UK has largely achieved its aim of GES for contaminants. The updated assessment of achieving GES with respect to descriptor 8 (Defra 2019) indicates that concentrations of hazardous substances in the Celtic Seas and the Greater North Sea and their biological effects are generally meeting agreed target thresholds which means they are at levels that should not cause harm to sea life (89% for contaminant concentrations and 96% for biological effects)[61]. Highly persistent legacy chemicals are the cause of the few failures, mainly in coastal waters close to polluted sources. Heavy metals (mercury, cadmium, and lead), polycyclic aromatic hydrocarbons (PAHs), organotins and synthetic substances such as polychlorinated biphenyls (PCBs) and polybrominated diphenyl ethers (PBDEs) are routinely measured for OSPAR. Measurements focus on marine sediments and on organisms in which these contaminants tend to accumulate or through which they biomagnify up the food chain. Contaminant concentrations have continued to decrease in the majority of areas assessed within the OSPAR area. Although concentrations are generally below levels likely to harm marine species, they mostly have not yet reduced to background levels. Concerns remain in some localised areas with respect to high levels of mercury, lead, and certain PCB compounds and locally increasing concentrations of PAHs and cadmium in open waters[62].

[60] United Kingdom Marine Monitoring and Assessment Strategy (2018) Eutrophication. Available: https://moat.cefas.co.uk/pressures-from-human-activities/eutrophication/
[61] Department for Environment, Food and Rural Affairs (2019) Marine Strategy Part One: UK updated assessment and Good Environmental Status. Available: Marine Strategy Part One: UK updated assessment and Good Environmental Status (publishing.service.gov.uk)
[62] OSPAR Assessment Portal (2017) Contaminant concentrations are decreasing, but concerns remain. Available: https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/key-messages-and-highlights/contaminant-concentrations-are-decreasing-concerns-remain/

Water Quality and Resources: Bathing Water Quality	The Bathing Water Directive (76/160/EEC) is to protect public health and the environment. The Directive sets a number of microbiological and physico-chemical standards that bathing waters must either comply with ('mandatory' standards) or endeavour to meet ('guideline' standards). The Bathing Water Directive is transposed into law in all of the United Kingdom's devolved nations and is administered in Wales by Natural Resources Wales. Although the UK has left the EU, the Bathing Water Regulations still apply.	
	109 designated bathing waters were sampled and classified during the 2023 bathing season. The quality status of bathing water areas assessed under the Welsh Bathing Waters Regulations were[63]: Excellent – 80 Good – 20 Sufficient – 7 Poor - 2 In 2023, 107 out of the 109 designated Welsh bathing waters met the standards set by the Bathing Water Regulations. Two bathing waters failed to achieve the standard and were assessed as Poor.	The plan area falls within the Western Wales RBD which has 105 bathing water protected areas, 100% of which are compliant with the RBMP objective[64]. Note no spatial data is available.
	Supporting Trend Data:	

[63] Natural Resources Wales (2022) Wales Bathing Water Report 2023. Available: Wales bathing water report 2023 (naturalresources.wales)
[64] Natural Resources Wales (2022) Western Wales RBMP 2021-2027. Available: Western Wales RBMP 2021_2027 Summary (naturalresourceswales.gov.uk)

	2015 was the first year of implementing the new classification system for bathing water quality. The results of these are not directly comparable to years prior to this. In Wales, results of the 2023 bathing season remain similar to the 2022 season[65].

[65] Natural Resources Wales (2022) Wales Bathing Water Report 2022. Available: Wales bathing water report 2022 (naturalresources.wales)

B.3 Adaptation to Climate Change

Table 3: Adaptation to Climate Change

Sustainability Topic / Baseline	Wales	Plan Area
Adaptation to climate change: Climate Projections	The UK Climate Projections (UKCP18)[66] and the State of the UK Climate reports (published annually) identify the following observed trends which are attributed to climate change[67]: • The temperature in the UK in the most recent decade (2013-2022) has been on average 0.3 °C higher than the 1991-2020 average and 1.1 °C higher than the 1961-1990. Five of the 10 years 2013–2022 have been within the top 10 warmest for the UK overall, and this is the warmest 10-year period in the UK series. • The most recent decade (2013–2022) has been on average as wet as 1991–2020 (i.e. anomaly 0%) and 8% wetter than 1961–1990 for the UK overall. • For the most recent decade (2013–2022) UK winters have been 10% wetter than 1991–2020 and 25% wetter than 1961–1990, with much smaller changes for spring, summer and autumn overall. • Since the 1900s, the sea level around the UK has risen by about 18.5 cm. Over the past 30 years (1993–2022) the sea level has risen by 11.4 cm. The rate of sea-level rise is increasing, with rates over the past 30 years in several locations around the UK range from 3.0 to 5.2 mm·year−1 corrected for vertical land movement. The UKCP18 projects the following changes within the UK by the 2080-2099 decades, relative to a 1981-2000 baseline, with a medium emissions scenario[68]:	

[66] Lowe, J. A., et al. (2018): UK Climate Projections 18 Science Overview Report, Met Office, Exeter, UK. Available: https://www.metoffice.gov.uk/pub/data/weather/uk/ukcp18/science-reports/UKCP18-Overview-report.pdf
[67] State of the UK Climate 2022 - Kendon - 2023 - International Journal of Climatology - Wiley Online Library
[68] Palmer, M., et al. (2018): UK Climate Projections 18 Marine Report, Met Office, Exeter, UK. Available: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18-marine-report-updated.pdf **Wrong source. Cited doc makes no reference to average summer or winter temperatures or rainfall. Cannot find 60cm figure (maybe wouldn't be found in 'Marine Projections')**

- Average summer temperatures across the UK will increase by 1.2 – 4.5 °C ;
- Average summer rainfall will likely decrease, with projections ranging between -46 – +2%;
- Average winter rainfall will likely increase, with projections ranging between -9 – +38%, and;
- Sea levels in Cardiff will rise by around 60 cm.

National key findings for temperature, precipitation and sea level rise for the different emissions scenarios are also detailed within UKCP18 as follows:

Variable	Annual Temperature Change (°C)					Winter precipitation change (%)					Summer precipitation change (%)				
Percentile	5th	10th	50th	90th	95th	5th	10th	50th	90th	95th	5th	10th	50th	90th	95th
High emissions	0.7	0.9	1.8	2.7	3.0	-5	-5	7	21	25	-35	-31	-15	0	3
Medium emissions	0.5	0.7	1.4	2.3	2.5	-10	-7	4	17	21	-30	-26	-13	2	6
Low emissions	0.3	0.5	1.2	2.0	2.3	-8	-5	5	16	19	-28	-24	-11	1	5

Based upon the emissions scenario that would result in an increase of 4°C globally, Wales is likely to experience summer mean temperature increases of 1.1°C by the 2050's and 2.3°C by the 2080's. There is likely to be a large difference in the patterns of summer and winter rainfall in the future. Increased winter rainfall is expected as a result of increased storminess leading to intense, but short-lived, rainfall events. The projected increases in winter average rainfalls in Wales are 5% by the 2050s, 13% by the 2080s. Most importantly with respect to the FRMP, statistics show historic increases in the frequency of heavy rainfall events in UK and projected increases for the future.

Adaptation to climate change: Flood Risk	The latest Climate Change projections from the UK Met Office forecast a rise in sea level, increased winter precipitation and an increase in the frequency and intensity of extreme rainfall events, which will further increase flood risk in the UK[69].	
	In 2022, the UK CCRA3 Summary for Wales[70] estimated that there were 148,000 people at significant risk of flooding in Wales (1 in 1000-year return period, 46,000 of these from fluvial, 10,000 from coastal and 91,000 from surface water flooding[71]. Assuming no population growth and a continuation of current levels of adaptation, by the 2080s, the projections from the CCRA suggest 142,000 people under a 2 degree scenario and 209,000 people under a 4 degree scenario would be living in areas of Wales at a 1-in-75 or greater chance of flooding in any given year.[72] Considerable advances have been made regarding the strategic management of flood risk at national and local levels since CCRA2 and whilst flood events have occurred, a larger number of properties have been protected than affected. Despite this, the number of assets and length of existing infrastructure networks located in areas exposed	Note the issues and data set out in the draft LFRMSP.

[69] Met Office (2022) UK Climate Projections: Headline Findings. Available: ukcp18_headline_findings_v4_aug22.pdf (metoffice.gov.uk)
[70] Dr. Alan Netherwood. Netherwood Sustainable Futures (2022) Evidence for the third UK Climate Risk Assessment (CCRA3): Summary for Wales. Available at: https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Wales-Summary-Final.pdf
[71] Sari Kovats & Rachel Brisley (2022) UK Climate Risk Independent Assessment (CCRA3) Technical Report. Chapter 5: Health, Communities and the Built Environment. Available at: https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA3-Chapter-5-FINAL.pdf
[72] Committee on Climate Change (2016) *UK Climate Change Risk Assessment 2017 Evidence Report: Summary for Wales.* Available: UK-CCRA-2017-Wales-National-Summary.pdf (theccc.org.uk)

	to a high risk of river or surface water flooding is projected to increase with climate change, including in areas previously not at risk.[73] Between 50cm and 1 meter of sea level rise is expected over the course of the rest of the century, increasing the likelihood of a severe 1-in-100 year coastal flood in west Wales to between a 1-in-10 and 1-in-20 annual chance. The number of assets and length of existing infrastructure networks located in areas exposed to a high risk of flooding from the sea is projected to significantly increase with climate change.[74]	
	The National Strategy for Flood and Coastal Erosion Risk Management in Wales (2020)[75] sets out how risks from flooding and coastal erosion will be managed across Wales. It sets objectives and measures for all partners to work towards over the next decade. The UK Climate Change Risk Assessment 2017 states that more ambitious approaches to adaptation could offset increases in expected annual flood damage if global warming is limited to 2°C. However, within this national projection local impacts will vary considerably. Improving protection for some communities will be possible whilst others will face the prospect of significantly increased risks. This will affect property values, business revenues and in extreme cases the viability of communities. Risks to communities and local economies are	

[73] Dr. Alan Netherwood. Netherwood Sustainable Futures (2022) *Evidence for the third UK Climate Risk Assessment (CCRA3): Summary for Wales*. Available at: https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Wales-Summary-Final.pdf

[74] Committee on Climate Change (2016) *UK Climate Change Risk Assessment 2017 Evidence Report: Summary for Wales.* Available: UK-CCRA-2017-Wales-National-Summary.pdf (theccc.org.uk)

[75] 40996 National Strategy for Flood and Coastal Erosion Risk Management in Wales (English) (gov.wales)

	closely linked to the resilience of local infrastructure, in particular energy, transportation and communications systems. Warming of 4°C or more implies inevitable increases in flood risk across all UK regions even in the most ambitious adaptation scenarios considered.[76]
Adaptation to climate change: Location of Fluvial and Tidal Floodplains & Shoreline Management Plans (SMPs)	In Wales, flood risk is assessed under the Planning Policy Wales Technical Advice Note (TAN) 15: Development and Flood Risk [77]. Flood risk from rivers and seas is categorised into three zones for planning purposes: Direct new development to areas at minimal risk of flooding – areas in Zone 1; Enable resilient development in areas served by formal flood risk management defences that reduce the risk and consequences of flooding over the lifetime of development – areas in the TAN 15 Defended Zones; Allow resilient development in undefended areas of relatively low risk – areas in Zone 2; Only permit water compatible development, essential infrastructure, and less vulnerable developments by exception in areas of higher risk – areas in Zone 3. Further detail on each flood zone of risk shows: Rivers – Flood Zone 2: Areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from rivers in a given year, including the effects of climate change. Rivers – Flood Zone 3: Areas with more than 1% (1 in 100) chance of flooding from rivers in a given year, including the effects of climate change. Rivers & Sea – Flood Zone 2 The combined 0.1% risk of flooding from rivers and the sea including climate change. Rivers & Sea – Flood Zone 3: The combined 1% risk of flooding from rivers and the sea including climate change.

[76] Committee on Climate Change (2016) *UK Climate Change Risk Assessment 2017*. Available: Committee on Climate Change - UK Climate Change Risk Assessment 2017 Synthesis Report - July 2016 (theccc.org.uk)
[77] Planning Policy Wales Technical Advice (TAN) Note 15: Technical advice note (TAN) 15: development, flooding and coastal erosion | GOV.WALES

	Sea – Flood Zone 2: Areas with 0.1% to 0.5% (1 in 1000 to 1 in 200) chance of flooding from the sea in a given year, including the effects of climate change. Sea – Flood Zone 3: Areas with more than 0.5% (1 in 200) chance of flooding from the sea in a given year, including the effects of climate change. Surface Water and Small Watercourses – Flood Zone 2: Areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change. Surface Water and Small Watercourses – Flood Zone 3: Areas with more than 1% (1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change In Wales, over 273,000 properties are at risk of flooding from rivers, the sea and surface water with almost 400 properties also at risk from coastal erosion[78]. As noted in the LFRMSP there are 64708 residential and commercial properties in NPTCBC. Of these, 25,821 are in a flood risk area, at some level of risk from flooding. That accounts for 40% of properties at risk of flooding within the county borough. See LFRMSP for more detailed information on flood risk in the Strategy and Plan area – this also includes consideration of climate change. Shoreline Management Plans have been developed across Wales by Coastal Groups made up of members from local councils and the Natural Resource Wales[79]. The purpose of these plans is to identify the most sustainable approach to managing the flood and coastal erosion risks to the coastline in the[80]: • Short term (0-20 years) • Medium term (20-50 years) • Long term (50-100 years) Welsh SMPs cover:

[78] 40996 National Strategy for Flood and Coastal Erosion Risk Management in Wales (English) (gov.wales)
[79] Natural Resource Wales Shoreline Management Plans. Available: Natural Resources Wales / Shoreline Management Plans
[80] 40996 National Strategy for Flood and Coastal Erosion Risk Management in Wales (English) (gov.wales)

	• SMP 19 – Anchor Head to Lavernock Point • SMP 20 – Lavernock Head to Saint Ann's Head • SMP 21 – St. Ann's Head to Great Ormes Head • SMP 22 – Great Ormes Head to Scotland The SMPs propose four different management policies: • Hold the existing defence line • Advance the existing defence line • Managed realignment • No active intervention	
	Flood zones 2 and 3 are located across the whole of Wales. The largest and most extensive of these areas exist in lowland and estuarine regions, such as the River Dee and Severn estuary. Mid Wales and the highland regions, such as Snowdonia and the Bannau Brycheiniog (Brecon Beacons), have less risk of flooding[81].	Flood zones 2 and 3 are located within the plan area, the largest surrounding the River Neath, River Afan / Ffwrd Wyllt and River Kenfig[82].
	Supporting Trend Data:	

[81] Natural Resources Wales (2023) Flood risk map. Available: https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en
[82] Data Map Wales Flood Map for Planning Flood Zones 2 and 3 (May 2024). Available: Flood Map for Planning Flood Zones 2 and 3 | DataMapWales (gov.wales)

	As a consequence of climate change (which could lead to increased rainfall, river flows, and higher coastal storm surges), and development pressures, it is likely that flood risk will increase in the future, with potentially the most significant changes likely to happen in the latter half of the century.
Adaptation to climate change: Marine Spatial Plans	The Welsh National Marine Plan (WNMP)[83] was adopted in 2019. The aim of the plan is to support the shared UK vision of clean, healthy, safe, productive and biologically diverse oceans and seas. This will be delivered through the Plan's objectives supported by general, cross-cutting policies and sector-specific objectives and policies. The marine plan area around Wales is 32,000 km2 of sea, with 2,120 km of coastline. The WNMP includes policy in relation to a wide range of general considerations organised under the themes of the shared UK High Level Marine Objectives including: • Nature conservation • Water quality • Sustainable use • Seascapes • Coastal communities and economic growth • Cumulative impacts • Heritage

[83] Welsh National Marine Plan (gov.wales)

B.4 Greenhouse Gas Emissions

Table 4: Greenhouse Gas Emissions

Sustainability Topic / Baseline	Wales	Plan Area
Greenhouse gas emissions: Distribution of greenhouse gas emissions	As of 2021, UK total net GHG emissions= 426.51 MtCO2e[84].	
	As of 2021, Wales net GHG emissions were 35.98 MtCO2e and had approximately 8.4% share of total net GHG emissions in the UK.	As of 2021, Neath Port Talbot local authority area's total territorial greenhouse gas emission estimate was 7,115.4 ktCO2e[85]. Note that the greenhouse gas emissions for Neath Port Talbot reflect the large steel works present in Port Talbot. It is important to note that this steel works is currently in the process of decarbonising production through use of Electric Arc Furnace technology. See Green Steel Future | Tata Steel UK (tatasteeleurope.com) for further information.
	Supporting Trend Data: UK GHG emissions decreased overall from 1990 to 2021 driven largely by a switch from using coal and heavy-emitting fuels in the energy supply and manufacturing industries to lower emission fuels such as natural gas and, more recently, renewable sources. Household emissions that come from heating homes and travelling, for commuting, social, domestic or leisure purposes, have been the largest contributor since 2015 as the emissions from energy supply decreased[86].	

[84] National Atmospheric Emissions Inventory (2021) Greenhouse Gas Inventories for England, Scotland, Wales & Northern Ireland: 1990-2021. Available: https://naei.beis.gov.uk/reports/reports?report_id=1110
[85] UK local authority and regional greenhouse gas emissions national statistics, 2005-2021. Available: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk)
[86] https://climate-change.data.gov.uk/dashboards/emissions

	In 2019, net territorial emissions in the UK of the basket of seven greenhouse gases covered by the Kyoto Protocol were estimated to be 454.8 million tonnes carbon dioxide equivalent (MtCO2e), a decrease of 2.8% compared to the 2018 figure of 468.1 million tonnes and 43.8% lower than they were in 1990[87]. In 2020, net territorial greenhouse gas emissions in the UK were estimated to be 405.5 million tonnes carbon dioxide equivalent (MtCO2e), a decrease of 9.5% compared to the 2019 figure of 447.9 million tonnes and 49.7% lower than they were in 1990. The coronavirus (COVID-19) pandemic and the resulting restrictions introduced in 2020 across the UK had major impacts on various aspects of society and the economy, which led to a significant decrease in GHG emissions[88]. In 2021, net territorial GHG emissions in the UK were estimated to be 426.5 million tonnes carbon dioxide equivalent (MtCO2e), an increase of 5.0% from the 2020 figure of 406.3 million tonnes, but still 5.3% lower than in 2019, the most recent pre-pandemic year[89]. Provisional figures for 2022 show that despite rises in some emissions as the UK continued to recover from the COVID-19 pandemic, 2022 saw another fall in GHG emissions, largely due to a reduction in fuel use to heat buildings. This will largely be because 2022 was considerably warmer than 2021 and higher energy prices may also have been a factor, particularly towards the end of the year. Total GHG emissions are estimated to have decreased by 2.2% to 417.1 million tonnes carbon dioxide equivalent (MtCO2e) compared to 2021. Compared to 2019, the most recent pre-pandemic year, 2022 CO2 emissions are down 7.5% and total GHG emissions are down 7.4%. Total GHG emissions were 48.7% lower than they were in 1990[90]. Emissions of CO2 are by far the largest component of total UK GHG emissions, of which the largest sources are power generation and road transport. Emissions have reduced from 1990 due to fuel switching, structural change, and improvements in end-use efficiency. The strong link between power generation and CO2 emissions means that short term trends can be dominated by UK temperatures. In cold years like 1996 and

87 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957887/2019_Final_greenhouse_gas_emissions_statistical_release.pdf

88 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1051408/2020-final-greenhouse-gas-emissions-statistical-release.pdf

89 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1134664/greenhouse-gas-emissions-statistical-release-2021.pdf

90 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147372/2022_Provisional_emissions_statistics_report.pdf

	2010 there was an increase in demand for power for heating and in warm years like 2011 and 2014 there was a decrease. The second most important source of greenhouse gases is methane (CH4). Annual emissions of CH4 have reduced by over half since 1990. The main sources of CH4 are agriculture, waste disposal, leakage from the gas distribution system and coal mining. Reductions in CH4 emissions in the UK are driven by the increased utilisation of methane from landfills, a large decline in UK coal mining, investment in improvements to the natural gas supply infrastructure to reduce leakage and a reduction in livestock numbers. Emissions of nitrous oxide (N2O) have also reduced by over half since 1990. Most N2O emissions are generated from the agriculture sector, Agriculture sector N2O emissions have decreased primarily due to reduced emissions from synthetic fertiliser application. N2O is also released during the production of nitric and adipic acid, a significant source in 1990 contributing to approximately half of all N2O emissions. Due to a decline in production together with the installation of abatement equipment, the Industrial Processes and Other Product Use (IPPU) sector now only contribute around 4% of N2O emissions. The smallest percentage reduction in emissions across the time series is for the F gases: HFCs, PFCs, NF3 and SF6. F-gas emissions have decreased since 1995, due mainly to the fall in F gas manufacture in the UK and the installation of abatement equipment at two of the three UK manufacturers. These emission reductions have been to some extent offset by the increases in the use of HFCs as substitutes for ozone depleting substances, particularly in refrigeration and air conditioning[91]. In Wales, total greenhouse gas emissions increased by 7% between 2020 and 2021. However, between 1990 and 2021, there has been a decrease of 35%.[92]	
Greenhouse gas emissions: Contribution of sectors to	As of 2021, the total net GHG emissions per sector in Wales were: Agriculture: 5,736.96 ktCO2e	As of 2021, Neath Port Talbot local authority area's territorial greenhouse gas emission estimate per sector was[93]: Agriculture: 42.2 ktCO2e

[91] UK Greenhouse Gas Inventory, 1990 to 2021 (defra.gov.uk)
[92] 2021 Wales Greenhouse Gas Emissions (gov.wales)
[93] UK local authority and regional greenhouse gas emissions national statistics, 2005-2021. Available: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk)

greenhouse gas emissions	Business: 8,808.41 ktCO2e Energy Supply: 9,323.49 ktCO 2e Industrial processes: 2,272.75 ktCO2e Public: 334.75 ktCO2e Residential: 3,728.63 ktCO2e Transport: 5,420.60 ktCO2e Waste: 1,104.33 ktCO2e LULUCF: - 752.04 ktCO2e	Commercial: 46.8 ktCO2e Industrial Processes: 6,506.9 ktCO2e Public: 20.5 ktCO2e Domestic: 218.9 ktCO2e Transport: 265.7 ktCO2e Waste: 58.7 ktCO2e LULUCF: -44.4 ktCO2e
	Supporting Trend Data: Emissions in the agricultural sector accounted for 16% of Welsh total net GHG emissions and have declined by 5.4% between 1990-2021. Emissions in the industry and business sector accounted for 39% of Welsh total net GHG emissions and have declined by 37.2% between 1990-2021. Emissions in the public sector buildings sector accounted for 1% of Welsh total net GHG emissions and have declined by 65.3% between 1990-2021. Emissions in the residential buildings sector accounted for 10% of Welsh total net GHG emissions and have declined by 25.8% between 1990-2021.	

	Emissions in the electricity and heat production sector accounted for 17% of Welsh total net GHG emissions and have declined by 43.9% between 1990-2021. Emissions in the transport sector accounted for 16% of Welsh total net GHG emissions and have declined by 18.4% between 1990-2021. Emissions in the waste management sector accounted for 3% of Welsh total net GHG emissions and have declined by 69.2% between 1990-2021.[94]

[94] 2021 Wales Greenhouse Gas Emissions (gov.wales)

B.5 Air Quality and Noise

Table 5: Air Quality and Noise

Sustainability Topic / Baseline	Wales	Plan Area
Air Quality and Noise: Location of Air Quality Management Areas (AQMAs) Air Pollution Information System	Since December 1997 each local authority in the UK must review and assess air quality in their area to determine performance against national air quality objectives. Where air quality objectives are not likely to be achieved an AQMA must be declared. AQMAs are typically associated with vehicle emissions, principally oxides of nitrogen (NOx), oxides of sulphur (SO2), particulates (PM10) and Benzene (C6H6). As such, AQMAs are predominantly associated with urban areas and the road network[95]). The Air Pollution Information System provides a searchable database and information on pollutants and their impacts on habitats and species. The APIS provides pollution impact records for a variety of habitats, ecosystems and species. Each record contains information on key impacts including any critical loads or levels and a full reference list.	
	As of June 2024, there were 44 AQMAs in Wales[96]. These are all located in the south of the country. The largest AQMAs are within Swansea and Port Talbot, on the south coast. Smaller AQMAs are within Cardiff, Newport and the smaller towns within the valleys between the M4 corridor and the Bannau Brycheiniog (Brecon Beacons). These small AQMAs are associated with congestion within the town centres.	Neath Port Talbot AQMA is located within the plan area[97], covering the majority of land and properties between the Steel Works and the M4 Motorway in Taibach and Margam. It is declared for Particulate Matter PM_{10}[98].

[95] Department for Environment and Rural Affairs (2016) Current AQMAs by Source. Available: https://uk-air.defra.gov.uk/aqma/summary
[96] Welsh Government (2021) Air Quality Management Areas. Available: https://airquality.gov.wales/laqm/air-quality-management-areas
[97] Data Map Wales Air Quality Management Areas (January 2017). Available: Air Quality Management Areas | DataMapWales (gov.wales)
[98] Air Quality Wales Air Quality Management Areas. Available: Air Quality Management Areas | Air Quality In Wales (gov.wales)

	Supporting Trend Data: The quality of our air in the UK has improved considerably over the last decade. Road transport is a key source of many air pollutants, particularly in urban areas. There are two main trends in the transport sector working in opposite directions: new vehicles are becoming individually cleaner in response to European emission standards legislation, but total vehicle kilometres are increasing. Overall emissions of key air pollutants from road transport have fallen by about 50% over the last decade, despite increases in traffic, and are expected to reduce by a further 25% over the next decade. This is mainly a result of progressively tighter vehicle emission and fuel standards agreed at European level and set in UK regulations[99]. The Clean Air Plan for Wales[100] (2020) sets out a 10-year pathway to achieving cleaner air. The timescales for delivering actions are framed within three Senedd periods, short term: 2020-2021, medium term: 2021-2026 and longer term: 2026-2031.	
Air Quality and Noise: Noise Action Plan Priority / Proximity Areas	Noise is an inevitable consequence of a mature and vibrant society, but it can have a negative effect on people's quality of life, affecting their health and wellbeing[101]. Noise action plans provide a framework to manage environmental noise and its effects. They also aim to protect quiet areas in agglomerations (large urban areas) where the noise quality is good. The Environmental Noise Directive covers noise from roads, rail, aviation and industry. It requires Member States to carry out noise mapping of environmental noise sources every 5 years. The Action Plans identify Important Areas (areas exposed to the highest levels of noise) and suggests ways the relevant authorities can reduce these.	
	The Noise and Soundscape Action Plan 2018-2023 was produced for three agglomerations in Wales. The number of people whose homes are exposed to noise levels above 55 Db for Lden (24-hour period) from	As of 2017, there are 23 Noise Action Plan Priority / Proximity Areas (Road) within the plan area[103].

[99] Department for Environment and Rural Affairs (2011) The Air Quality Strategy for England. Scotland, Wales and Northern Ireland - Volume 1. Available: https://www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1
[100] 40794 The Clean Air Plan for Wales (gov.wales)
[101] Department for Environment, Food & Rural Affairs (2022) Noise management. Available: Noise management - GOV.UK (www.gov.uk)
[103] Data Maps Wales Environmental Noise Mapping 2017 – (Noise Action Plan) Priority/Proxiity Areas (Roads) (December 2017). Available: Environmental Noise Mapping 2017 - (Noise Action Plan) Priority/Proximity Areas (Roads) | DataMapWales (gov.wales)

	major roads, railways and industry, in the Cardiff and Penarth agglomeration was 46,100 people, in the Newport agglomeration 36,100 people, and in the Swansea and Neath Port Talbot agglomeration 46,800.[102]	

[102] Noise and soundscape action plan (2018-2023) https://www.gov.wales/sites/default/files/publications/2019-04/noise-and-soundscape-action-plan.pdfv

B.6 Soils, Geology, Landuse and Contaminated Land

Table 6: Soils, Geology, Landuse and Contaminated Land

Sustainability Topic / Baseline	Wales	Plan Area
Soils, Geology, Landuse and Contaminated Land: Location of Geological SSSIs / ASSIs	*Geological SSSIs are included within the SSSI information provided in Biodiversity and Ecology.*	
Soils, Geology, Landuse and Contaminated Land: National Soil Maps	Maps delineating soil types across respective regions have been published and draw from survey work and GIS techniques. In respect of the England and Wales resource the maps include soilscapes, developed from the more detailed national soil map and a series of thematic soil properties including carbon, metal binding capacity and native woodland models. The maps are developed with the purpose of effectively communicating a general understanding of the variations that occur between soil types and how soils affect the environment.	
	NATMAP (National Soil Map) is derived from the National Soil Map for England and Wales[104] and is the product of sixty years of soil survey work in England and Wales.	No data available at a local level.

[104] NATMAP - National Soil Map - data.gov.uk Lasted updated on 03 October 2013

Soils, Geology, Landuse and Contaminated Land: Contaminated Land	Of particular note across England and Wales are the numerous contaminated sites that are a legacy of current or past industrial activities. Typically, contaminated land would be found in urban areas and along major transport links, though many sites are also found in rural or coastal areas. While many sites are known, it is the case that many contaminated sites (their location and the nature of contamination) remain unknown. Across the United Kingdom, land is legally defined as 'contaminated land' where substances are causing or could cause[105]: • Significant harm to people, property or protected species, • Significant pollution of surface waters or groundwater, • Harm to people as a result of radioactivity. Some types of contaminated land are classed as 'special sites'. This includes land that: • seriously affects drinking waters, surface waters or important groundwater sources, • has been, or is being, used for certain industrial activities, such as oil refining or making explosives, • is being or has been regulated using a permit issued under the integrated pollution control or pollution prevention and control regimes, • has been used to get rid of waste acid tars, • is owned or occupied by the Ministry of Defence, • is contaminated by radioactivity, • is a nuclear site. Determination of contaminated land is made in the UK by a local council or the relevant environment agency and is best identified on a local or regional basis. It is however important to note that there will be lots of brownfield sites which are contaminated and require remediation but have not been formally designated. They will have not been assessed for designation or don't meet the threshold for designation but still pose a risk of pollution and harm. Local authorities maintain the Public Registers for the ordinary contaminated land in their area.

[105] UK Government (2021) Contaminated Land. Available: https://www.gov.uk/contaminated-land

	In 2005, estimate of around 300,000 hectares of land affected by industrial activity in England and Wales which may be contaminated. A total of 781 sites had been determined as contaminated land under Part 2A, 122 of which were in Wales by the end of March 2007. Of these, two were designated special sites. Metal and metalloids plus organic compounds were the most common pollutants identified in the significant pollutant linkages of contaminated land sites[106].	In 2005, Neath Port Talbot County Borough Council determined one site as being contaminated after inspecting the area for contaminated land under Part 2A of the Environmental Protection Act 1990 between July 2001 and December 2013[107].
	Supporting trend data not available.	
Soils, Geology, Landuse and Contaminated Land: Geoparks	Geoparks are endorsed by UNESCO and are not designated under legislation. They are locally led partnerships within areas of internationally significant geology that work to support sustainable economic development of the area, primarily through geological and eco-tourism[108]. *NB: No mapping data on Geoparks is available.*	
	There are currently two Geoparks in Wales, Fforest Fawr, located in the Bannau Brycheiniog (Brecon Beacons) in the south, and GeoMon, which encompasses the island of Anglesey in the north west[109].	There are no Geoparks identified within the plan area.
	Supporting trend data not available.	

[106] Environment Agency (2009) Dealing with contaminated land in England and Wales. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/313964/geho0109bpha-e-e.pdf
[107] Natural Resources Wales, The State of Contaminated Land in Wales (2016). Available: The State of Contaminated Land in Wales (naturalresources.wales)
[108] United Kingdom National Commission for UNESCO (2021) Global Geoparks. Available: http://www.unesco.org.uk/designation/geoparks/
[109] United Kingdom National Commission for UNESCO (2021) Global Geoparks. Available: http://www.unesco.org.uk/designation/geoparks/

Soils, Geology, Landuse and Contaminated Land:	Agricultural Land Classification classifies land into categories according to versatility and suitability for growing crops. For planning applications involving agricultural land in all parts of the UK there are statutory requirements to minimise the loss of the best quality agricultural land, and supporting evidence on land quality may have to be produced with an application.	
Agricultural Land Classification	The Welsh ALC system is the same as England's. Agricultural land is graded using the Agricultural Land Classification (ALC) system. This system classifies land into five grades according to the extent to which physical or chemical characteristics impose long term limitations on the agricultural use of a site for food production[110].	The ALC system within the plan area is the same as Wales.

[110] Natural England (2021) *Guide to assessing development proposals on agricultural land*. Available: Guide to assessing development proposals on agricultural land - GOV.UK (www.gov.uk)

B.7 Historic Environment

Table 7: Historic Environment

Sustainability Topic / Baseline	Wales	Plan Area
Historic Environment: World Heritage Sites	World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention and the sites are designated for their globally important cultural or natural interest and require appropriate management and protection measures[111].	
	There are four World Heritage Sites in Wales[112]: • Blaenavon Industrial Landscape • Castles and Town Walls of King Edward in Gwynedd • Pontcysyllte Aqueduct and Canal • The Slate Landscape of Northwest Wales	No World Heritage Sites have been identified within the plan area[113].
	Supporting Trend Data: The first World Heritage Sites within the UK were designated in 1986. Sites can continue to be nominated, with the last site on the UK mainland being The Slate Landscape of Northwest Wales, designated in 2021. Of all the sites in the UK, none are placed on the List of World Heritage in	

[111] UNESCO (2023) World Heritage Convention - United Kingdom of Great Britain and Northern Ireland. Available: http://whc.unesco.org/en/statesparties/gb
[112] UNESCO (2023) World Heritage Convention - United Kingdom of Great Britain and Northern Ireland. Available: http://whc.unesco.org/en/statesparties/gb
[113] Data Maps Wales World Heritage Sites (July 2021). Available: World Heritage Sites in Wales | DataMapWales (gov.wales)

<table>
<tr><td></td><td colspan="2">Danger. The list presently comprises 56 sites in total worldwide. These are sites at which conditions are present to threaten the characteristics for which a site was placed on the World Heritage List[114].</td></tr>
<tr><td rowspan="3">Historic Environment:

Scheduled Monuments</td><td colspan="2">Scheduling is the selection of nationally important archaeological sites which are legally protected. The monitoring and identification of sites is undertaken by Historic England. Scheduled Monuments cover the whole range of archaeological sites and are not always visible or above ground sites.

The condition of Scheduled Monuments is monitored as part of Cadw's 'Heritage at Risk' programme. Local government archaeological services, plus independent national and local heritage organisations and community groups can also play important roles in their curation, plus that of non-scheduled but nationally important monuments. It is to be noted that a monument not designated as a Scheduled Monument does not necessarily imply that it is not of national importance.</td></tr>
<tr><td>As of 2023, there are over 4,000 Scheduled Monuments located throughout Wales[115].</td><td>There are approximately 86 Scheduled Monuments located within the plan area[116].</td></tr>
<tr><td colspan="2">Supporting Trend Data:

Applications for sites to be Scheduled can be made at any time and is an ongoing process. Since 2007 the number of Scheduled Monuments has increased by approximately 400 in Wales. Wales has an ongoing planned policy of enhancing the number of sites on the Schedule.</td></tr>
<tr><td>Historic Environment:</td><td colspan="2">Conservation Areas are designated for their special architectural and historic interest. They were first designated in 1967 with now over 500 in Wales[117]. There are many different types including:</td></tr>
</table>

[114] UNESCO (2023) World Heritage Convention – List of World Heritage in Danger. Available: https://whc.unesco.org/en/danger/
[115] Welsh Government (2023) DataMap Wales: Scheduled Monuments. Available: https://datamap.gov.wales/layers/inspire-wg:Cadw_SAM
[116] Data Map Wales Scheduled Monuments (Jan 1901). Available: Scheduled Monuments | DataMapWales (gov.wales)
[117] Welsh Government (2023) Conservation Areas. Available: https://cadw.gov.wales/advice-support/placemaking/legislation-and-guidance/conservation-areas

Listed Buildings and Conservation Areas	• the centres of our historic towns and cities • fishing and mining villages • 18th and 19th-century suburbs • model housing estates • country houses set in their historic parks • historic transport links and their environs, such as stretches of canal Most Conservation Areas are designated by the local planning authority and as such are best identified on a local basis. Listing of buildings is concerned with recognising buildings' special architectural and historic interest, with a view to protecting buildings, under the planning system for future generations to enjoy. All buildings built before 1700 which survive in anything like their original condition are listed, as are most of those built between 1700 and 1840. After about 1840, only buildings of definite quality and character are listed. Buildings which are less than 30 years old are normally listed only if they are of exceptional quality and under threat[118]. There are three categories of listed building: • Grade I buildings are of exceptional interest, • Grade II* buildings are particularly important, • Grade II buildings are of special interest[119].	
	There are over 30,000 listed buildings in Wales[120].	There are six conservation areas within the plan area[121].

[118] Welsh Government (2018) understanding Listing in Wales. Available: https://cadw.gov.wales/sites/default/files/2019-05/Understanding%20Listing%20in%20Wales.pdf
[119] Welsh Government (2023) DataMapWales: Listed Buildings. Available: https://datamap.gov.wales/layers/inspire-wg:Cadw_ListedBuildings
[120] Welsh Government (2023) DataMapWales: Listed Buildings. Available: https://datamap.gov.wales/layers/inspire-wg:Cadw_ListedBuildings
[121] Data Map Wales Conservation Areas (September 2022). Available: Conservation Area Boundaries | DataMapWales (gov.wales)

		There are approximately 398 listed buildings within the plan area[122]: • 7 Grade I • 354 Grade II • 37 Grade II*
Historic Environment: Historic Battlefields	The Inventory of Historic Battlefields in Wales is a non-statutory Inventory which means there is no primary legislation enacted to protect entire battlefields. The public recognised the importance of these sites and supported their record. The are defined as: "An area or location, terrestrial or marine, where a conflict occurred, involving military forces."[123]	
	As of 2023, there are over 700 sites on the Inventory of Historic Battlefields in Wales[124].	No spatial data is available at a local level.
	Supporting Trend Data: Public consultation demonstrated strong public support for the recognition of the importance of Historic Battlefields in Wales and the inventory was only recently created following legislation introduced in 2016.	
Historic Environment:	In Wales, Cadw maintains the Register of Parks and Gardens of Special Historic Interest. NB: No mapping data is available for Wales.	

[122] Welsh Government (2023) DataMapWales: Listed Buildings. Available: https://datamap.gov.wales/layers/inspire-wg:Cadw_ListedBuildings
[123] Cadw Historic Battlefields in Wales. Available: Historic battlefields in Wales | Cadw (gov.wales)
[124] Cadw (2023) Historic Battlefields in Wales. Available: https://cadw.gov.wales/advice-support/historic-assets/other-historic-assets/historic-battlefields-wales

Registered Parks and Gardens	As of 2023, there are nearly 400 sites on the Register of Parks and Gardens of Special Historic Interest in Wales[125].	Registered Parks and Gardens in Neath Port Talbot include 'Margam Park', 'The Gnoll', 'Rheola' and 'Jersey Park'. In addition, there are a range of other country parks such as Afan Forest Park and Craig Gwladus Woods, as well as a number of urban parks: • Aberavon Sea Front, Port Talbot • Baglan Park, Baglan • Bryn Park, Bryn • King George V Park, Pontardawe • Melyn Park, Melyn, Neath • Mount Pleasant, Hillside • Parc-y-Darren, Ystalyfera • Parc-y-Llyn, Cwmavon • Parc-y-Werin, Gwaun-Cae-Gurwen • Talbot Memorial Park, Port Talbot • Tollgate Park, Margam • Vivian Park, Port Talbot Ornamental parks include Jersey Park, Talbot Memorial Park, Victoria Gardens and Vivin Park.
	Supporting trend data is not available.	
Historic Environment:	Landmap is a unique national information system which provides information on the landscape quality in Wales. The data shows the historical landscape classification for Wales[126]. The land is classified in four different stages with the first two as:	

[125] Cadw (2023) Registered Historic Parks and Gardens. Available: https://cadw.gov.wales/advice-support/placemaking/legislation-guidance/registered-historic-parks-and-gardens

[126] Data Map Wales Landmap Historic Landscape (June 2024). Available: Landmap Historic Landscape | DataMapWales (gov.wales)

Landmap Historic Landscape	Classification 1: Rural / Built Environment Classification 2: Agricultural / Industrial / Non Agricultural / Other Built Environment / Settlement Classification 3 provides a higher level of detail and classification 4 even more detail for specific groupings.	
	There are 2625 different Landmap sites in Wales (1145 Agriculture, 105 Industrial, 608 Non-Agricultural, 276 Other Built Environment, 491 Settlement)[127].	There are approximately 65 sites within the plan area (21 Agricultural, 9 Industrial, 23 Non- Agricultural, 9 Other Built Environment, 3 Settlement).
Historic Environment: Archaeological Sites	The Ancient Monuments and Archaeological Areas Act 1979 allows the Government to designate as an area of archaeological importance any area which appears to merit treatment as such. In Wales there is no such designation however, approximately 200,000 archaeological sites are on record[128]. NB: No mapping data is available.	
Historic Environment: Protected Wrecks	The Protection of Wrecks Act (1973)[129] allows the Government to designate a wreck to prevent uncontrolled interference. Designated sites are identified as being likely to contain the remains of a vessel, or its contents, which are of historical, artistic or archaeological importance[130].	
	There are six Wrecks of Wales. These are primarily located around the north west and north coast, with one being located off Pembrokeshire in the south west[131]. Despite there being numerous maritime wrecks in the	No protected wrecks have been identified within the plan area.

[127] Data Map Wales Landmap Historic Landscape (June 2024). Available: Landmap Historic Landscape | DataMapWales (gov.wales)
[128] CBHC RCAHMW Archaeological Sites Record. Available: Sites (119755) | Coflein
[129] UK Government (1973) *Protection of Wrecks Act 1973.* Available: https://www.legislation.gov.uk/ukpga/1973/33
[130] Historic England (2023) Protected Wreck Sites. Available: https://www.historicengland.org.uk/advice/planning/consents/protected-wreck-sites/
[131] Data Map Wales Protected Wrecks (July 2017). Available Protected Wrecks | DataMapWales (gov.wales)

	seas around Wales with historic value, these six are the only ones currently with legal protection.	
	Supporting trend data is not available.	
Historic Environment: Registered Historic Landscapes	To recognise the value of historic landscapes and to raise awareness of their importance, Cadw has compiled a register of landscapes of historic interest in Wales. It is a non-statutory, advisory register which aims to aid the protection and conservation of these landscapes.	
	Cadw have identified 58 landscapes of outstanding or special historic interest, which are considered to be the best examples of different types of historic landscapes in Wales[132].	Three Historic Landscapes have been identified within the plan area: • Margam Mountain • Merthyr Mawr, Kenfig & Margam Burrows • The Rhondda
Historic Environment: Roman Roads	Roman Roads are roads built by the ancient Romans, typically paved and following a predominantly straight route. Following the Roman invasion of Britain in AD 43, the Roman army constructed about 2,000 miles of Roman roads in Britain[133].	
	Major Roman Roads evident in Wales include: • Sarn Helen across the Bannau Brycheiniog (Brecon Beacons) • A road between Llandovery and Trecastle[134].	Roman roads have been identified passing through the plan area however, no spatial data is available to provide detail. One passes between Neath and Brecon, while another linked Cardiff to Carmarthen[135].

[132] Cadw (2023) Registered Historic Landscapes. Available: https://cadw.gov.wales/advice-support/historic-assets/conservation-areas-and-other-historic-assets/other-historic-assets-0

[133] English Heritage *Roads in Roman Britain*. (Accessed 17/07/2023) Available: Roads in Roman Britain | English Heritage (english-heritage.org.uk)

[134] Cadw (2023) *The Romans in Wales.* Available: Roman | Cadw (gov.wales)

[135]Anglo Saxon History. Available: Roman Roads in Wales and the Welsh Borders centered on Llanidloes in Powys (saxonhistory.co.uk)

B.8 Landscape

Table 8: Landscape

Sustainability Topic / Baseline	Wales	Plan Area
Landscape: National Parks	In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales. In addition, the Environment Act 1995 requires relevant authorities to have regard for nature conservation. Special Acts of Parliament may be used to establish statutory authorities for their management (e.g. the Broads Authority was set up through the Norfolk and Suffolk Broads Act 1988). Note that every National Park is required to prepare and publish a National Park Management Plan which formulates its policy for the management of the relevant National Park and for the carrying out of its functions in relation to that National Park and note needs to be made of these in relation to any National Park that may be affected.	
	There are three National Parks in Wales[136]: • Bannau Brycheiniog (Brecon Beacons) • Pembrokeshire Coast • Snowdonia	Bannau Brycheiniog National Park is located adjacent to the north east of the plan area[137].
	Supporting trend data is not available.	

[136] National Parks UK (2023) Your National Parks. Available: https://www.nationalparks.uk/parks/
[137] Data Map Wales National Parks (June 2023). Available: National Parks | DataMapWales (gov.wales)

<table>
<tr><td rowspan="2">Landscape:

National Landscapes</td><td colspan="2">Please note as of 2023, Areas of Outstanding Natural Beauty (AONB) have been renamed as National Landscapes. Some of the information below may still reference AONBs[138].

The primary purpose of the AONB designation was to conserve natural beauty – which by statute includes wildlife, physiographic features and cultural heritage as well as the more conventional concepts of landscape and scenery. Account was taken of the need to safeguard agriculture, forestry and other rural industries and the economic and social needs of local communities. AONBs have equivalent status to National Parks as far as conservation is concerned.

National Landscapes however are living places and take into account the physical geography in a landscape, incorporating all aspects of place: the unique combination of landform, climate and geology determines which species thrive, which industries grow, and therefore the heritage, language and culture of the individual place. National Landscapes are designated AONB.

There are 46 National Landscapes within the UK[139]

National Landscapes are protected under the National Parks and Access to the Countryside Act 1949, amended in the Environment Act 1995. The Countryside and Rights of Way Act 2000 clarifies the procedure and purpose of designating AONBs[140].</td></tr>
<tr><td>There are five National Landscapes within Wales, covering around 5% of the nation’s land area[141]:

• Anglesey
• Clwydian Range and Dee Valley
• Gower
• Llyn</td><td>No National Landscapes are within the plan area.</td></tr>
</table>

[138] National Landscapes Association. Available: National Landscapes - Welcome to National Landscapes (national-landscapes.org.uk)
[139] National Landscapes Association. Available: National Landscapes - Home (zscaler.com)
[140] National Landscapes Association FAQs. Available: National Landscapes - FAQ (national-landscapes.org.uk)
[141] The National Association of Areas of Outstanding Natural Beauty (2023) Areas of Outstanding Natural Beauty. Available: http://www.landscapesforlife.org.uk/

	• Wye Valley	
	Supporting trend data is not available.	
Landscape: Heritage Coasts (England and Wales)	A Heritage Coast is a section of coast exceeding one mile in length that is of exceptionally fine scenic quality, substantially undeveloped and containing features of special significance and interest. The designation is agreed between local authorities and (in Wales) Natural Resources Wales, as an aid to local authorities in planning and managing their coastlines[142]. These sites were set up to protect coastlines from insensitive developments. Most are defined by the coastline between two named points, however some have clearly defined inland boundaries. Their status carries no legal protection, but planning authorities must take the designation into account when making decisions on development. Most of the Heritage coastal strips were defined in 1973, 1974 and one in 1984[143].	
	There are 14 Heritage Coasts located around Wales that occupy about a third of the Welsh coastline, that is 500km[144]: • Aberffraw Bay • Ceredigion Coast • Dinas Head • Glamorgan Coast • Gower • Great Orme	There are no heritage coast sites identified within the plan area.

[142] Natural England (2015) Heritage coasts: definition, purpose and Natural England's role. Available: https://www.gov.uk/government/publications/heritage-coasts-protecting-undeveloped-coast/heritage-coasts-definition-purpose-and-natural-englands-role
[143] Data Map Wales Heritage Coasts (November 2022). Available: Heritage Coasts | DataMapWales (gov.wales)
[144] Welsh Government (2023) Heritage Coasts: Natural Resources Wales. Available: https://datamap.gov.wales/maps/new?layer=inspire-nrw:NRW_HERITAGE_COAST#/

	• Holyhead Mountain • Llŷn Coast • Marloes and Dale • North Anglesey Coast • St Bride's Bay • St David's Peninsula • St Dogmaels and Moylgrove • South Pembrokeshire	
	Supporting trend data is not available.	
Landscape: Landscape Character Areas	Landscape Character Areas or Landscape Character Assessments encompass various aspects of landscape, biodiversity, heritage, cultural and geological features. These are non-statutory and used as an aid in the planning process and for decision making.	
	Natural Resources Wales uses the LANDMAP tool to evaluate landscape characteristics. This includes geological landscape, landscape habitats, visual and sensory, historic landscape (as referenced in Table B.7) and cultural landscape[145]. Although no specific defined Landscape Character Areas are identified, LANDMAP is used to inform planning, policy and strategies.	Spatial data available on the Data Map Wales website[146].

[145] Natural Resources Wales (2023) LANDMAP – the Welsh landscape baseline. Available: https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline/?lang=en

[146] Data Map Wales LANDMAP (2024) Available: Data catalogue | DataMapWales (gov.wales)

	Supporting trend data is not available.	
Landscape: National Landscape Character Area	National Landscape Character Areas are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment. National Character Area profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain inform the delivery of nature improvement areas and encourage broader partnership working through local nature partnerships. National Seascape Character Areas are also defined to support decision making through the marine planning process. The Welsh equivalent to this is the National Marine Character Areas which highlight the key natural, cultural and perceptual influences that make the character of each seascape distinct and unique[147].	
	Wales defines 48 National Landscape Character Areas (NLCAs) which highlight what distinguishes one landscape from another, with reference to their regionally distinct natural, cultural and perceptual characteristics[148]. In 2014, Welsh Government and Natural Resources Wales undertook a Seascape Assessment for the Welsh Inshore Waters. Wales inshore waters are divided into 29 Marine Character Areas[149].	Two of the 28 NLCAs intersect the plan area[150]: • South Wales Valleys • Swansea Bay One of the 29 National Marine Character Areas intersects the plan area[151]: • Swansea Bay and Porthcawl

[147] Natural Resources Wales (2022) *Marine Character Areas.* Available: https://naturalresources.wales/evidence-and-data/maps/marine-character-areas/?lang=en
[148] Natural Resources Wales (2019) *National Landscape Character Areas (NLCA).* Available: https://naturalresources.wales/evidence-and-data/maps/nlca/?lang=en
[149] Natural Resources Wales (2022) *Marine Character Areas.* Available: https://naturalresources.wales/evidence-and-data/maps/marine-character-areas/?lang=en
[150] Data Map Wales National Landscape Character Areas (September 2023). Available: National Landscape Character Areas | DataMapWales (gov.wales)
[151] Data Map Wales National Marine Character Area (June 2017). Available: National Marine Character Areas | DataMapWales (gov.wales)

	Supporting trend data is not available.	
Landscape: Green Belt	The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping some land permanently open around urban areas[152].	
	As of 2018, one Green Belt has been designated in Wales between Newport and Cardiff. Planning Policy Wales (Edition 5) 2012 (PPW) sets the context for managing urban form in Wales by means of Green Belts and Green Wedges. Land within a Green Belt should be protected for a longer period than the current development plan period, whereas Green Wedge policies should be reviewed as part of the development plan review process. Land to the north of Cardiff and land around Swansea are designated as Green Wedges. [153]	No spatial data is available at a local level.
	An inquiry by the Housing, Communities and Local Government Committee called for a review to "examine the purpose of the Green Belt". The Committee noted that stakeholders were divided on whether Green Belt land should "never be built on" or constituted "an anti-growth mechanism". Many local authorities are in the process of carrying out Green Belt reviews as part of their Local Plan or local plan review preparation. These are likely to be concluded within the next few years, allowing the local authorities to set in place policies to release Green Belt land over the next 25-30 years, where 'exceptional circumstances' can be demonstrated. This suggests further reductions in the total area of Green Belt land are to be anticipated.	

[152] Department for Levelling Up, Housing and Communities (2012) *National planning policy framework.* Available: National Planning Policy Framework - 13. Protecting Green Belt land - Guidance - GOV.UK (www.gov.uk)
[153] Landscape Institute (2018) *Green Belt Policy.* Available: li-green-belt-briefing-apr-2018.pdf (windows.net)

B.9 Communities – Population, Employment and Viability

Table 9: Communities - Population, Employment and Viability

Sustainability Topic / Baseline	Wales	Plan Area
Communities – Population, Employment, and Viability: Population	The population in the UK is measured through the Census. This provides an estimate of the overall population the UK and its distribution within countries and regions. The last Census was undertaken in 2021[154]. The Office for National Statistics (ONS) also provides mid-year population estimates which provide annual and more recent data.	
	The population of Wales in mid-2022 is estimated at 3,131,640 which accounts for 5% of the UK's population[155].	In Neath Port Talbot, the population in mid-2022 is estimated to be 142,158[156]. Neath Port Talbot's population increased by around 2,500 between the last two censuses (held in 2011 and 2021), with a greater percentage increase than the overall population increase in Wales.
	Supporting Trend Data: The UK population at mid-2021 was estimated to be 5.9% greater than the population in mid-2011. Over these 10 years, the population of Wales increased by 1.4% over the same 10 year period[157].	

[154] Office for National Statistics (2023) Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2021. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

[155] Office of National Statistics (2023) Estimates of the population for the UK, England, Wales, Scotland and Northern Ireland. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

[156] Office of National Statistics (2023) Estimates of the population for England and Wales. Available: Estimates of the population for England and Wales - Office for National Statistics (ons.gov.uk)

[157] Office for National Statistics (2023) *Population estimated for the UK, England, Wales, Scotland and Northern Ireland: mid-2021.* Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2021

	The population of England and Wales at mid-year 2022 was estimated to be 60.2 million, an increase of around 1% since mid-year 2021. Wales grew by 0.8% (26,000) during this time, with the rate of population change occurring at a much higher rate than over the last decade[158]. In Neath Port Talbot, the population size has increased by 1.8% from around 139,800 in 2011 to 142,300 in 2021. This is higher than the overall increase for Wales (1.4%)[159]
Communities – Population, Employment, and Viability: The location of major settlements	The densest areas of population within the UK are within towns and cities.

[158] Office for National Statistics (2023) *Population estimates for England and Wales: mid-2022.* Available: Population estimates for England and Wales - Office for National Statistics (ons.gov.uk)

[159] Office for National Statistics (2023) How the population changed in Neath Port Talbot: Census 2021. Available: Neath Port Talbot population change, Census 2021 – ONS

and areas of population.	The most populated area of Wales is the south coast, where the large urban areas of Cardiff, Newport, Bridgend and Swansea are located. The north coast has fewer major urban settlements, however areas of population are present in Rhyl, Colwyn Bay and Bangor. Central and western Wales have smaller towns and villages distributed throughout the regions. (GIS Mapping)	As of March 2021, Neath Port Talbot had a population density of 323 persons per square kilometre[160]. The more densely populated areas are in settlements towards the south coast in Port Talbot, Britton Ferry, Neath, Skewen, as well as settlements further North in Pontardawe and Glyn-neath.
	Supporting trend data is not available.	
Communities – Population,	Using the 2021 Census, the Office for National Statistics compared the age structures of each of the UK countries. Mid-year population estimates provide annual and more recent data. Below population estimates are shown in three categories: 0-14, 15-64 (i.e. working age) and 65+.	

[160] Population density - Census Maps, ONS

Employment, and Viability: Age Structure – Working age population	In mid-2022 in Wales, the estimated percentage of the population in each age group was[161]: 0-14: 16.4% 15-64: 62.1% 65+: 21.5%	In Neath Port Talbot in mid- 2022, the percentage of the population was broken down as follows[162]: 0-15: 17.5% 16-64: 61.1% 65+: 21.5%
	Supporting Trend Data: In mid-2022, there were 12.7 million people aged 65 years and over (18.8%) and 2.5% were aged 85 years and over[163]. The median age in the UK changed from 39.6 to 40.7 between mid-2011 and mid-2022. The increase in median age over this period in Wales was by 1.4 years (from 41.5 to 42.9)[164]. In Neath Port Talbot, the percentage of people aged 85+ was 2.6% in mid-2022. The median age increased by one year from 42 to 43 between the 2011 and 2021 censuses. The number of people aged 65-74 years rose by just under 2,800 (19.8%)[165]	

[161] Office of National Statistics (2023) Estimates of the population for the UK, England, Wales, Scotland and Northern Ireland. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

[162] Office of National Statistics (2024) Population estimates for the UK, England, Wales, Scotland, and Northern Ireland: mid-2022. Available: Population estimates for the UK, England, Wales, Scotland, and Northern Ireland - Office for National Statistics (ons.gov.uk)

[163] Office of National Statistics (2022) *Estimates of the population for the UK, England, Wales, Scotland and Northern Ireland.* Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

[164] Office for National Statistics (2022) Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2022. Available: Population estimates for the UK, England, Wales, Scotland, and Northern Ireland - Office for National Statistics (ons.gov.uk)

[165] Office for National Statistics (2023) How life has changed in Neath Port Talbot: Census 2021. Available: How life has changed in Neath Port Talbot: Census 2021 (ons.gov.uk)

<table>
<tr><td rowspan="3">Communities – Population, Employment, and Viability:

Unemployment</td><td colspan="2">The definition of unemployed people within the UK is specified by the International Labour Organisation. This defines unemployed people as being without a job, having been actively seeking work in the past four weeks and are available to start work in the next two weeks, or people who are out of work, have found a job and are waiting to start it in the next two weeks[166].</td></tr>
<tr><td>As of March 2024, the unemployment rate in Wales was 3.5%[167].</td><td>As of December 2023, Neath Port Talbot had an unemployment rate of 3.4% for ages 16+[168].</td></tr>
<tr><td colspan="2">Supporting Trend Data:

The unemployment rate has fluctuated in the UK since 1992. A general decrease in unemployment rates can be seen throughout the UK since the period of economic recession between 2009 and 2012, however this is largely dependent on economic performance.

Since the coronavirus pandemic, unemployment rates have begun to increase. However, as this is still ongoing and is seen as temporary, there is still some uncertainty about the accuracy of this data and the effects on unemployment that will be present in the long-term.</td></tr>
<tr><td>Communities – Population,</td><td colspan="2">This is a measure of people, who are economically active, expressed as a percentage of all people (aged 16-64).

As of February – April 2024, the employment rate in the UK was 74.3%[169].</td></tr>
</table>

[166] Office for National Statistics (2020) A guide to labour market statistics. Available: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/aguidetolabourmarketstatistics#unemployment
[167] Office for National Statistics (2023) LFS: ILO unemployment rate: Wales: All: %: SA. Available: https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/timeseries/ycnm/lms
[168] Office for National Statistics (2024) Employment, unemployment and economic inactivity in Neath Port Talbot. Available: Neath Port Talbot's employment, unemployment and economic inactivity - ONS
[169] Office for National Statistics (2024) Employment rate (aged 16 to 64, seasonally adjusted):%. Available: Employment rate (aged 16 to 64, seasonally adjusted): % - Office for National Statistics (ons.gov.uk)

Employment, and Viability: Economic Activity Rates	As of March 2023, the economic activity rate in Wales was 75.6%[170].	In December 2023, 20,300 or 23.4% of the population between 16-64 were economically inactive, comparing to 23% in Wales over the same period[171]..
	Supporting Trend Data: Economic activity rates in the UK have not varied significantly since 1992.	

[170] Office for National Statistics (2023) LFS: ILO unemployment rate: Wales: All: %: SA. Available: https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/timeseries/ycnm/lms

[171] Office for National Statistics (2024) Employment, unemployment and economic inactivity on Neath Port Talbot. Available: Neath Port Talbot's employment, unemployment and economic inactivity - ONS

B.10 Communities – Supporting Infrastructure

Table 10: Communities – Supporting Infrastructure

Sustainability Topic / Baseline	Wales	Plan Area
Communities – Supporting Infrastructure: Locations of Strategic Rail Links		
	Both the north and south coast of Wales are well connected by rail, linking the major coastal cities such as Cardiff and Swansea in the south, and Llandudno, Bangor and Holyhead in the north. Few major branch lines extend from these links, and the central and western regions of Wales are comparatively poorly served by rail. (GIS mapping)	There is a small network of railway lines within the plan area, the 'South Waled Main Line' being one passing through the southern regions of the area. (GIS mapping)
	Supporting Trend Data: Upgrades to lines and electrification projects are continually taking place. It is considered unlikely that future projects will significantly increase the strategic rail network.	
Communities – Supporting Infrastructure: Locations of strategic road networks		
	The south and north coast of Wales are the only areas with motorway connections. The remaining regions are serviced by the A road network which links the major towns and villages. Comparatively the central and upland regions are less provisioned with strategic network links. (GIS mapping)	The M4 motorway runs through the plan area in it's southern region and the A465 though it's centre north east to south west. (GIS mapping)

(motorways and primary roads)	**Supporting Trend Data:** The strategic road network in the UK is constantly undergoing maintenance and improvements to improve efficiency, such as managed motorways. It is considered unlikely that significant new strategic road networks will be developed.	
Communities – Supporting Infrastructure: Location of Airports		
	The only major airport in Wales is Cardiff[172].	No major Airports are identified within the plan area.
	Supporting Trend Data: The number of passengers using UK airports has generally increased since the Covid-19 pandemic. For example, when the Civil Aviation Authority compared annual 2024 data against 2017 data, the 7 of the 10 largest airports in 2024 all had more passengers in 2017 across April to May[173].	
Communities – Supporting Infrastructure: Location of Ports		
	Principal ports in Wales are[174]: • Milford Haven • Port Talbot • Holyhead	Port Talbot is a principal port identified within the plan area.

[172] Civil Aviation Authority (2022) Annual Airport Data 2024. Available: UK airport data April 2024 | Civil Aviation Authority (caa.co.uk)
[173] Civil Aviation Authority (2022) Annual Airport Data 2024. Available: UK airport data April 2024 | Civil Aviation Authority (caa.co.uk)
[174] Department for Transport (2023) Maritime Statistics: Interactive Dashboard (2022 data). Available: UK maritime statistics: interactive dashboard (dft.gov.uk)

	• Newport	
	Supporting Trend Data: It is considered unlikely that significant new strategic port development will take place.	
Communities – Supporting Infrastructure: Gas Network	The National Transmission System (NTS) transports high pressure natural gas around Great Britain via thousands of miles of pipelines, supplying large end users such as power stations, large industrial plant, whilst it also receives gas injections from the main gas terminals and gas producers. There are eight distribution networks throughout the British Isles which are owned by Cadent, Northern Gas Networks, SGN (formerly Scotia Gas Networks) and Wales & West Utilities.	
	Wales & West Utilities distributes gas to Wales.	Wales & West Utilities also distribute gas to the plan area.
	In Quarter 1 2024 gas demand remained relatively stable and only fell by 1.9 per cent compared with the same period last year, despite warmer temperatures. This reflects similar consumption by households, industry and other final users to the previous year, indicating some recovery in consumer spending on energy following the drop in bills from last year's record highs. Gas used for generation also fell by 5.8% in Quarter 1 due to reduced electricity demand, strong output from renewable sources and sustained high imports. Exports of gas fell by two thirds compared to Quarter 1 2023 as the UK continued to support the European move away from Russian gas throughout 2022 and into early 2023. Imports fell by almost a fifth compared to the same period last year following reduced Liquified Natural Gas (LNG) imports (dropping 47% compared to 2023.Despite this fall, Norway and US remained the largest source of imports[175].	
Communities – Supporting Infrastructure:	The National Grid is a high-voltage electricity transmission network in England and Wales. Electricity is generated at a range of sources including gas fired power stations, wind turbines, nuclear power stations, biomass, coal, solar, imports, hydro and storage. Separate lower voltage local distribution networks connect the electricity directly to homes and businesses.[176]	

[175] Department for Energy Security and Net Zero (2024) *Energy trends: UK oil and oil products.* Available: Energy Trends June 2024 (publishing.service.gov.uk)
[176] National Grid Group *National Grid Electricity Transmission* (Accessed 03/07/2024) Available: National Grid Electricity Transmission

HV Electricity Network	HV electricity networks in Wales are operated by National Grid.	No local level data available.
	Quarter 1 of 2024 saw higher electricity demand and generation compared to Quarter 1 2023. Demand increased by 1.2 per cent with generation increasing by 3.7 per cent. A substantial increase in net imports (up 27 per cent) accounting for the difference. Total imports rose to a record 11.2 TWh, with a record 5.1 TWh from France and 1.4TWh across the new interconnector with Denmark[177].	
Communities – Supporting Infrastructure: Offshore Wind Farms	The UK is the second largest offshore wind (OSW) market in the world. The UK currently has 13.9 GW of offshore wind fully commissioned, a fourfold increase on capacity installed in 2012. There is also a total project pipeline of around 77 GW across 80 projects that are either in construction, consented, in development and planned in future seabed leasing auctions[178]. The UK has the largest offshore wind farm in the world, which is located off the coast of Yorkshire.	
	There are three operational offshore wind farms off the North Wales coast.[179]	No wind farms have been identified within the plan area. (GIS Mapping)
	Electricity generation from wind power in the UK has increased by 715% from 2009 to 2020. Wind energy generation accounted for 24% of total electricity generation (including renewables and non-renewables) in 2020; with offshore wind accounting for 13% and onshore wind accounting for 11%.[180] In 2022, the British Energy Security Strategy included an ambition to deliver up to 50GW of offshore wind by 2030, including up to 5gw of innovative floating wind, in Great Britain.[181] Wind generated more electricity than gas for the second quarter in succession (Quarter 1 2024). It rose 3% whilst gas generation fell by 3.8%[182].	

[177] Department for Energy Security and Net Zero (2024) *Energy trends: UK oil and oil products.* Available: Energy Trends June 2024 (publishing.service.gov.uk)
[178] Great Britain and Northern Ireland Department for Business & Trade. Available: Offshore wind - great.gov.uk international
[179] Natural Resources Wales (2023) Offshore wind developments. Available: Natural Resources Wales / Offshore wind developments
[180] Office for National Statistics (2021) *Wind energy in the UK: June 2021* Available: Wind energy in the UK - Office for National Statistics (ons.gov.uk)
[181] Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy (2022) *British energy security strategy.* Available: British energy security strategy - GOV.UK (www.gov.uk)
[182] Department for Energy Security and Net Zero (2024) *Energy trends: UK oil and oil products.* Available: Energy Trends June 2024 (publishing.service.gov.uk)

<table>
<tr><td rowspan="3">Communities – Supporting Infrastructure:

Nuclear Power Stations</td><td colspan="2">The UK currently has eight operational nuclear power stations, which supplied 18.7 per cent of total electricity supply in 2018. Nuclear energy has an important role to play in delivering our long term objective of a secure, low carbon, affordable, energy future. For nuclear energy to reach its full potential, significant challenges need to be met, both in the short term and for the longer term to 2050 and beyond.[183] The Long-term Nuclear Energy Strategy outlines government policy to help the UK nuclear sector increase its key role in UK electricity provision and the global economy to 2050.[184]</td></tr>
<tr><td>There are two historic nuclear sites in Wales, at Wylfa on Ynys Môn and Trawsfynydd in Gwynedd. The construction of two Magnox reactors at Wylfa began in 1963 and the plant began operations in 1971; generation ceased in 2015. At Trawsfynydd, there were also two Magnox reactors operational between 1965 and 1991.[185]</td><td>There are no nuclear power stations identified within the plan area.</td></tr>
<tr><td colspan="2">In 2017, the UK's average nuclear load factor was 77.4 per cent, 0.9 percentage points (pp) above the European average. However, for 1970 to 2017, the UK's average load factor was 67.4 per cent, 5.2 pp below the European average. In 2022, the British Security Strategy included an ambition to deploy up to 24GW of civil nuclear by 2050, representing 25% of Great Britain's projected energy demand.

Nuclear generation decreased to 8.3TWh in Quarter 1 2024, which was the lowest quarterly value on the published data series and 15 per cent lower than the same period in the previous year[186].</td></tr>
</table>

[183] Department of Energy & Climate Change (2023) Nuclear electricity in the UK. Available: Nuclear_electricity_in_the_UK.pdf (publishing.service.gov.uk)
[184] Department of Energy & Climate Change and Department for Business, Innovation & Skills *Long-term nuclear energy strategy*. Available: Long-term Nuclear Energy Strategy - GOV.UK (www.gov.uk)
[185] UK Parliament (2023) *Nuclear energy in Wales.* Available: Nuclear energy in Wales - Welsh Affairs Committee (parliament.uk)
[186] Department for Energy Security and Net Zero (2024) *Energy trends: UK oil and oil products.* Available: Energy Trends June 2024 (publishing.service.gov.uk)

B.11 Health and Wellbeing

Table 11: Health and Wellbeing

Sustainability Topic / Baseline	Wales	Plan Area
Health and Well-Being: The Measuring National Well-being programme	The Measuring National Well-being (MNW) programme set out to establish measures to understand and monitor national well-being[187]. In October to December 2023, 4.2% of adults aged 16 and over rated how worthwhile they feel the things they do in life are as low. This represents no change from the previous year or a long-term change since the same period in 2018[188]. This varies across the UK as follows[189]: • England – 4.2% • Wales – 4.9% • Scotland – 4.4% • Northern Ireland – 3.9% In October to December 2023, 9.3% of adults aged 16 and over rated their happiness yesterday as low. This represents no change from the previous year or a long-term change since the same period in 2018[190]. This varies across the UK as follows[191]:	

[187] Office for National Statistics (2019) Measuring national well-being in the UK: international comparisons, 2019. Available; https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuringnationalwellbeing/internationalcomparisons2019
[188] Office for National Statistics (2024) UK Measures of National Well-Being Dashboard. Available: UK Measures of National Well-being Dashboard - Office for National Statistics (ons.gov.uk)
[189] Office for National Statistics (2024) Quarterly Personal Well-Being Estimates – Non-Seasonally Adjusted. Available: Quarterly personal well-being estimates – non-seasonally adjusted - Office for National Statistics (ons.gov.uk)
[190] Office for National Statistics (2024) UK Measures of National Well-Being Dashboard. Available: UK Measures of National Well-being Dashboard - Office for National Statistics (ons.gov.uk)
[191] Office for National Statistics (2024) Quarterly Personal Well-Being Estimates – Non-Seasonally Adjusted. Available: Quarterly personal well-being estimates – non-seasonally adjusted - Office for National Statistics (ons.gov.uk)

	• England – 9.2% • Wales – 10.4% • Scotland – 9.3% • Northern Ireland – 8.5% In 2021/22, 21.8% of adults aged 16 and over reported some evidence of depression or anxiety. This represents a no change over the short term but a long-term deterioration from 2016/17[192]. In October to December 2023, 5.8% of adults in the UK rated their life satisfaction as low. This represents no change from the previous year and a deterioration since the same period in 2018[193]. In April 2024, it was reported that 7.8% people in Great Britain felt lonely often or always. This represents no change from the previous year. No data is available to generate long-term change results[194].
Health and Well-Being:	The WIMD is the official measure of relative deprivation for small areas in Wales. WIMD ranks all small areas in Wales from 1 (most deprived) to 1,909 (least deprived)[195].

[192] Office for National Statistics (2023) Measures of National Well-Being Dashboard: Quality of Life in the UK. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuresofnationalwellbeingdashboardqualityoflifeintheuk/2022-08-12

[193]Office for National Statistics (2024) UK Measures of National Well-Being Dashboard. Available: UK Measures of National Well-being Dashboard - Office for National Statistics (ons.gov.uk)

[194] Office for National Statistics (2024) UK Measures of National Well-Being Dashboard. Available: UK Measures of National Well-being Dashboard - Office for National Statistics (ons.gov.uk)

[195] Welsh Government (2019) Welsh Index of Multiple Deprivation. Available: https://statswales.gov.wales/Catalogue/Community-Safety-and-Social-Inclusion/Welsh-Index-of-Multiple-Deprivation

The Welsh Index of Multiple Deprivation (WIMD) 2019	The south east and north east coast are the most deprived areas in Wales. Deprivation is most concentrated in the south east, around the urban areas of Cardiff, Newport, Swansea and Bridgend. The smaller towns within the valleys of the south east, such as Caerphilly and Merthyr Tydfil are similarly deprived. Comparatively the rural areas of Wales are considerably less deprived[196].	Within the plan area, the overall most deprived Lower Layer Super Output Areas (LSOA) with decile scores of 10 are as follows[197]: • Bryn-coch North 2 • Bryn-coch South 1 • Baglan 2 It is to be noted that Neath Port Talbot has a health profile largely worse than the average for Wales[198]. In 2021, 45.9% of Neath Port Talbot residents described their health as "very good", increasing from 44.7% in 2011. Those describing their health as "good" rose from 28.5% to 30.5%. These are age-standardised proportions. The proportion of Neath Port Talbot residents describing their health as "very bad" decreased from 2.6% to 2.1%, while those describing their health as "bad" fell from 7.9% to 6.4%[199].
	Supporting Trend Data: It is not advised to compare the deprivation measures across the UK as data definitions, collection methods and base populations are not the same across the devolved administrations. In WIMD 2019, there were pockets of high relative deprivation in the South Wales cities and valleys, and in some North Wales coastal and border towns. The overall picture is similar to that of WIMD 2014.	

[196] Welsh Government Welsh Index of Multiple Deprivation (WIMD) 2019. Available: (WIMD - Home Page (gov.wales)
[197] Data Map Wales Welsh Index of Multiple Deprivation (WIMD) 2019. Available: Welsh Index of Multiple Deprivation (WIMD) 2019 | DataMapWales (gov.wales)
[198] Wales Centre for Health phw.nhs.wales/services-and-teams/observatory/data-and-analysis/publication-documents/pictures-of-health-for-local-authorities-wales-centre-for-health/wchcommunityprofiles-neathporttalbot-pdf/
[199] Office for National Statistics How life has changed in Neath Port Talbot: Census 2021 (ons.gov.uk)

	Deep-rooted deprivation Analysis identified which LSOAs have remained in the top 50 most deprived areas in Wales since 2005. In the country, 26 LSOAs are in this category[200].	
Health and Well-Being: National Trails	National Trails are long distance walking, cycling and horse riding routes through the best landscapes in England and Wales. In total, England and Wales have around 3,600 miles (5,800 km) of National Trail[201].	
	There are 3 National Trails in Wales including: • Glyndŵr's Way • Offa's Dyke Path • Pembrokeshire Coast	No national trails have been identified within the plan area.
	The trails – like many local greenspaces and access areas further afield – recorded high levels of use during the pandemic. Whilst these levels have certainly not been sustained, the people counters provided evidence of high levels of use, which suggests that some people may have continued to explore these high quality networks. Natural England has secured an uplift for the National Trails for three years from April 2022.[202]	
Health and Well-Being: Country Parks	Country Parks are public green spaces often at the edge of urban areas which provide places to enjoy the outdoors and experience nature in an informal semi-rural park setting.	
	Most Country Parks were designated in the 1970s, under the Countryside Act 1968 with the support of the former Countryside	There are two country parks identified within the plan area: • Afan Argoed

[200] Welsh Government Welsh Indec of Multiple Deprivation 2019: analysis relating to areas of deep-rooted deprivation. Available: Welsh Index of Multiple Deprivation 2019: analysis relating to areas of deep-rooted deprivation | GOV.WALES

[201] National Trails The Trails. (Accessed 04/07/2024) Available: The Trails - National Trails

[202] Natural England and National Trails (2023) National Trails Annual Report 2021/22. Available: NT-Annual-Report-21-22-small.pdf (nationaltrails.s3.eu-west-2.amazonaws.com)

	Commission. In more recent times there has been no specific financial support for Country Parks directly, and fewer have been designated[203]. As of 2014, there are 37 country parks in Wales[204].	• Margam Park
	Public parks and greenspaces have been under increasing budget pressures in recent years, with limited resources available to adapt to changing circumstances. Between 2014 and 2020, Nesta, in partnership with The National Lottery Heritage Fund and The National Lottery Community Fund backed 24 innovations, with £3 million in funding and support, to test and replicate ideas to improve parks. The Future Parks Accelerator, a collaboration between the National Trust, National Lottery Heritage Fund, and the Ministry for Housing, Communities and Local Government is supporting nine places to help local authorities transform their green spaces to enable these valuable places to be more financially sustainable and ensure that communities can continue to benefit from them for generations to come.[205]	
Health and Well-Being: National Cycle Networks	The National Cycle Network is a UK-wide network of signed walking and cycling paths connecting our cities, towns, and countryside. The National Cycle Network brings huge benefits to the UK's economy and improves people's health and wellbeing.	
	There are over 1,200 miles of National Cycle Network in Wales.[206] The Welsh Government is investing in active travel and has provided £350,000 funding for maintenance of the National Cycle Network.[207]	No spatial data is available.
	Sustrans is working in partnership with government, local authorities and other key stakeholders to create a safe and accessible traffic-free Network. The project involves assessment and plans for every mile of the National Cycle Network, as well as detailed and specific plans for priority sections.	

[203] Natural Resources Wales (2023) Country parks. Available: Country Parks - data.gov.uk
[204] Data Map Wales Country Parks (2014). Available: Country Parks | DataMapWales (gov.wales)
[205] Nesta (2020) Rethinking the future of parks. Available: Rethinking the Future of Parks | Nesta
[206] Sustrans The national cycle network in Wales (Accessed 04/07/2024) Available : The National Cycle Network in Wales - Sustrans.org.uk
[207] Sustrans (2022) Paths for everyone. Available: Paths for Everyone Three Years On (sustrans.org.uk)

	Two major projects to create an additional 100 miles of new walking and cycling routes has just been created in Wales. Areas that have benefited from new routes include Conwy, Rhyl, Clydach, Port Talbot, Maesteg, Merthyr Tydfil, Pontypridd, Treforest, Church Village, Llantrisant, Ebbw Vale, Blaenavon, Brynmawr, Cardiff, Newport, Caerleon and Monmouth.[208]	
Health and Well-Being: Coastal Paths	A coastal path is a trail that runs alongside a lake or seashore for pedestrians, and sometimes cyclists or equestrians.	
	The Wales Coast Path (managed by Natural Resource Wales) is a continuous coastal footpath stretching the entire coastline of Wales, totalling 870 miles.[209]	The Wales Coast Path intersects the plan area.
	The National Trust protects over 780 miles of coastline in England, Wales and Northern Ireland. They work with other organisations such as tourist bodies and the South West Coast Path Association to protect and promote access to the coast, an essential part of their commitment to coastal access. Their ranger teams are continually working to improve our coastal paths, making them more accessible for everyone, and planning for future coastal change.[210]	

[208] Sustrans The national cycle network in Wales (Accessed 04/07/2024) Available : The National Cycle Network in Wales - Sustrans.org.uk
[209] Wales Coast Path: Natural Resources Wales / Wales Coast Path
[210] National Trust Caring for coastal footpaths. (Accessed 17/07/2023) Available: Caring for coastal footpaths | National Trust

B.12 Resources and Waste

Table 12: Resources and Waste

Sustainability Topic / Baseline	Wales	Plan Area
Resources & Waste: Active Landfill Sites	A landfill is a waste disposal site for the deposit of waste onto or into land[211]. The Landfill Tax Regulations 1996 were introduced in the UK with the primary purpose of reducing the disposal of waste to landfill and encouraging more sustainable waste management outcomes. The tax was devolved to Wales by way of the Landfill Disposals Tax (Wales) Act 2017[212]. The tax is chargeable by weight. As of April 2024, the standard rate was £103.70 per tonne[213].	
	Landfill sites are regulated in Wales by Natural Resources Wales. The Welsh Revenue Authority provides a list of the 20 landfill sites in Wales which was updated in 2024[214].	No spatial data is available.
	The UK recycling rate for Waste from Households (WfH); including Incinerator Bottom Ash metal (IBAm) was 44.6% in 2021, increasing from 44.4% in 2020. Wales had a rate of 56.7% in 2021 compared to 56.5% in 2020. However, UK biodegradable municipal waste (BMW) sent to landfill increased to 6.8 thousand tonnes in 2021 from 6.1 thousand tonnes in 2020. For Wales this was an increase to 855 thousand tonnes in 2021 compared to 734 thousand tonnes in 2020. It is estimated that the UK generated 40.4 million tonnes of commercial and industrial (C&I) waste in 2020.[215]	
	Since minerals are a non-renewable resource, minerals safeguarding is the process of ensuring that non-minerals development does not needlessly prevent the future extraction of mineral resources, of local and national importance. The role of the planning authority in relation to mineral	

[211] DEFRA (2010) *Environmental Permitting Guidance- The Landfill Directive.* Available: DRAFT GUIDANCE ON: (publishing.service.gov.uk)
[212] Welsh Government (2023) *An Independent Review of the Landfill Disposals Tax (Wales) Act 2017.* Available: An Independent Review of the Landfill Disposals Tax (Wales) Act 2017 (gov.wales)
[213] UK Government Landfill Tax Rates. Available: Landfill Tax rates - GOV.UK (www.gov.uk)
[214] Welsh Revenue Authority (2023) *Check the list of registered landfill site operators in Wales.* Available: Check the list of registered landfill site operators in Wales | GOV.WALES
[215] Department for Environment, Food & Rural Affairs (2023) *UK statistics on waste.* Available: UK statistics on waste - GOV.UK (www.gov.uk)

<table>
<tr><td rowspan="3">Resources & Waste:

Mineral safeguarding and exploration zones</td><td colspan="2">extraction is to balance the fundamental requirement to ensure the adequate supply of minerals with the protection of amenity and the environment. Each mineral planning authority should ensure that it makes an appropriate contribution to meeting local, regional and UK needs for primary minerals which reflects the nature and extent of resources in the area and their best and most appropriate use, subject to relevant environmental and other planning considerations. [216]

Mineral exploration is the systematic process of investigation designed to eliminate mineral resource targets that are considered uneconomic and highlight targets for further investigation. The ultimate aim is to identify a concentration of minerals that can be economically extracted.[217]</td></tr>
<tr><td>Using the National Minerals Resource Maps and the National Aggregates Safeguarding Maps for Wales, areas to be safeguarded should be identified on proposals maps and policies should protect potential mineral resources from other types of permanent development which would either sterilise them or hinder extraction.

Development plans should set out the broad strategy for mineral working and related development and as far as practicable, areas for future working should be identified, where this can be undertaken in a sustainable way. [218]</td><td>The Neath Port Talbot Local Development Plan sets out policy for development in mineral safeguarding areas[219].

Note there is no spatial data is available at a local level.</td></tr>
<tr><td colspan="2">The UK’s Critical Minerals Strategy, published in 2022, set out an approach to improve the resilience of critical mineral supply chains to safeguard British industries now and in the future, deliver clean energy transition and protect national security and defence capability. The strategy sets out how we will accelerate our domestic capabilities, collaborate with international partners and enhance international markets.[220]</td></tr>
</table>

[216] Welsh Government (2024) *Planning Policy Wales*. Available: Planning Policy Wales - Edition 12 (gov.wales)
[217] Department for the Economy (2021) *Mineral prospecting - common exploration methods.* Available: Mineral prospecting - common exploration methods | Department for the Economy (economy-ni.gov.uk)
[218] Welsh Government (2024) *Planning Policy Wales*. Available: Planning Policy Wales - Edition 12 (gov.wales)
[219] Neath Port Talbot Council Local Development Plan 2011-2026. Available: ldp_written_statement_jan16.pdf (npt.gov.uk)
[220] Department for Business & Trade and Department for Business, Energy & Industrial Strategy (2023) *Critical Minerals Refresh: Delivering Resilience in a Changing Global Environment*. Available: Critical Minerals Refresh: Delivering Resilience in a Changing Global Environment (published 13 March 2023) - GOV.UK (www.gov.uk)

Resources & Waste: Exploration Licenses	A UK Petroleum Exploration and Development Licence (PEDL) allows a company to pursue a range of oil and gas exploration activities, subject to necessary drilling/development consents and planning permission. There are currently 230 onshore licences, covering 529 blocks.	
	From 2018, Welsh Ministers are responsible for licensing the exploration and development of Wales' onshore petroleum resources[221].	No local level data available.
	For the UK, the scenarios for meeting the Sixth Carbon Budget and Net Zero in 2050 require large and rapid reductions in consumption of oil and gas[222]. The UK is a mature basin and in their 2021 reserves and resources report, the Oil and Gas Authority warned that without further exploration the UK faces a cliff edge in production decline and increased reliance on imports. The North Sea Transition Deal, signed in March 2021, has ambitious milestones for the offshore sector to support the government's objective of reaching Net Zero, for example challenging production emission reduction targets (10% by 2025, 25% in 2027 and 50% by 2030) and enabling Carbon Capture, Utilisation and Storage at scale.[223]	

[221] Welsh Government (2021) *Petroleum Licensing Functions in Wales: Frequently Asked Questions.* Available: Petroleum Licensing Functions in Wales: Frequently Asked Questions (gov.wales)

[222] Climate Change Committee (2022) *Letter: Climate Compatibility of New Oil and Gas Fields*. Available: Letter: Climate Compatibility of New Oil and Gas Fields - Climate Change Committee (theccc.org.uk)

[223] OEUK (2022) *Designing a climate compatibility Checkpoint for future oil and gas licensing in the UK Continental Shelf – OEUK Response*. Available: OEUK-Consultation-Response-28.02.2022-Designing-a-climate-compatibility-checkpoint-for-future-oil-and-gas-licensing-in-the-UK-.pdf

Appendix C. Assessment of compatibility

Note that the following scale has been used in the assessment of compatibility:

✓	Broadly compatible
X	Potential conflict
?	Depending on nature of implementation measure
NR	Not relevant / no relationship identified

LFRMSP Objective 1: Reducing the threat to life by reducing the number of properties at risk of flooding.

Description: Removing risk to residential and commercial properties from high and medium flood risk areas by investing in flood mitigation solutions.

See LFRMSP for list of associated flood measures linked to Objective 1

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Reducing the number of properties at risk of flooding may be done through a range of measures. Where the flood measures implemented involve property level defences there will be negligible impacts on biodiversity, species and habitat, however if measures such as flood alleviation schemes are implemented to protect larger areas there may be protection of biodiversity, species and habitat during flood events. If NFM and NBS are implemented there will be significant opportunities to enhance biodiversity. Although the construction of NFM and NBS as well as other measures proposed, may impact on biodiversity during construction, overall it anticipated that they would be beneficial for biodiversity. **It is recommended that this objective be strengthened to reflect the need to be sensitive to the natural environment.**
2	Protect and enhance areas designated under the Habitats Regulations	?	Reducing the number of properties at risk of flooding may be done through a range of measures. Where the flood measures implemented involve property level defences there will be negligible impacts on biodiversity, species and habitat, however if measures such as flood alleviation schemes are implemented to protect larger areas there may be protection of designated sites, depending on the location, during flood events. If NFM and NBS are implemented there will be significant opportunities to enhance biodiversity and potentially designated sites in turn. The construction of NFM and NBS as well as other measures proposed, may impact on designated sites during construction. Overall it anticipated that impacts on designated sites in relation to the objective would be dependant on the measures implemented and their location in relation to designated sites. **It is recommended that this objective be strengthened to reflect the need to be sensitive to the natural environment.**
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	?	Reducing the number of properties at risk of flooding may be done through a range of measures. Should these involve property level defences there will be negligible impacts on geology and soils, however if measures such as flood defences are implemented to protect larger areas there will be protection of soils during flood events. **It is recommended that this objective be strengthened to reflect the need to be sensitive to the natural environment.**

No.	SEA Objective	Compatible	Commentary
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	It is expected that measures put in place to manage the risk of flooding at properties will subsequently help to protect the quality of the water environment. Of particular note are Asset Surveys which will aid in the improvement in quality of water bodies, as misconnections are resolved.
5	To reduce and minimise air and noise emissions	✓	By reducing the number of properties at risk of flooding the objective will subsequently reduce air and noise emissions which would result from the clean up of flooding events.
6	Contribute to the national (UK) target of Net Zero by 2050	?	Whilst there may be carbon emissions during construction of some of the flood measures associated with this objective, there would likely be benefits from the implementation of NFM or NBS where the associated creation of woodland and wetted areas is anticipated to increase the carbon sequestration value of land and provide new carbon sinks therefore directly contributing to net zero and greenhouse gas emissions targets
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	By reducing the number of properties at risk of flooding this objective will help to reduce vulnerability of built infrastructure and increase their resilience. Of particular note in this objective is the NFM and NBS flood measure which will promote resilience to climate challenges.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	This objective will reduce the number of properties at risk of flooding and is therefore managing flood risk and the effects of climate change. Of particular note in this objective is the NFM and NBS flood measure which will promote resilience to climate challenges.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	?	Where this objective reduces the number of properties at risk of flooding it would help to protect landscape, townscape and visual amenity which would otherwise be negatively impacted during flooding events. It should be noted that there is potential to negatively impact landscape, townscape or visual amenity during construction and potentially during operation where new features are introduced into the landscape. **It is recommended that this objective be strengthened to reflect the need to be sensitive to the natural and built environment.**
10	To conserve, protect, sustainably manage and enhance the historic	?	As this objective intents to reduce the number of properties at risk of flooding, it may in turn protect the historic environment indirectly and directly where the properties are heritage assets. It should be

No.	SEA Objective	Compatible	Commentary
	environment and assets, including archaeology		noted that there is potential to negatively impact heritage assets during construction of flood measures including flood alleviation schemes. **It is recommended that this objective be strengthened to reflect the need to be sensitive to the natural and built environment.**
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Clear reference is made to reducing the threat to life as a result of flooding and subsequently the health, economic and social wellbeing of the community would be protected.
12	To minimise resource use and waste production	✓	By reducing the number of properties at risk of flooding the objective will subsequently reduce the resource use and waste production which would result from the clean up of flooding events and resources destroyed by flooding.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	By reducing the number of properties at risk of flooding this objective will help to avoid negative effects on built assets / infrastructure and may increase their resilience.

LFRMSP Objective 2: Reducing the consequences for individuals, communities, businesses, and the environment from flooding and coastal erosion.

Description: Reduce distress, disruption and associated physical receptors to improve health and wellbeing within local communities.

See LFRMSP for list of associated flood measures linked to Objective 1

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity.	✓	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include biodiversity. Of note in relation to this objective, if NFM and NBS are implemented there will be significant opportunities to enhance biodiversity.

2	Protect and enhance areas designated under the Habitats Regulations	✓	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include designated sites.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include geology and soils.
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include water resources. Of particular note are Asset Surveys which will aid in the improvement in quality of water bodies, as misconnections are resolved.
5	To reduce and minimise air and noise emissions	✓	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include air quality.
6	Contribute to the national (UK) target of Net Zero by 2050	✓	By reducing the consequences from flooding and coastal erosion the objective will subsequently reduce the emissions associated with remedial and clean up activities including pumping of flood waters. Of particular note in relation to this objective is the potential implementation of NFM or NBS where the associated creation of woodland and wetted areas is anticipated to increase the carbon sequestration value of land and provide new carbon sinks therefore directly contributing to net zero and greenhouse gas emissions targets
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	By reducing the consequences of flooding and coastal erosion for individuals, communities, businesses, and the environment it is anticipated that this objective will help to reduce vulnerability of built infrastructure and increase their resilience. Of particular note in this objective is the NFM and NBS flood measure which will promote resilience to climate challenges.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	This objective will reduce the consequences of flooding and coastal erosion for individuals, communities, businesses, and the environment and is therefore managing flood risk and the effects of climate change. Of particular note in this objective is the NFM and NBS flood measure which will promote resilience to climate challenges.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	?	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include landscape. It should be noted the introduction of

			new features including flood alleviation schemes may have negative impacts on landscape, townscape or visual amenity depending on their location.
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	The objective clearly sets out that it will reduce consequences to the environment from flooding and coastal erosion. It is expected that this would include the historic environment.
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	The objective clearly sets out that it will reduce consequences to individuals, communities and businesses from flooding and coastal erosion, therefore it will help to protect the health, economic and social wellbeing of the local community.
12	To minimise resource use and waste production	✓	By reducing the consequences from flooding and coastal erosion the objective will subsequently reduce the resource use and waste production which would result from the clean up of flooding events and resources destroyed by flooding.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	It is expected that through reducing the consequences for individuals, communities and businesses from flooding and coastal erosion, built assets and infrastructure will also have reduced consequences.

LFRMSP Objective 3: Provide Strategic Leadership and direction at a local level

Description: LLFA to act responsibly and in line with legislation, policy and guidance to ensure flood risk is managed effectively and hollistically

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Acting in line with legislation, policy, and guidance to ensure flood risk is management effectively and holistically is likely to result in measures that act to protect or enhance sites designated for nature

			conservation. For example, there is strong legislative requirements to ensure that such sites are not directly or indirectly impacted from development.
2	Protect and enhance areas designated under the Habitats Regulations	✓	Acting in line with legislation, policy, and guidance to ensure flood risk is management effectively and holistically is likely to result in measures that act to protect or enhance biodiversity.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	Acting in line with legislation, policy, and guidance to ensure flood risk is management effectively and holistically is likely to result in measures that act to protect or enhance soils.
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	Acting in line with legislation, policy, and guidance to ensure flood risk is management effectively and holistically is likely to result in measures that act to protect or enhance water resources. For example the WFD places a number of requirements and there is a range of guidance in this regard.
5	To reduce and minimise air and noise emissions	✓	Acting in line with legislation, policy, and guidance to ensure flood risk is management effectively and holistically is likely to result in measures that act to control air pollution or noise emissions.
6	Contribute to the national (UK) target of Net Zero by 2050	✓	Acting in line with legislation, policy, and guidance to ensure flood risk is management effectively and holistically is likely to result in measures that act to help meet National targets.
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Although the objective does not make reference to climate change, acting responsibly and in line with legislation, policy, and guidance to manage flood risk may also include the protection of climate change.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	The objective will work to ensure the effective and holistic management of flood risk and therefore would limit the effects of climate change.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Although the objective does not make reference to landscape, acting responsibly and in line with legislation, policy, and guidance to manage flood risk may also include the protection of landscape.

10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Although the objective does not make reference to the historic environment, acting responsibly and in line with legislation, policy, and guidance to manage flood risk may also include the protection of the historic environment.
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Although the objective does not make reference to health or wellbeing, acting responsibly and in line with legislation, policy, and guidance to manage flood risk may also include the maintaining health or wellbeing.
12	To minimise resource use and waste production	✓	Although the objective does not make reference to health or wellbeing, acting responsibly and in line with legislation, policy, and guidance to manage flood risk may also act to reduce material use or waste generation.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Although the objective does not make reference to health or wellbeing, acting responsibly and in line with legislation, policy, and guidance to manage flood risk may also act to protect built assets / infrastructure.

LFRMSP Objective 4: Improve our understanding of local flood risk and how climate change will affect standards of protection in the future

Description: Develop our knowledge and understanding of local flood risk within the county borough. Advance our understanding on how future flood risk will increase with climate change and where practicable develop projects to account for this future risk.

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
2	Protect and enhance areas designated under the Habitats Regulations	**NR**	No relationship between the Plan Objective and the SEA Objective identified

3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified
6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Understanding how climate change will affect standards of protection in the future will make it easier to ensure resilience and adaption to climate change risks and hazards.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Understanding how climate change will affect standards of protection in the future will make it easier to limit its causes and effects and therefore reduce and manage the associated flood risk.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	**NR**	No relationship between the Plan Objective and the SEA Objective identified
11	To maintain and enhance the health, economic and social wellbeing of the	**?**	Although this objective focuses on the knowledge and understanding of local flood risk, it is anticipated that it may in turn protect the health, economic and social wellbeing of the local community

	local community and support attractive, resilient and viable communities		through measures such as emergency response plans, warn and inform and communicate risk. **It is recommended the objective could be strengthened by referencing health and well being of local communities.**
12	To minimise resource use and waste production	**NR**	No relationship between the Plan Objective and the SEA Objective identified
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	**NR**	No relationship between the Plan Objective and the SEA Objective identified

LFRMSP Objective 5: Ensure RMA's & Stakeholders work together to effectively manage Flood Risk & Coastal Erosion

Description: Continual engagement with all RMA's and selected stakeholders will ensure a unified and integrated approach to flood risk locally and nationally. Aligning projects with other RMA's where aims and objectives overlap or shared, will streamline achievements.

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Working with a range of stakeholders provides opportunities to bettter understand flood risk and how this could effect biodiversity. Sharing of resources could allow for more effective addressing of flood issues and better and more effective response.
2	Protect and enhance areas designated under the Habitats Regulations	✓	Working with a range of stakeholders provides opportunities to better understand flood risk and how this could effect biodiversity. Sharing of resources could allow for more effective addressing of flood issues and better and more effective response.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	Working with a range of stakeholders provides opportunities to bettter understand flood risk and how this could effect soils or sites used for multiple benefits. Sharing of resources could allow for more effective addressing of flood issues and better and more effective response.

4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	Working with a range of stakeholders provides opportunities to bettter understand flood risk and how this could effect sthe water environment. Sharing of resources could allow for more effective addressing of flood issues and better and more effective response. This could include to pollution events.
5	To reduce and minimise air and noise emissions	?	More effective / quicker flood response may lead to an increase in air or noise emissions depending on the approach taken.
6	Contribute to the national (UK) target of Net Zero by 2050	?	More effective / quicker flood response may lead to an increase in air or noise emissions depending on the approach taken.
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	NR	No relationship between the Plan Objective and the SEA Objective identified
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Where this objective aligns projects and streamlines achievements there is likely to be a more significant reduction in flood risk.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Quicker, more streamlined response could be quicker at allowing recovery, with benefits for townscape and visual amenity.
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Quicker, more streamlined response could be quicker at allowing recovery, with benefits for townscape and visual amenity.
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Quicker, more streamlined response could be quicker at allowing recovery, with benefits for peoples health and wellbeing, social interactions and economic activities

12	To minimise resource use and waste production	?	More effective / quicker flood response may lead to an increase in material use or waste generation depending on the approach taken.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Better use of shared resources would likely act to increase resilience of built assets and infrastructure.

LFRMSP Objective 6: Prioritising projects and investment using a risk-based approach

Description: Ensuring the LLFA identifies risk on a qualitative approach and invest in communities that are at greatest risk of flooding

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
2	Protect and enhance areas designated under the Habitats Regulations	**NR**	No relationship between the Plan Objective and the SEA Objective identified
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine	**NR**	No relationship between the Plan Objective and the SEA Objective identified

	and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.		
5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified
6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	**NR**	No relationship between the Plan Objective and the SEA Objective identified
8	To reduce or manage flood risk by limiting the causes and effects of climate change	**NR**	No relationship between the Plan Objective and the SEA Objective identified
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	**NR**	No relationship between the Plan Objective and the SEA Objective identified
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	This objective will look to invest in communities that are at greatest risk of flooding and therefore is anticipated to enhance the health, economic and social wellbeing of these communities.
12	To minimise resource use and waste production	**NR**	No relationship between the Plan Objective and the SEA Objective identified

13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	This objective will look to invest in communities that are at greatest risk of flooding and it is anticipated that this may involve greater resilience of built assets / infrastructure.

LFRMSP Objective 7: Reduce disruption to critical services, transport, and infrastructure network within the county borough

Description: Focusing resources on ensuring major highways are free from flooding and protecting infrastructure and services that are vital to societal needs

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
2	Protect and enhance areas designated under the Habitats Regulations	**NR**	No relationship between the Plan Objective and the SEA Objective identified
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified

6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	This objective will protect infrastructure from flooding and therefore will help to reduce the vulnerability built assets / infrastructure to climate change hazards including flooding.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	This objective will reduce disruption to critical services, transport, and infrastructure network through managing flood risk and the effects of climate change.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	**NR**	No relationship between the Plan Objective and the SEA Objective identified
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Through reducing disruption to critical services, transport, and infrastructure network local communities will benefit during flood events. Health, economic and social wellbeing would be protected through the maintained access to critical services and transport as well as reduced effects on infrastructure which may other wise be damaged or not be accessible during periods of flooding.
12	To minimise resource use and waste production	✓	Through reducing disruption to critical services, transport, and infrastructure from flooding events there is anticipated to be reduced resource use and waste production which would generally by associated with damage caused by flooding events and the clean up / repair activities.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	This objective will look to invest in communities that are at greatest risk of flooding and it is anticipated that this may involve greater resilience of built assets / infrastructure.

LFRMSP Objective 8: Raise awareness of flooding and engaging with people in the response to flood and coastal erosion risk

Description: Ensure information is readily available to build community level resilience. Ensure correct informative information can be found and distributed locally to the population

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This could include for protected species etc.
2	Protect and enhance areas designated under the Habitats Regulations	✓	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This could include for sites designated for nature conservation etc.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	No relationship between the Plan Objective and the SEA Objective identified
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	**NR**	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This could include for the water environment
5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified
6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified

7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This would help to adapt to increased risks from a changing climate.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	**NR**	No relationship between the Plan Objective and the SEA Objective identified
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This could include for sites designated for landscape and visual amenity.
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This could include for sites designated for heritage assets.
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	The objective sets out that it will build community resilience. Raising awareness of flooding and engaging with people in response to flooding is anticipated to reduce distress and therefore protect health and wellbeing of the community.
12	To minimise resource use and waste production	**NR**	No relationship between the Plan Objective and the SEA Objective identified
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	A greater awareness of flooding and communication of risk will allow people to take preventative action to protect assets, or remove them from harm, as well as develop emergency response plans. This could include for sites built assets / infrastructure.

LFRMSP Objective 9: Develop policies for effective land use management and enhanced development control procedures to ensure future developments incorporate effective surface water management

Description: Produce appropriate planning and SAB policies that match the objectives of the councils Flood Risk Management Strategy and Plan.

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	As this objective develops policies for effective land use management it is anticipated that is will be beneficial in terms of protecting biodiversity. With measures to include SuDS development, NFM and NBS, Adaption and Resilience and SAB and Planning Consultee which all provide opportunity to protect or enhance biodiversity.
2	Protect and enhance areas designated under the Habitats Regulations	✓	As this objective develops policies for effective land use management it is anticipated that is will be beneficial in terms of protecting designated sites. With measures to include SuDS development, NFM and NBS, Adaption and Resilience and SAB and Planning Consultee which all provide opportunity to protect or enhance biodiversity, which is anticipated to have subsequent and associated benefits on designated sites.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	As this objective develops policies for effective land use management it is anticipated that is will be beneficial in terms of geology and soils. With measures to include SuDS development, NFM and NBS, Adaption and Resilience and SAB and Planning Consultee which all provide opportunity to protect or enhance the environment, including soils. These measures are anticipated to manage flooding and in turn reduce the amount of soil erosion associated with such events.
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	As this objective develops policies for enhanced development control procedures to ensure future developments incorporate effective surface water management it is anticipated that it will beneficial in terms of the water environment. Where flood risk is reduced water quality will be protected due to reduced potential of pollution incidents. Additionally, measures such as SuDS development will improve water quality through natural filtration processes.

5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified
6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	The development of policies for land use management and enhanced development control procedures, through measures such as SuDS will help to reduce the vulnerability of built infrastructure to climate change risks including flooding.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	No relationship between the Plan Objective and the SEA Objective identified
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	As this objective develops policies for effective land use management it is anticipated that is will be beneficial in terms of protecting landscape, townscape and visual amenity. It should be noted that there is potential to negatively impact landscape, townscape or visual amenity during construction of some measures such as NFM, and although this likely to be temporary and improve through its operational phase..
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	The development of policies for land use management and enhanced development control procedures, through measures such as SuDS are anticipated to reduce the risk of flooding and therefore protect communities and maintain health, economic and social well being. Additionally, measures such as NFM and SuDS may provide recreational areas benefitting the local community.
12	To minimise resource use and waste production	**NR**	No relationship between the Plan Objective and the SEA Objective identified

13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	The development of policies for land use management and enhanced development control procedures, through measures such as SuDS will help to reduce the vulnerability of built infrastructure and avoid negative effects from flooding.

LFRMSP Objective 10: Improve regular maintenance schedules and improve existing flood and coastal erosion risk management assets

Description: Efficiently and effectively manage the councils flood risk assets and upgrade existing structures to ensure they are fit for purpose and build resilience to climate change

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Improving existing flood and coastal erosion risk management assets may help to protect biodiversity depending on their location and the area which the protect. This objective is also anticipated to be beneficial in terms of biodiversity as improvements to existing assets would avoid potential significant effects associated with the implementation / construction of new risk management assets and structures.
2	Protect and enhance areas designated under the Habitats Regulations	✓	Improving existing flood and coastal erosion risk management assets may help to protect designated sites depending on their location and the area which the protect. This objective is also anticipated to be beneficial in terms of designated sites as improvements to existing assets would avoid potential significant effects associated with the implementation / construction of new risk management assets and structures.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	Improving existing flood and coastal erosion risk management assets may help to protect geology and soils depending on their location and the area which the protect. This objective is also anticipated to be beneficial in terms of geology and soils as improvements to existing assets would avoid potential significant effects associated with the implementation / construction of new risk management assets and structures.

4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	Improving existing flood and coastal erosion risk management assets may help to protect water quality through reducing flood risk and through measures such as asset surveys which would resolve misconnections in the drainage infrastructure .This objective is also anticipated to be beneficial in terms of the water environment as improvements to existing assets would avoid potential significant effects associated with the implementation / construction of new risk management assets and structures.
5	To reduce and minimise air and noise emissions	✓	Upgrades to existing structures and assets and ensuring they are fit for purpose will help to reduce flood risk and subsequently reduce emissions from the clean up activities associated with flooding events.
6	Contribute to the national (UK) target of Net Zero by 2050	✓	Upgrades to existing structures and assets and ensuring they are fit for purpose will help to reduce flood risk and subsequently reduce emissions from the clean up activities associated with flooding events.
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	This objective clearly states that through managing the councils flood risk assets and upgrade existing structures it will build resilience to climate change.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	This objective clearly states that through managing the councils flood risk assets and upgrade existing structures it will build resilience to climate change.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Improving existing flood and coastal erosion risk management assets may help to protect landscape, townscape and visual amenity. This objective is also anticipated to be beneficial in terms of landscape, townscape and visual amenity as improvements to existing assets would avoid potential significant effects associated with the implementation / construction of new risk management assets and structures.
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Upgrades to existing structures and assets and ensuring they are fit for purpose will help to reduce flood risk and may protect the historic environment and assets.

11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Upgrades to existing structures and assets and ensuring they are fit for purpose will help to reduce flood risk and protect the health, economic and social wellbeing of the local community.
12	To minimise resource use and waste production	✓	Improving existing flood and coastal erosion risk management assets would be beneficial in terms of resource use and waste production as it makes use of existing infrastructure and will avoid the needs for significant resources to be used in creating new structures.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Upgrades to existing structures and assets and ensuring they are fit for purpose will help to reduce flood risk and protect built assets / infrastructure.

LFRMSP Objective 11: Providing an effective and sustained response to flood and coastal erosion events

Description: Ensure the preparation and testing of Emergency Plans. Respond to flood events in a timely and appropriate manner and facilitate recovery from flooding within the shortest possible timescales

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
2	Protect and enhance areas designated under the Habitats Regulations	**NR**	No relationship between the Plan Objective and the SEA Objective identified

3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified
6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Providing an effective and sustained response to flood and coastal erosion events would help to limit the negative effects on built assets / infrastructure, limiting the effects of climate change hazards.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Providing an effective and sustained response to flood and coastal erosion events would help to manage flood risk, limiting the effects of climate change hazards.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	**NR**	No relationship between the Plan Objective and the SEA Objective identified

11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Providing an effective and sustained response to flood and coastal erosion events would help to limit the negative effects on health, economic and social wellbeing of the local community. This will be achieved through measures such as an emergency response plan, timely flood warnings and communication of flood risk.
12	To minimise resource use and waste production	✓	Providing an effective and sustained response to flood and coastal erosion events would help to limit the negative effects on communities and infrastructure and therefore reducing the amount of resource use associated with the clean up activities.
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Providing an effective and sustained response to flood and coastal erosion events would help to limit the negative effects on built assets / infrastructure. Measures such as timely flood warnings would allow for property protection.

LFRMSP Objective 12: Develop a local programme of investment for flood and coastal erosion risk management.

Description: Develop a pipeline of projects for the next 10 years that focuses on investment needs and identify alternative sources of funding for flood and coastal erosion risk management projects

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
2	Protect and enhance areas designated under the Habitats Regulations	**NR**	No relationship between the Plan Objective and the SEA Objective identified
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	**NR**	No relationship between the Plan Objective and the SEA Objective identified

4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	**NR**	No relationship between the Plan Objective and the SEA Objective identified
5	To reduce and minimise air and noise emissions	**NR**	No relationship between the Plan Objective and the SEA Objective identified
6	Contribute to the national (UK) target of Net Zero by 2050	**NR**	No relationship between the Plan Objective and the SEA Objective identified
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	**NR**	No relationship between the Plan Objective and the SEA Objective identified
8	To reduce or manage flood risk by limiting the causes and effects of climate change	**NR**	No relationship between the Plan Objective and the SEA Objective identified
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	**NR**	No relationship between the Plan Objective and the SEA Objective identified
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	**NR**	No relationship between the Plan Objective and the SEA Objective identified
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	**NR**	No relationship between the Plan Objective and the SEA Objective identified
12	To minimise resource use and waste production	**NR**	No relationship between the Plan Objective and the SEA Objective identified

13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	**NR**	No relationship between the Plan Objective and the SEA Objective identified

LFRMSP Objective 13: Ensure Flood Risk Management Projects are delivered in a responsibly sustainable way with a focus on environmental benefits and enhancements

Description: Produce sustainably responsible construction projects that match the aims and objectives of the councils' various internal policies. Ensuring our projects enhance the environment and add value to the community.

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include biodiversity.
2	Protect and enhance areas designated under the Habitats Regulations	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include designated sites.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include geology and soils.
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include the water environment.

5	To reduce and minimise air and noise emissions	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include air and noise emissions.
6	Contribute to the national (UK) target of Net Zero by 2050	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include carbon emissions.
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	The measures potentially implemented under this objective are anticipated to improve resilience to climate change.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	The measures potentially implemented under this objective are anticipated to improve resilience to climate change.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	The measures potentially implemented under this objective are anticipated to improve resilience to climate change.
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	This objective will deliver its flood risk management projects sustainably, with a focus on environmental benefits and enhancements. This is anticipated to include the historic environment.
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	This objective will deliver its flood risk management projects sustainably, whilst enhancing the environment and adding value to the community, which would be beneficial in terms of health, economic and social wellbeing in the local community.
12	To minimise resource use and waste production	✓	It is anticipated that through ensuring Flood Risk Management Projects are delivered in a responsibly sustainable way this will include minimising resource use and waste production where possible.

13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	It is anticipated that through ensuring Flood Risk Management Projects are delivered in a responsibly sustainable way this will help to avoid negative effects on and promote sustainable management of built assets / infrastructure.

LFRMSP Objective 14: Identify locations where flood risk can be reduced by working with or enhancing the natural environment

Description: Develop more projects that incorporate Natural Flood Management solutions and manipulate nature and the natural landscape to better manage flood on a catchment wide approach

No.	SEA Objective	Compatible	Commentary
1	To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for biodiversity.
2	Protect and enhance areas designated under the Habitats Regulations	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for designated sites.
3	To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for geology and soils.
4	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for the water environment.

	maximise the sustainable management of water resources.		
5	To reduce and minimise air and noise emissions	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for air and noise emissions.
6	Contribute to the national (UK) target of Net Zero by 2050	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for carbon emissions.
7	To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	The measures potentially implemented under this objective are anticipated to improve resilience to climate change.
8	To reduce or manage flood risk by limiting the causes and effects of climate change	✓	The measures potentially implemented under this objective are anticipated to improve resilience to climate change.
9	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	The objective clearly states that it will identify locations where flood risk can be reduced by working with or enhancing the natural environment. This anticipated to beneficial for landscape, although it should be noted that there may be negative effects during the construction period depending on the solution implemented.
10	To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	**NR**	No relationship between the Plan Objective and the SEA Objective identified
11	To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	**NR**	No relationship between the Plan Objective and the SEA Objective identified

12	To minimise resource use and waste production	**NR**	No relationship between the Plan Objective and the SEA Objective identified
13	To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	**NR**	No relationship between the Plan Objective and the SEA Objective identified

Appendix D. Assessment of policy measures

D.1 Development Planning and Adaptive Measures

Measure 1: SuDS development

Measures 2: SAB and Planning Consultee

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Local	LT	Perm	High	+	++	++	++

Commentary

These measures related to ensuring that sustainable drainage (SuDS) is incorporated into development. Opportunities could also be taken to install these in any new refurbishment project. SuDS is a wide range of measures that allows for the incorporation of green infrastructure (inc. planting) that can help enhance biodiversity and provide habitat for a wide range of species, including priority species. It also allows for habitat connectivity and resilience. The involvement of SAB as a Planning consultee should ensure the inclusion of SuDS and will help to ensure adherence to latest guidance / methodologies etc. The need for long term maintenance is noted – it is anticipated that this would help to remove the threat of invasive species becoming established. Effects would be local but of significant benefit in the medium to long term, as any planting etc becomes established.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: Any planting associated with the implementation of SuDS should be made using native species, ideally of local provenance.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
2. Protect and enhance areas designated under the Habitats Regulations	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

It is anticipated that the SuDS would be developed outside designated areas, so effects would likely be indirect. Nevertheless, the incorporation of SuDS can allow for more natural flood conditions which would potentially reduce the threat of flooding in sites designated for nature conservation, which may be downstream of a development. The potential for SuDS to allow for biodiversity enhancement could have indirect beneficial effects on sites by increasing habitat connectivity and providing for species outside the designated area. Effects are considered local and of slight benefit.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	Local	LT	Perm	High	++	++	++	++

Commentary

SuDS allow for more natural drainage methods and this can help to protect soils as a resource, as well as support sustainable use of land for multiple benefits – for example it can ensure that soil is incorporated into a development and not simply replaced with hardstanding. This helps to maintain soil health and preserve it as a resource and can help to support infrastructure development, but also green infrastructure, as well as allowing for effective control of water and helping to ensure water quality is improved.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓✓	Local-Reg.	LT	Perm	High	+++	+++	+++	+++

Commentary

A key aspect of SuDS is that it can protect or improve water quality, in addition to effectively managing flow. This is in keeping with the aims of the WFD and is considered key to the sustainable management of wider water resources. Ensuring the incorporation of SuDS into development via the use of SAB and wider planning controls means that effects would be large beneficial from the short through to the long term. Effects could be of regional significance in the longer term as more schemes become established.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

SuDS are a very passive system for managing water and when well designed and maintained, can remove the need for pumping or reduce the amount of water being treated at Treatment Works, with reduced air and noise emissions. SuDS also remove areas of hard standing and this can reduce dust generation. Effects would be slight and very local.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
6. Contribute to the national (UK) target of Net Zero by 2050	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Widescale implementation of SuDS could result in reduced need for pumping or water treatment, with consequent reduction in carbon emissions. While not directly related to reducing emissions, SuDS would also allow for planting that can help to sequestrate carbon. Beneficial effects would be slight.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Local	LT	Perm	High	++	++	++	++

Commentary

SuDS more closely mimic natural drainage than traditionally engineered approaches. As such, they can 'slow' water and remove / reduce discharge peaks and if positioned correctly, can act to complement hard drainage. This can mean the wider drainage network is better able to cope with the extreme peak events anticipated to become more frequent with a changing climate.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Local	LT	Perm	High	++	++	++	++

Commentary

Widescale implementation of SuDS could result in reduced emissions caused by pumping and water treatment. Planting also allows for sequestration of carbon, further helping to reduce the causes of climate change. Effects of climate change would be reduced by the more natural mimicking of natural drainage.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Local	LT	Perm	High	++	++	++	++

Commentary

SuDS allows for more natural drainage and key features would typically be green infrastructure – ponds, streams, landscaped areas etc. This can protect and enhance landscapes (if at scale), or more locally townscapes. Overall visual amenity can be enhanced. The requirement for SuDS as part of the planning process and the noted need for maintenance gives confidence the SuDS would become established.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

The setting of heritage assets such as scheduled monuments, or historic landscapes / townscapes can be enhanced by the incorporation of SuDS and the typical design elements associated with it. Removing the need for hard engineered pipes etc. could potentially also help to protect archaeology e.g. there is less risk of disturbance / destruction and water logged archaeological artefacts may remain better preserved.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Local	LT	Perm	Med	++	++	++	++

Commentary

The development of green infrastructure, as part of SuDS, would allow for more open space, enhanced biodiversity, more attractive landscape / visual amenity and ultimately help to enhance a better 'sense of place' and likely benefit to health and wellbeing, particularly if used for recreation. Places will have an opportunity to become more attractive to live and work in. Communities will be more resilient and viable by better managing flood risk.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	✓	Local	LT	Perm	Med	++	++	++	++

Commentary

SuDS would allow for a greater use of natural materials and would help remove or reduce the need for 'hard' engineered drainage solutions and thereby would reduce the need for plastic pipes, as well as other materials such as concrete, pipe bedding etc. The natural materials typically used in SuDS are easier to recycle / repurpose and as such overall waste would be reduced.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Local	LT	Perm	High	++	++	++	++

Commentary

SuDS closely mimic natural drainage than traditionally engineered approaches. As such, they can 'slow' water and remove / reduce discharge peaks and if positioned correctly, can act to complement hard drainage. In addition to the drainage network, by reducing the rate of flow in a catchment, they can help to protect bult infrastructure such as bridges, roads etc. from damage by extreme flows or flooding.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

D.2 Flood forecasting, Warning and Response

Measure 3: Flood Action Plan

Measure 4: Adaptation and Reliance

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral. Note that while reference is made to Flood Action Plans allowing the incorporation of solutions such as NFM, it is considered that these issues are addressed elsewhere in this assessment.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
2. Protect and enhance areas designated under the Habitats Regulations	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations:

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations:

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
6. Contribute to the national (UK) target of Net Zero by 2050	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations:

SEA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Community adaptation and resilience refers to the strategies and capacities communities develop to effectively manage and recover from flood events. By integrating these principles into planning and policy making, along with constructing resilient infrastructure would help adaptation to climate change.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

A community that is prepared for the potential of flooding, through action plans, or through taking pre-emptive measures or by having resilient design and construction will be better able to reduce or manage flood risk as well as the wider effects of climate change. Strategies to help with recovery will also limit effects.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

No interaction between these measures and this Objective have been identified. As such, effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Local	LT	Perm	Med	++	++	++	++

Commentary

Flood Risk Plans, as well as general Community Adaptation and resilience will help to ensure communities are prepared for the potential for flooding. This preparation would include through improved infrastructure, early warning systems, and disaster response plans, thereby lessening the immediate impact of floods. It is also anticipated this will lead to lower long-term vulnerability by encouraging sustainable land-use practices and constructing resilient infrastructure that can withstand future flood events. There would also be post-flood recovery strategies to help enable quick restoration of normalcy. Well informed and prepared communities are also anticipated to have enhanced social and community networks, with reduced property damage, lower recovery expenses and livelihoods which are more secure. Nevertheless, some flood risk will remain, with consequent adverse effects.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

A community that is prepared for the potential of flooding, through action plans, or through taking pre-emptive measures, will need less resource use or will produce less waste during / immediately after a flood event. This could include, for example, early warning systems providing enough time to remove material goods out of danger in good time and thereby avoiding their loss. Constructing resilient infrastructure would require less replacement and thereby reduce resource use and waste production. Note though that there will nearly always be a requirement for some level of material use and waste generated post flood in order to reconstruct / refurbish damaged assets.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm

13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Flood Risk Plans, as well as ensuring resilience in construction / design would act to ensure built assets are sustainable.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

D.3 Land, Cultural and Environmental Management

Measure 5: Natural Flood Management (NFM) and Nature Based Solutions (NBS)

Measure 6: Environmental and Biodiversity Enhancements

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓✓	Local-Reg.	LT	Perm	High	++	+++	+++	+++

Commentary

Both NFM and NBS provide numerous opportunities to protect, restore and enhance biodiversity. This can lead to benefits for a wide range of species, including relevant priority species, protect vulnerable habitats and help build resilience into these as well as improve habitat connectivity. Note is also made that there would be integration of integrating ecological considerations into flood control measures to create multifunctional landscapes. Overall it is anticipated that there would be opportunities that would result in a net benefit for biodiversity, with significant beneficial effects at a local to regional level, particularly as habitats become established / restored etc.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
2. Protect and enhance areas designated under the Habitats Regulations	✓✓	Local-Reg.	LT	Perm	High	++	+++	+++	+++

Commentary

While no direct note is made of sites designated for nature conservation, it is anticipated that significant beneficial effects could be experienced indirectly through wider measures that result in net benefit for biodiversity. Both NFM and NBS would act synergistically to provide protection to designated sites by reducing a risk of flooding, but would also act to increase valuable habitats, habitat connectivity and provide for priority species outside those designated areas.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓✓	Local-Reg.	LT	Perm	High	++	++	++	++

Commentary

The utilisation of NFM and Nature based solutions utilise natural hydrological processes to managing water. This is intimately connected to the underlying geology and overlying soil resource and as such requires management of these. General environmental or specific biodiversity enhancements could be expected to protect soil quality and support more sustainable use of land that will result in multiple benefits such as open space for recreation.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓✓	Local-Reg.	LT	Perm	High	++	+++	+++	+++

Commentary

The utilisation of NFM and Nature based solutions utilise natural hydrological processes to managing water. This will result in more natural flow rates and will act to improve water quality in all mediums (ground, surface, coastal) – for example there will be less runoff from areas of hard standing that could be potentially polluted, or would result in less sedimentation in local waterbodies. There would also be less volumes and therefore less requirement to treat water that has entered the storm system. These approaches are in keeping with the aims of WFD and relevant River Basin Management Plans. Effects would be particularly beneficial in the medium to longer terms as more areas utilise these NFM and NBS approaches.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

While the essence of NFM and NBS is that they are a natural process, they could have indirect benefits on air and noise emissions by helping to reduce the need for pumping or water treatment. The use of vegetated surfaces would reduce dust generation. Effects would be beneficial at a local scale.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
6. Contribute to the national (UK) target of Net Zero by 2050	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

While there would be limited reduction in emissions due to less need to pump and treat water, the use of NFM, NBS, general environmental enhancement and a focus on biodiversity, would allow opportunities for carbon sequestration through planting, or through the protection or enhancement of peatlands, bogs, protection of soils and so on.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

NFM and NBS are based on natural processes that ensure less reliance on built infrastructure and as such are inherently more resilient to climate change than fixed hard engineered 'solutions'. However, like any system, they can be overwhelmed by extreme events. Nevertheless, they provide opportunities to help adapt to a changing climate, such as planting of a range of (native) species that are better able to withstand weather extremes.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

NFM and NBS provide opportunities for carbon sequestration which would help reduce the causes of climate change. These systems are also better able to manage extreme events which are likely to become more frequent due to a changing climate.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm

9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓✓	Local-Reg.	LT	Perm	High	++	++	++	++

Commentary

NFM, NBS, general environmental enhancement and a focus on biodiversity, would allow opportunities for enhancing landscapes, townscapes and general visual amenity by protecting from development those areas of importance to the management of water – it is anticipated this would frequently be upland areas or hillsides with high landscape / visual prominence. Enhancement could be through planting etc. Seascapes could also be protected through removal of water from the storm network and therefore reducing discharge that could be polluted with rubbish or sewage. Specific note is also made of coastal habitat restoration which would help enhance seascape character.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

NFM, NBS, general environmental enhancement and a focus on biodiversity would provide opportunities to enhance the setting of individual heritage assets or wider heritage landscapes. A focus on natural hydrological processes could help to preserve those archaeological remains which are reliant on waterlogged conditions. A reduced need for 'hard engineered' infrastructure would reduce the potential for loss or damage to heritage assets.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓✓	Local-Reg.	LT	Perm	High	++	++	++	++

Commentary

A focus on more natural systems will act to support attractive and resilient communities, with benefits for health and wellbeing for example through protecting open green space as well as enhancing biodiversity – these aspects are known to provide benefits to peoples mental and physical wellbeing. An overall reduction in flood risk can also have significant benefits in terms of mental wellbeing for those residents of flood prone areas. Community engagement and education is noted as part of these measures – this can help to engender a sense of ownership, as well as a sense of place, again with recognised benefits for wellbeing. The economy can be enhanced by making areas more physically attractive to visit or do business in.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	✓	Local	LT	Perm	Med	++	++	++	++

Commentary

NFM and NBS would allow for a much greater use of natural materials and would help remove or reduce the need for 'hard' engineered drainage solutions and thereby would reduce the need for plastic pipes, as well as other materials such as concrete, pipe bedding etc. The natural materials typically used are easier to recycle / repurpose and as such overall waste would be reduced.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

NFM and NBS are based on natural processes that ensure less reliance on built assets / infrastructure. More natural flood control will reduce impact on downstream assets such as bridges, culverts, roads, drainage network etc.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

D.4 Asset Management and Maintenance

Measure 7: Asset Surveys

Measure 8: S21 Asset Register

Measure 9: Critical Flood Risk Asset Inspections

Measure 10: Critical Flood Risk Asset Maintenance and Repairs

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Local	LT	Perm	Med	+/-	+/-	+/-	+/-

Commentary

Proactive maintenance has the potential to aid biodiversity by removing invasive species, controlling unwanted species or ensuring that any planting schemes become established. Ensuring that silt does not build up can help to protect river beds and any species or habitats present on the bed. Nevertheless there may also be a potential for disturbance or loss to biodiversity during maintenance activities, or a pollution incident could occur.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
2. Protect and enhance areas designated under the Habitats Regulations	✓	Local	LT	Perm	Med	+/-	+/-	+/-	+/-

Commentary

Proactive maintenance could help to protect and enhance designated sites, should these have flood assets located on them, or be dependent upon them – this can help to maintain the drainage system in a manner which is in keeping with the objectives of the site. Maintenance activities could potentially cause disturbance to designated sites, or a pollution incident could occur.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: Ensure pollution control measures are in place during maintenance.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	N/A	N/A	N/A	N/A	N/A	**+/-**	**+/-**	**+/-**	**+/-**

Commentary

Maintenance activities could provide opportunities to remove invasive species, or remediate any contamination that has occurred. Though, a pollution spill during maintenance or other activities could lead to a loss / disturbance to soil etc.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: Ensure pollution control measures are in place during maintenance.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	Local	ST	Temp	Med	**-**	**-**	**-**	**-**

Commentary

Asset maintenance would include desilting operations and channel clearance. This could lead to increased silt downstream of the works. Desilting can also disrupt the natural hydrology of a river (or restore it). Pollution incidents could occur during maintenance.

Mitigation / Recommendations

Mitigation Measures: Ensure pollution prevention measures are undertaken such as silt mattresses, silt curtains, bunds etc.

Recommendations: Include note on need to prevent water pollution during maintenance operations.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	✓	Local	LT	Perm	Med	**+**	**+**	**+**	**+**

Commentary

A better understanding of assets and their condition will allow for more proactive and effective maintenance will keep built infrastructure in good condition for longer. This would have a slight beneficial effect of removing some of the need for more intensive reconstruction / replacement that would involve air and noise emissions.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
6. Contribute to the national (UK) target of Net Zero by 2050	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

A better understanding of assets and their condition will allow for more proactive and effective maintenance will keep built infrastructure in good condition for longer. This would have a slight beneficial effect of removing some of the need for more intensive reconstruction / replacement that would involve carbon emissions (both direct and embedded in materials used).

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

A better understanding of assets and their condition will allow for more proactive and effective maintenance will keep built infrastructure in good condition for longer. Proactive maintenance will reduce vulnerability and also help the asset to adapt to more frequent extreme weather events caused by a changing climate.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Proactive maintenance undertaken as part of asset inspections would help to reduce the effects of climate change. The causes of climate change would also be reduced by pro-active maintenance reducing the need for refurbishment / reconstruction.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm

9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Visual amenity would be protected and enhanced by asset maintenance carried out as part of inspections.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Historic structures such as bridges would be protected and enhanced by asset maintenance carried out as part of inspections.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Local	LT	Perm	Med	++	++	++	++

Commentary

Asset surveys, registers and inspections will help to maintain health, economic and social wellbeing of local communities by helping to better understand flood risk, where likely 'hotspots' will be and making it possible to plan effectively. Pro-active maintenance will ensure assets are better able to work to their design, again helping to protect communities and remove some risk.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Proactive maintenance undertaken as part of asset inspections would help to reduce the need for resource use and the generation of waste.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

A better understanding of assets and their condition will allow for more proactive and effective maintenance will keep built infrastructure in good condition for longer. Pro-active maintenance represents a more sustainable management option.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

D.5 Construction of Flood Alleviation Schemes

Constructing flood alleviation schemes

ISA Objective	Effects					Assessment								
	Mag	Scale	Dur	T/P	Cert	ST		MT		LT		Sm	
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Local	ST	Temp	Med	+	- -	+	- -	+	- -	+	- -

Commentary

New hard engineered flood alleviation schemes have the potential to result in adverse effects on biodiversity through direct loss, or encroachment to habitats, as well as the severance / fragmentation of green infrastructure. Effects would most likely be during construction stage, when disturbance via noise or pollution deposition could also be a factor. During operation, hard engineered structures can act as barriers to fish migration, though it is anticipated most schemes will be to prevent out of bank flooding rather than being weirs etc. However, in some circumstances, hard engineered schemes could protect vulnerable habitats or general biodiversity from the effects of flooding.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: Note potential for adverse effects during construction stage and noted the need for consideration of issues such as fish passage.

ISA Objective	Effects					Assessment								
	Mag	Scale	Dur	T/P	Cert	ST		MT		LT		Sm	
2. Protect and enhance areas designated under the Habitats Regulations	✓	Local	ST	Temp	Med	+	- -	+	- -	+	- -	+	- -

Commentary

It would be important to ensure that hard engineered flood alleviation schemes are not developed in areas designated for nature conservation, unless it could be demonstrated through HRA that there was no viable alternative. As with general biodiversity, there would be a potential for adverse effects, particularly during construction, though there could be a potential benefit to sites should the scheme offer protection to the designated area. Note that effects could be direct or indirect.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: Particular consideration needs to be made to protection measures in relation to any scheme which may impact directly, or indirectly, on any site designated for nature conservation purposes – particularly those designated as SSSI or Natura 2000.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm

3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	Local	LT	Perm	Med	+/-	+/-	+/-	+/-

Commentary

New hard engineered assets could potentially be located within moderate to good agricultural lands, or greenfields, hence leading to a decrease in quality soils or potential effect on geodiversity, though it is anticipated that extent would be typically relatively limited in area. There is also a potential that new areas could become contaminated e.g. following accidental pollution during construction. However, schemes may also provide an opportunity to remediate contaminated land – including removal / treatment of invasive species such as Japanese Knotweed.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	Local	ST	Perm	Med	-	-	-	-

Commentary

Construction of engineered assets can have implications for water quality due to the potential for pollution incidents. The asset will also likely change the local hydrological regime to less natural flow conditions when operational and may have adverse implications for WFD objectives.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	✓	Local	ST	Temp	Med	-	0	0	-

Commentary

During construction there is a potential for air and noise emissions from construction activities. While operational, hard engineered schemes are anticipated to be passive, with no noise or air emissions (unless pumping is required). During this phase effects are anticipated to be neutral (though slight adverse if pumping required).

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm

6. Contribute to the national (UK) target of Net Zero by 2050	✓	Local	ST	Temp	Med	--	0	0	--

Commentary

During construction there is a potential for carbon emissions from construction activities. Such schemes can frequently also have a relatively high level of embedded carbon due to the use of materials such as steel or concrete, though use of other materials such as stone and soil is also possible. While operational, hard engineered schemes are anticipated to be passive, with no carbon emissions (unless pumping is required). During this phase effects are anticipated to be neutral (though slight adverse if pumping required).

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: Consider use of low carbon materials where possible.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓✓	Local	LT	Perm	Med	++	++	++	++

Commentary

Hard engineered solutions are very effective at protecting infrastructure from flooding, thereby reducing vulnerability and can be designed to account for anticipated climate change factors and as such reduce associated risk and hazards.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Local	LT	Perm	Med	+/-	+/-	+/-	+/-

Commentary

Hard engineered assets would likely contain embedded carbon, though this can be reduced through good design. These assets can also be designed to factor in the potential anticipated risk of a changing climate.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations:

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Local	LT	Perm	Med	+/-	+/-	+/-	+/-

Commentary

New engineered structures are a new feature in the landscape / townscape and can have both beneficial or adverse effects on visual amenity, frequently depending on factors such as location and design. Good design can act to help regenerate areas, or provide protection to areas that can have multiple uses.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Local	LT	Perm	Med	+/-	+/-	+	+/-

Commentary

Hard engineered solutions are very effective at protecting specific sites and as such can have a role to play to protect important assets e.g. scheduled monuments or specific buildings, conservation areas etc. Nevertheless, they can have an effect on setting – both potentially beneficial or adverse and may also disturb archaeological artefacts, particularly during construction. Changes to the local hydrological environment could have implications for waterlogged remains.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓✓	Local	LT	Perm	Med	++	++	++	++

Commentary

Providing robust flood protection can act to reduce direct or indirect threats to physical and mental wellbeing, protect economic assets and help to make communities more resilient to the risk of flooding.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	✓	Local	LT	Perm	Med	+/-	+/-	+	+/-

Commentary

Construction of new flood alleviation schemes would require use of materials / resources and would likely generate waste during construction. However, these schemes would also protect a range of assets and thereby reduce the need to replace or repair damaged assets, thereby avoiding future waste and resource use. Adverse effects are more likely in the short terms (construction).

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

ISA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Hard engineered solutions are very effective at protecting infrastructure from flooding and if well built, can last many decades. As part of a range of catchment wide management, they can have an important role at very specific locations e.g. to protect high worth assets and as such can be considered a key element to wider sustainable management.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

D.6 Studies, Assessments and Plans

Measure 12: Flood Risk Assessments

Measure 13: S19 Investigation into flooding

Measure 14: Feasibility Studies

Measure 15: Business Case Development

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
2. Protect and enhance areas designated under the Habitats Regulations	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

It is anticipated that as part of any scheme development, consideration would be made of the need for HRA assessment to take place. Outcome cannot be anticipated at this stage and effects noted as neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
6. Contribute to the national (UK) target of Net Zero by 2050	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements and regeneration, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements and regeneration, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements and regeneration, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental and social enhancements, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects	Assessment

	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements and regeneration, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	N/A	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**

Commentary

While there are elements of these studies, assessment and plans that will consider and encourage environmental enhancements and regeneration, for example during Business case development, no direct interaction with this objective is noted and it is not possible at this stage to anticipate what effects, if any, there may be on any individual flood scheme. As such effects are considered neutral.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

D.7 High Level Awareness and Engagement and Monitoring

Measure 16: Communicate Risk

Measure 17: Warn and Inform

Measure 18: Partnership working with other RMAs

Measure 19: Emergency response plans

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
1. To protect and enhance biodiversity, priority species, vulnerable habitats, habitat connectivity and resilience with the capacity to adapt to change, and achieve Net Benefit for Biodiversity	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Elements of these measures have the potential to provide beneficial effects to biodiversity, though these will be slight. For example, timely flood warnings provide people opportunities to prepare for floods and this could include the removal from harm items that could lead to a pollution event and impact biodiversity such as fuel tanks, vehicles etc. Similarly, early preparations and emergency response plans could allow for protection to sensitive habitats to be put in place or for emergency maintenance works to take place such as to culverts etc that might lessen the extent of flooding.

Shared resources between organisations, including strategic planning will also allow for a quicker recovery and this would benefit biodiversity such as by removing contamination – this could include preventative measures to stop invasive species becoming established.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
2. Protect and enhance areas designated under the Habitats Regulations	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Early warning and advanced planning with partner organisations could help to identify those sites designated for nature conservation (or features within such sites) that may be at risk and measures could be taken to prevent / minimise damage. Joint efforts could also allow for quicker recovery post flood.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
3. To protect and enhance geology, the functionality, quantity and quality of soils as a resource, and to support sustainable use of land for multiple benefits.	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Partnership working with a range of organisations and sharing resources will help to recover from floods. This could include removing detritus or contamination from areas of high quality soil. Measures could also be taken, with early warning, to undertake emergency measures that would lessen the extent of flooding.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
4. To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources.	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Partnership working with a range of organisations and sharing resources will help to recover from floods. This could include removing detritus or contamination from water courses. Measures could also be taken, with early warning, to undertake emergency measures to remove from harm, or adequately protect items that could lead to water pollution – vehicles, fuel tanks etc.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
5. To reduce and minimise air and noise emissions	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Emergency response plans and effective early warning that allows emergency preventative action to protect property from floods can result in reduced damage. This will reduce the need for generators, pumps, drying equipment etc. to be used in post flood recovery and reduce the need for general construction / repair activities.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
6. Contribute to the national (UK) target of Net Zero by 2050	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Effective early warning that allows emergency preventative action to protect property from floods can result in reduced damage. This will reduce the need for generators, pumps, drying equipment etc. to be used in post flood recovery and would result in fewer emissions, including that associated with embedded carbon in replacement materials.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
7. To reduce vulnerability of built infrastructure and ensure resilience and adaption to climate change risks and hazards	✓	Local	LT	Perm	Med	+	++	++	++

Commentary

Flood risk is anticipated to increase with a changing climate, with more intense floods of greater frequency likely. Strategic planning and sharing of information across organisations will allow for a much greater and more comprehensive understanding of where new risks may arise and how best to address these. Vulnerability will be reduced through good communication to inform people of the increased risk and allow them to take measures to adapt to new risks and hazards. This would be beneficial both for individuals and their properties as well as across communities as a whole. Resource sharing will help to ensure the best and latest equipment is available where it is needed to further reduce vulnerability and greater joint training will be invaluable to ensure emergency personnel are fully up to date with changing threats and the best response. Effects will have greater beneficial significance as these new ways of working and greater understanding become more embedded.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
8. To reduce or manage flood risk by limiting the causes and effects of climate change	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Emergency response plans and effective early warning that allows emergency preventative action to protect property from floods can result in reduced damage. This will reduce the need for generators, pumps, drying equipment etc. to be used in post flood recovery and would result in fewer emissions, thereby helping to limit the causes of climate change. Effective partnership working across organisations will be invaluable in helping to reduce and manage flood risk.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
9. To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	✓	Local	LT	Perm	Med	+	+	+	+

Commentary

Effective early warning that allows emergency preventative action to protect property from floods can result in reduced damage. This will help to preserve townscapes. Effective partnership working will also help to recover from floods, thereby ensuring townscapes and landscapes, as well as general visual amenity can recover as quickly and efficiently as possible.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
10. To conserve, protect, sustainably manage and enhance the historic environment and assets, including archaeology	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Emergency response plans and effective early warning that allows emergency preventative action to protect sites or assets of heritage interest from floods can result in reduced damage. This will help to preserve the historic environment. Joint working with partner organisations can help identify vulnerable historic sites and allow better understanding of how flood risk may change for such sites and how best to protect them.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
11. To maintain and enhance the health, economic and social wellbeing of the local community and support attractive, resilient and viable communities	✓	Local	LT	Perm	Med	+	++	++	++

Commentary

While it will not directly remove the threat of flooding, effective communication significantly benefits flood-prone communities by enhancing preparedness and ensuring timely responses. It increases awareness of risks and provides practical preparation steps, leading to better evacuation readiness and reduced property damage. Reliable information alleviates anxiety, while training in emergency skills enhances safety. Timely flood warnings enable safe evacuations, property protection, and psychological preparedness,

reducing panic and fostering community resilience. Warning and informing residents about flooding is a vital component of disaster risk reduction. It saves lives, protects property, minimises economic losses, enhances community resilience.

Partnership working would also likely include organisations concerned with health and social care as well as economic agencies.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: The Measure could be more specific about partnership working with organisations concerned with health and social care as well as economic agencies.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
12. To minimise resource use and waste production	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Emergency response plans and effective early warning that allows emergency preventative action to protect property from floods can result in reduced damage. This will reduce the need for generators, pumps, drying equipment etc. to be used in post flood recovery and would result in reduced use of fuel, as well as a reduced need for new materials to replace or repair damage / lost items.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

SEA Objective	Effects					Assessment			
	Mag	Scale	Dur	T/P	Cert	ST	MT	LT	Sm
13. To avoid negative effects on and / or protect and / or promote the sustainable management and resilience of built assets / infrastructure	✓	Local	LT	Perm	Low	+	+	+	+

Commentary

Emergency response plans and effective early warning that allows emergency preventative action to protect property from floods can result in reduced damage to built assets or infrastructure. Resilience of such assets will be increased through more effective planning and cooperation across organisations, to avoid duplication of effort and provide a greater focus on the most vulnerable assets.

Mitigation / Recommendations

Mitigation Measures: N/A

Recommendations: No recommendations made.

Appendix E. Consultation responses

Consultee	Comment	How was this addressed?
Cyfoetyh Naturiol Cymru – Natural Resource Wales	Suggested consideration of flood risk for the present day and for climate change for each topic	Consideration of climate change has formed a key element of the NPTLFRMSP – see for example Chapter 2. Consideration of climate change has also been a substantial aspect of the SEA, with a number of Objectives being directly or indirectly concerned with this issue.
	Suggested there is currently too much focus on the UK scale, the LFRMS will benefit more focus on the Neath Port Talbot (NPT), regional and Wales scale evidence, plans, policy and strategies. For example, NPT Local Nature Partnership (NPT LNP)'s assessment of the State of Nature in the county, linked with a Nature Recovery Action Plan should be a key evidence source for Biodiversity & Ecosystems, rather than the UK's State of Nature 2023	Noted – the baseline data gathered at Scoping stage was done so in order to provide context and understanding of the issues involved. This included information from the UK as a whole, as well as Wales and the local area. This helped to inform the identification of key issues and opportunities and as such helped inform the SEA Framework – providing reassurance that this was in line with UK and Welsh issues as well as local ones. The NPTLFRMSP has concentrated on the local area and as such the SEA assessment focused on that scale. Reference has also been made to those NPT Plans.
	As this is a second cycle plan, we suggest it should draw more on what has been learnt from the implementation of the first cycle. What was monitored from the first cycle SEA and how have the results of the monitoring fed into the baseline data/environmental context for this round? How has the learning from the first cycle influenced this second cycle?	The LFRMSP builds upon the first Local Strategy and associated Flood Risk Management Plan that were developed in 2014. This LFRMSP is the second Local Strategy and whilst previously the Local Strategy and FRMP were published separately, this new Local Strategy and Plan integrates the two documents into one. This

		approach has been made as it was recognised that this reduces complexity, duplication, and will enable NPTCBC to communicate and manage local flood risk more effectively, compared to the first plan cycle. It is the intention that the LFRMSP will work alongside other strategic plans for shoreline management, infrastructure and planning to set out the direction NPTCBC want to take. Where possible, findings from earlier assessments, as well as other assessment processes have informed the development of the LFRMSP and associated SEA. Note is made in the SEA Report (Section 12) that, going forward, the monitoring carried out will be used to inform future plans and programmes, including future iterations of the LFMRSP.
	Suggest removal of ‘fluvial’ from flood risk management, as the LFRMSP will consider flood risk from surface water, ordinary watercourses and groundwater.	Noted – reference was made in Scoping Report but not repeated in this main SEA Report.
	Suggestion water companies are also included within reference to Risk Management Authorities, and that coastal erosion is also noted as included in the LFRMSP objectives.	Reference in Section 1.2 to RMA’s expanded to include water companies.Note also expanded to note the linkages between water companies develoing Drainage and Wastewater Management Plans (DWMP) and Flood Risk Management Plans.
	Suggested rephrasing of ‘Manipulate nature’ to ‘use nature based solutions’.	This reference was part of a description of NPTLFRMSP Objectives in Scoping Report and is not repeated in the SEA Report. Note that Nature Based Solutions form a key part of the Measures set out in NPTLFRMSP.

	Suggest that co-ordination via the Local Resilience Forum is also noted.	Note made in Section 1.5 of the Local Resilience Forum and some detail on their role provided.
	Update ‘Wales Flood Risk Management Plan (South West Wales)’ to ‘Natural Resources Wales’ Flood Risk Management Plan (National and South West Wales)’	Reference updated in Section 3.1
	Reference should be made to cross-cutting policies at local, regional, and national scale for Wales, rather than to UK Government’s 25 Year Plan to Improve the Environment 2018 as Environment is devolved in Wales.	Note has been made of these policies in Section 3.2
	Please refer to NPT’s Biodiversity Duty Plan 2020 – 2023 and Nature Recovery Action Plan and update section accordingly with baseline evidence and opportunities to align to action plan	Consideration of these Plan’s has been made and reference added to Section 4, Table 4-1
	When producing the HRA, for the Marine areas we recommend reference to all relevant Regulation 33 Advice Packages	These Regulation 33 Advice Packages have been considered and referenced in the HRA Report.
	There are coal reserves still present across the whole of the South Wales Coalfield area, and an open drift mine at Aberpergwm, but given the current climate emergency and the position of Welsh Government, suggest rephrasing of the likely evolution– please refer to Coal policy statement | GOV.WALES and How we regulate coal extraction for more information.	Additional clarification has been added to Table 4-1 to note that it is the Welsh Government’s coal extraction policy objective “to avoid the continued extraction and consumption of fossil fuels” and “to bring a managed end to the extraction and use of coal”. Effectively this means that new coal authority mining operation licences or variations to existing licences are not likely to be granted, unless in exceptional circumstances, whereby each application will be decided on its own merits. Under Welsh Government policy, there is a presumption against new coal extraction operations.
	Suggest that this section considers the importance of coal tip safety for disused coal tips, considering the risks associated with heavy rainfall, the large number within NPT (Coal tip safety | GOV.WALES) and the relevance for the LFRMSP.	Additional text added to Table 4-1 to note that consideration should be made in the NPTLFRMSP that given the large number within Neath Port Talbot, note should also be

		made of the importance of coal tip safety for disused coal tips, considering the risks associated with heavy rainfall and the potential implications of extreme weather events caused by a changing climate. Note is also made in the NPTLFRMSP of issues relating to coal mining in relevant catchments such as Afon Pelenna.
	There could also be inclusion of recent flooding events, for example in Skewen in 2021 Policy on Skewen Flooding Response Support – 16 March 2021 - GOV.UK (www.gov.uk)	Flood Actions relating to Skewen are set out in the NTPLFRMSP and are considered within the SEA.
	The Colliery spoil biodiversity initiative should also be noted, with key links to biodiversity, cultural heritage and landscape	Reference to exploring potential synergies with the Colliery Spoil Biodiversity Initiative has been added to Table 4-1.
	Nature based solutions could be listed as opportunities for NPTLFRMSP	Implementation of Nature Based Solutions (alongside Natural Flood Management and general environmental and Biodiversity enhancement) forms a key element of the NPTLFRMSP and Measure 5 and 6. The inclusion of these Measures has been assessed as part of the SEA.
	Tata Steel's UK plan to decarbonise and associated potential impacts should be considered (Tata Steel Transition Information Hub - Neath Port Talbot Council (npt.gov.uk))	Note is made in Table 4-1 that plans to decarbonise the steel works are in place. Note that reference to a Nationally Significant Infrastructure Project at the steel works is made in Section 11.3 and consideration is made of cumulative effects with the NPTLFRMSP.
	We welcome reference to NRW's Flood Risk Management Plan which includes details of communities at risk from main rivers and the sea. Suggest that baseline information is also needed	Noted – Chapter 7 of the NPTLFRMSP sets out the risk of flooding across the plan area and provides detail of each Catchment and reference is made to Shoreline Management

	about the areas at risk of flooding from surface water, ordinary watercourses, groundwater and coastal erosion and the Shoreline Management Plan should also be considered.	Plans as required. The Measures and Actions for each catchment are considered in the SEA (Section 9).
	The importance of nature based solutions to flooding and in respect of climate change both in the urban and landscape context should be noted in implications / opportunities for NPT LFRMSP. This could be a good opportunity to highlight the multiple benefits of nature based solutions in flood risk management. For example, salt marsh in coastal environments or peatland restoration in the upper catchment.	Implementation of Nature Based Solutions (alongside Natural Flood Management and general environmental and Biodiversity enhancement) forms a key element of the NPTLFRMSP and Measure 5 and 6. The inclusion of these Measures has been assessed as part of the SEA.
	Update is required following the suggestions for further analysis of baseline information, issues and opportunities at the NPT scale, with greater consideration of flood risk in the present day and considering climate change.	Consideration was made of the further baseline information, plans and policies etc. Consideration was also made of the level of detail in the NPTLFRMSP, including the focus in this on climate change, as well as the Measures and Actions proposed. In light of these considerations it was determined that the SEA Framework remained robust and appropriate to provide a proportionate assessment of potential for significant effects on the environment from implementation of the NPTLFRMSP.
NRW Comments on Scoping Report Appendices		
	A number of additional Plans and Policies were suggested for National, Regional and Local scales	Reference to additional Plans and Policies now made in SEA Report and included in Appendix A.
	Please refer to NPT's Biodiversity Duty Plan 2020 – 2023 and Nature Recovery Action Plan and update section accordingly.	Reference to these Plans is made in Appendix A and in Table 4-1 of the SEA Report.
	More detail is needed on the 21 SSSIs, including whether they are at risk of flooding or coastal erosion.	More detail is provided in Appendix F. This provides details of those SSSI within the

		LFMRSP area that may be impacted by Measures and Actions set out. Note is also made that discussions need to be held with Natural Resource Wales prior to any activities or operations taking place that could negatively effect a SSSI or which involve an operation for which prior notification needs to be given.
	Potential impact to fish needs to be explored and to note Section 7 Species from the Environment Wales (2016) Act, Brown Trout, European Eel and Atlantic Salmon should be included. There are several legislative drivers which there are statutory requirements to have regard and should be highlighted in the SEA – SAFFA 1975, Eel Regs 2009 and Environment Wales Section 7 species. This is in addition to the WFD requirement to ensure all aspects of the water environment are protected and, where necessary, restore water bodies in order to reach good status, and to prevent deterioration.	Note is made of 'Section 7' species of fish in Table 4-1 of the SEA Report. Barriers to fish migration has been considered in the SEA. For example, note is made that during operation, hard engineered structures in watercourses can act as a barrier to fish migration – this is a prevalent problem in the Neath Port Talbot area and it is recognised in the RBMP (Ogmore to Tawe) that mitigation of this will be an important factor in improving fish passage and fish status. Recommendation is also made that further specialist assessment may be required in respect of scheme development – this could include relating to fish passage or other issues noted in the relevant RBMP and it is noted that any design should consider the findings of all such assessments.
	We are currently looking into River Restoration and other nature based solutions in NPT (Nant Gwrach and Ffrwydwllt) looking at multiple benefits including flood risk, sediment management and others. Please contact us if you would like further information about this evidence and how it may offer opportunities to consider in the LFRMSP	Noted – Measure 5 of the NPTLFRMSP is concerned with Natural Flood Management and Nature Based Solutions. Reference has been made to this offer in the cumulative effects of other plans and policies section (Section 11). This notes that cooperation with NRW on these issues offers the potential for

		significant benefits to be realised across a range of SEA Objectives.
	We recommend including baseline evidence on INNS given the risk of Non-native invasive species alongside watercourses and their spread, the potential for such plants to impede flow especially on smaller watercourses and the benefits for their management.	Note is made in Table 4-1 of the SEA Report that INNS pose a serious and growing threat to native fauna and flora, with a changing climate providing opportunity for further expansion of their composition and range. Note is also made that sites designated for nature conservation are at risk from the spread of invasive species and that invasive species may spread further due to climate change. The issue of invasive species is also considered throughout the assessment, e.g. it is noted that “the incorporation of specific Measures to ensure better preparation, response and recovery performance could potentially benefit biodiversity by helping to avoid pollution on sensitive areas, or by cleaning pollution more quickly / effectively. This could include for example, the removal of invasive species”. The need for long term maintenance is also noted – it is anticipated that this would help to remove the threat of invasive species becoming established. Note is made that proactive maintenance has the potential to aid biodiversity by removing invasive species, controlling unwanted species or ensuring that any planting schemes become established. In relation to construction, it was noted this provides an opportunity to remediate contaminated land – including removal / treatment of invasive species such as Japanese Knotweed. The

		need to remove invasive species is also noted in relation to mitigation.
	More information needed at NPT Scale. Bathing Water Please refer to Bathing waters overview (data.gov.uk) and Aberafan for NPT scale information. Water Resources Natural Resources Wales is the regulatory body responsible for managing water resources in Wales. We need to balance the water needs of the environment, society and the economy, both now and in the future. We face a number of challenges which will have an impact on our water resources and the ways we manage them. These include population growth, an increased demand for water and climate change. Limited mention of Water Resources and water abstraction licences within the current draft. Understand the drive to align the LFRMSP aims to the Water Framework Directive. This relates more to water quality than water quantity. The Water Act is the Legislation that drives the management of our water resources. Inclusion of other relevant plans and policies, such as Abstraction Licensing Strategies (ALS), this strategy assesses applications to abstract and/or impound water against local water availability. Please refer to the Swansea Bay Abstraction Licensing Strategy	Additional information on bathing waters in the Neath Port Talbot area has been added to Appendix B. This notes that bathing waters have been rated as 'Excellent' or 'Good'. Note is also made in Appendix A of the Swansea Bay Abstraction Licensing Strategy – this notes different water bodies within Neath Port Talbot and the availability (or otherwise) of water for abstraction.
	Water Framework Directive A LFRMS has the opportunity to be detrimental or beneficial to implementing WFD mitigation measures. FRM activities do contribute to WFD failures due to physical modifications so there should be an issue/opportunity for the LFRMS to make efforts address this. Opportunities to work collaboratively on nature based solutions for wider benefits, including flood risk, should be listed as an opportunity. All projects being undertaken in the fluvial, estuarine or coastal environment must undergo WFD compliance assessment. This should be considered and referenced, please refer to WFD Advice Note for Local Authorities (naturalresources.wales).	Natural Flood Management and Nature Based Solutions are recognised as an Opportunity in Table 4-1 of the SEA Report and also form an important component of the LFRMSP (Measure 5). As such, consideration of these is made throughout the SEA. An SEA Objective was to 'protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies in line with the requirements of the WFD, and to maximise the sustainable management of water resources'. As such, note is made in the SEA Report of

		implications for WFD objectives and that all schemes being developed in the fluvial, estuarine or coastal environment should undergo assessment in respect of implications for the WFD. Note also that Appendix G contains a further note on the Western Wales River Basin District, the status of water bodies within it and the identified challenges to the current and future water environment. Note is made in Appendix A of the NRW Advice note to Local Authorities on the Water Framework Directive.
	There is no mention of Opportunity Catchments – this is a key omission to the SEA. The third cycle River Basin Management Plan (RBMP) established ten Opportunity Catchments across Wales. Opportunity Catchments (OpC) have been agreed as the delivery mechanism for the third cycle River Basin Management Plans (RBMP) (2021- 2027). The focus of OpC is to maximise multiple benefits for waterbodies, health, and wellbeing, delivered through partnership working. OpC are a delivery mechanism to integrate RBMP with other work streams and to deliver the Natural Resources Plan priorities, such as delivery through nature-based solutions. Area Statements provide an important local steer having identified the local challenges and opportunities for each area. The Swansea Bay Opportunity catchment encompasses the Rivers Tawe, Neath (lower rivers) and Afan as well as the Clyne and Kenfig catchments and the coastal area within Swansea Bay. An overview is included in Western Wales RBMP 2021_2027 Summary (naturalresources.wales) (Page 54)	Neath Port Talbot is within the South West Area opportunity catchment and note of this is made in Appendix A. This notes a series of themes that seek to reduce health inequalities, ensure sustainable land management, reverse the decline of biodiversity as well as mitigate and adapt to a changing climate. The SEA Report has shown that a number of the Measures and Actions within the LFRMSP are aligned with these broad themes, including those measures that promote Natural Flood Management and Nature Based Solutions, as well as those measures that encourage collaboration across a range of organisations.
	The Scoping Report refers to 29 riverine water bodies (WB), 3 canals and 1 lake within NPT. Please include the names of the WBs so that we are able to advise whether the classifications listed are correct, and whether all the correct WBs have been included for NPT. The Coastal and	Note is made in Appendix G of the waterbodies within Neath Port Talbot and their water quality.

	Groundwater bodies within NPT should also be included. The Reason for Not Achieving Good (RNAG) should also be included, to explore the evidence of the issues and opportunities there may be with the LFRMSP. Please note the next classification is due for release in January 2025. Heavily Modified Waterbodies (HMWB) in NPT should be included in the baseline information. Some waterbodies might be classified as a HMWB as a result of their function as a flood risk asset. These might provide valuable social and economic benefits which it is vitally important to protect, so they have been designated as such under Article 4.3 of the WFD. There can still be opportunities to deliver mitigation measures in HMWB to help achieve Good Ecological Potential. Where LFRMSP measures are delivered in a HMWB, they must seek opportunities to deliver mitigation measures identified for the HMWB.	It is noted that the next classification iteration is due January 2025. Note is made within Appendix G that any scheme being developed in the fluvial, estuarine or coastal environment (such as those set out under Measure 10) should undergo assessment in respect of implications for the WFD and the objectives of the RBMP. Any design should consider the findings of all such assessments. Note is also made that consideration should be made of waterbody classifications prevailing at that time.
	Flood Risk Data should refer to a Wales scale (NRW Data set) Data from NRW's FRMP should be considered within the South West Wales and NPT scale too, or data from LFRMSP should be included for review.	Issues and data relating to flood risk are set out at length in the LFRMSP and the SEA has considered the Measures and Actions to address this risk for each of the catchments within NPT.
	National Planning Policy Framework (NPPF) applies to England only. Please refer to Planning Policy Wales and Technical Advice Note (TAN) 15: Development and Flood Risk. • References 78 and 79 should be updated to Natural Resources Wales / Flood Map for Planning / Development Advice Map and the guidance regarding zones updated accordingly. The Flood Map for Planning has the following layers, which show the potential extent of flooding, assuming no defences are in place: Rivers – Flood Zone 2 Areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from rivers in a given year, including the effects of climate change. Rivers – Flood Zone 3 Areas with more than 1% (1 in 100) chance of flooding from rivers in a given year, including the effects of climate change. Rivers & Sea – Flood Zone 2 The combined 0.1% risk of flooding from rivers and the sea including climate change.	Noted - Amendments made to specifically reflect planning policy in Wales and requirements of TAN 15: Development and Flood Risk. The noted additional information has also been added to the baseline data and considered within the SEA. It was not considered necessary to amend any SEA Objective on this basis.

Rivers & Sea – Flood Zone 3

The combined 1% risk of flooding from rivers and the sea including climate change.

Sea – Flood Zone 2

Areas with 0.1% to 0.5% (1 in 1000 to 1 in 200) chance of flooding from the sea in a given year, including the effects of climate change.

Sea – Flood Zone 3

Areas with more than 0.5% (1 in 200) chance of flooding from the sea in a given year, including the effects of climate change.

Surface Water and Small Watercourses – Flood Zone 2

Areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change.

Surface Water and Small Watercourses – Flood Zone 3

Areas with more than 1% (1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change

• Given recent updates to Properties at Flood Risk data, there are approximately 273,000 properties at flood risk within Wales. Property figures are also available at the NPT scale for both present day and climate change. Please get in touch if you would like more information about this.

• Reference to Environment Agency should be updated to Natural Resources Wales as the relevant authority in Wales.

• NPT data should include key data about the areas at risk of flooding for the present day and considering climate change allowances (people, property, key infrastructure etc), specifying the source of flood risk. Rather than some areas being highlighted from the FMfP. Please get in touch if you would like further guidance on this.

• NPT scale information about coastal erosion should be included Natural Resources Wales / Check your coastal erosion risk (National Coastal Erosion Risk Management map)

• Update reference 81 to Natural Resources Wales / Shoreline Management Plans. The relevant Shoreline Management Plan, policy units and action plan for the NPT are should also be included, as well as mention of the Swansea and Carmarthen Bay Coastal Engineering Group.

	Should refer to NPT's Decarbonisation and Renewable Energy Strategy and Tata Steel's UK plan to decarbonise (Tata Steel Transition Information Hub - Neath Port Talbot Council (npt.gov.uk)) • Reference to Corus Steel should be updated.	Note is now made in the Appendix B that the greenhouse gas emissions for Neath Port Talbot reflect the large steel works present in Port Talbot. It is important to note that this steel works is currently in the process of decarbonising production through use of Electric Arc Furnace technology. See Green Steel Future | Tata Steel UK (tatasteeleurope.com) for further information. Reference to Corus Steel has been removed.
	• Any flood alleviation plans that could impact traffic routes would need to consult the Local Authority Air Quality Management Plans to ensure that changes in traffic flows do not increase air quality issues. • The report does acknowledge the current trend in electric vehicles which should also contribute to reduced NOx emissions in the communities. • It is also important to note that there is emerging legislative controls being introduced by Welsh Government via The Environment (Air Quality and Soundscapes) Bill that will introduce new air quality targets within Wales. • In regards to The Clean Air Plan for Wales, suggest inclusion of consideration for people and health, including population groups in the 'most' deprived areas being at greater risk	Note is now made in the SEA Report in respect of construction of any flood alleviation scheme that further assessment may be required and the findings of such assessment should be considered in any scheme design. This would include the need to consider air quality management areas in the event of changes to traffic flows. While the issue of people in more deprived areas being at greatest risk of poor air quality is noted is noted, the SEA has considered air quality in respect of the population as a whole. Construction of engineered assets is noted as having potential adverse effects on air quality, though it is anticipated that when operational, hard engineered schemes are anticipated to be passive, with no noise or air emissions (unless pumping is required). During this phase effects are anticipated to be neutral (though slight adverse if pumping required).

	Build upon history of coal mining in the area and include reference of disused coal tips in baseline data for NPT Coal tip safety | GOV.WALES. • Include peatland as baseline evidence and also the opportunities for restoration. The Wales Environmental Information Portal contains the new peat map showing the locations of all Peatlands in Wales. The National Peatland Action Programme (NPAP) is a 5 year plan (2020-2025) of peatland restoration in Wales. Welsh peatlands need urgent action to reverse habitat loss and their poor condition. They support a variety of habitats and species, and have an important role in capturing and storing carbon, regulating greenhouse gases, maintaining biodiversity, regulating water To determine any opportunities project managers should contact the NPAP team: npap@naturalresourceswales.gov.uk Reference should also be made to the Lost Peatlands Project -The Project (npt.gov.uk) •	The historical importance of coal mining in Neath Port Talbot is noted in SEA Report Table 4-1. Additional clarification has been added to Table 4-1 to note that it is the Welsh Government's coal extraction policy objective "to avoid the continued extraction and consumption of fossil fuels" and "to bring a managed end to the extraction and use of coal". Effectively this means that new coal authority mining operation licences or variations to existing licences are not likely to be granted, unless in exceptional circumstances, whereby each application will be decided on its own merits. Under Welsh Government policy, there is a presumption against new coal extraction operations. Note is also made that there are 617 disused coal tips in Neath Port Talbot and that LFRMSP should recognise the risks associated with heavy rainfall and the potential implications of extreme weather events caused by climate change. Note is made in Table 4-1 of the SEA Report to the importance of peat e.g. in relation to storing Carbon and how elements of NFM could be of relevance. Note is made in the assessment of how the use of NFM, NBS, general environmental enhancement and a focus on biodiversity, would allow opportunities for carbon sequestration through planting, or through the protection or enhancement of peatlands, bogs, protection of soils and so on.

	For Agricultural land, refer to ALC classifications within the NPT area using data from Data Map Wales, rather than Natural England which in England focused. Consideration should also be given to the Sustainable Farming Scheme and land management opportunities to help flood risk management. • Consideration of the amount of urban/rural areas at flood risk within NPT. For instance, a sparsely populated rural and semirural area will face different challenges with flood risk, compared to a densely populated urban area. • Consideration of NPT Council's land, assets and consideration for flood risk and coastal erosion in the present day and considering climate change • For contaminated land, identify where is at risk of flooding or coastal erosion within NPT • Consider how the characteristics of soil and geology within NPT impact the nature of flood risk in the area. There is an opportunity for nature based solutions to reduce soil erosion, as well as flood risk and wider benefits • Areas of Welsh Government Woodland Estate within the NPT area should also be considered. A forest resource plan is a core management document used on the Welsh Government's Woodland Estate (WGWE). It lays out proposals for the future management of a woodland in accordance with current policy and practice Forest Resource Plans. Future iterations of the Forest Resource Plans will be put together to meet the standards set out in the UKFS and UKWAS for water management and flood risk. Particular attention to the UKFS Practice Guide on Designing Forests and Woodland to reduce flood risk.	Note is made within the LFRMSP of agricultural lands and the flood risk posed to these. Consideration is made of ALC Classification 1, 2 and 3 and provides detail of the area (ha) at risk under different flood risk categories. Note is also made within the LFRSMP of the number of residential properties at risk of flooding and details the challenges of preventing flooding in both urban and rural areas. Consideration of climate change is also noted in the LFRMSP.
	More detail needed for the NPT scale. For example, are any Scheduled Monuments or listed buildings at risk of flooding in the present day or considering climate change. Network of canals should be considered in relation to the LFRMSP, including key areas such as the Aberdulais Aqueduct. The section should reference Heritage Strategy 2024- 2039 – Neath Port Talbot Council (npt.gov.uk), Historic Environment and Climate Change Sector Adaptation Plan (gov.wales) and NPT PSB's Wellbeing Assessment as key evidence sources and be updated accordingly.	The LFRMSP sets out those assets, including those of heritage value such as listed buildings and scheduled monuments, which are considered at risk of flooding (for those areas considered High, Medium and Low risk). Note is also made within the LFRMSP of the Aberdulais Aqueduct and relevant canals.
	References to Brecon Beacons National Park should be updated to Bannau Brycheiniog National Park	All references to Brecon Beacons amended to reflect the true name of this area.

	• Should refer to LANDMAP and Wales Dark Skies (arcgis.com) and provide more detail for the NPT scale, can consider nature based solutions at the landscape scale e.g., Green Infrastructure strategy	Consideration is made in the SEA of Natural Flood Management and Nature Based Solutions and it is noted that these allow opportunities for enhancing landscape. It is noted in the SEA Report that this can help to enhance a sense of tranquility and maintenance of 'dark skies'.
	More detail is needed at the NPT scale for: • How many people at risk of flooding and coastal at residential properties? • How many people at risk of flooding at business properties? • How is this population information and those at risk expected to change with climate change? • How do those at risk correlate with those in the highest density areas, the Wales Index of Multiple Deprivation, access to green spaces etc. • Reference could be made to the British Red Cross research, which highlights the social vulnerability of those at flood risk • Inclusion of languages spoken with NPT • Typo – 'food risk', rather than 'flood risk' • Section should refer to Climate Change in Wales: Health Impact Assessment - World Health Organization Collaborating Centre On Investment for Health and Well-being (phwwhocc.co.uk) and be updated accordingly	Detail on risk of flooding (as well as implications of climate change) at the NPT scale is set out in the LFRMSP and considered through the SEA.
	Should refer to Transport for Wales climate adaptation, the developing Regional Transport Plan for South West Wales which includes plans for a Swansea Bay and West Wales Metro, relevant Dŵr Cymru reports and NPT's Decarbonisation and Renewable Energy Strategy • Should explore if any key infrastructure, public services or public transport at risk of flooding and coastal erosion • Suggest inclusion of information about the existing flood risk infrastructure in NPT, including natural flood management schemes like those at Gnoll Country Park, with details of the monitoring to date of flood risk and wider benefits • Some Supporting Trend Data is not relevant for NPT (e.g., HS2, Heathrow), it would be better to focus on the NPT specific trends (e.g. Tata Steel, the Freeport Programme in Wales | GOV.WALES)	The LFRMSP contains details of flood risk, including to infrastructure. This notes the roles of organisations such as the Highway Authorities and the South Wales Trunk Road Authority, as well as the Coastal Protection Authority. Note is also made in the LFRMSP of how NFM has been used successfully by NPTCBC in the Gnoll Country Park, where the upper catchment incorporates NFM techniques to adapt the behaviour of peak

	and whether the key infrastructure is at risk of flooding for present day and considering climate change	flow rates before water reaches Neath town centre. Reference to HS2 and Heathrow removed as agreed it was not relevant – it had been inserted originally to show wider trends. Note made elsewhere to developments in NPT such as at Tata Steel and the SEA Report details consideration of Nationally Significant Infrastructure Projects of relevance to Neath Port Talbot.
	Section should refer to NPT PSB's Well-being Assessment and Plan, Active Travel - Neath Port Talbot Council (npt.gov.uk) and PHW's Climate Change in Wales: Health Impact Assessment and be updated accordingly • Details of the South Wales and Severn estuary section of the Wales Coastal Path in NPT should be included Reference 212 should be updated to Wales Coast Path / About the path as NRW manage the Wales Coastal Path, working in close partnership with others, such as NPTC. • Include details of Public Rights of Way and if any are at risk of flood risk and coastal erosion, especially as listed in the SEA Scoping Report	Reference made to Wales Coast Path corrected to note role of Natural Resource Wales and footnote updated. No risks to Public Rights of Way were identified in the SEA – it is anticipated such issues would be identified through the noted additional assessments (such as EIA) that would be required of any scheme being developed.
	Suggest that active and historic landfill and recycling details specific to NPT is included, and whether it is at risk of flooding or coastal erosion – please refer to Historic Landfill sites, Recycling centres - Neath Port Talbot Council (npt.gov.uk), Local authority municipal waste management: April 2022 to March 2023 (gov.wales) and Check the list of registered landfill site operators in Wales | GOV.WALES • National Planning Policy Framework (NPPF) applies to England only, therefore refer to Planning Policy Wales • Tata Steel's UK plan to decarbonise and associated potential impacts should be considered (Tata Steel Transition Information Hub - Neath Port Talbot Council (npt.gov.uk))	Reference to NPPF amended to reflect the requirement that since minerals are a non-renewable resource, minerals safeguarding is the process of ensuring that non-minerals development does not needlessly prevent the future extraction of mineral resources, of local and national importance. Note is also made of the role of local authorities.
CADW	We note that statutorily registered historic parks and gardens are not included in this section and should be added.	Note is now made to Registered Parks and Gardens in Neath Port Talbot to include 'Margam Park', 'The Gnoll', 'Rheola' and 'Jersey Park'. Note is also made of other

		country parks, urban parks and ornamental parks.
	There is a discrepancy between this section which states there is 1 Roman road in the area, and the Historic Environment Section of the Appendix which states there are 2. However, this does not include the Roman road linking Cardiff to Carmarthen which also crosses the area. We are not certain why Roman roads have been included in this section, if it is due to their importance as communication routes then railways should also be included as well as canals. The latter of particular importance given that the SEA is considering Flood Risk Management.	Roman Roads were identified in the baseline with the intention to show the wide range of historic assets / heritage in the Neath Port Talbot area, across numerous periods. Clarification provided to baseline to note there are routes between Neath and Brecon as well as Cardiff and Carmarthen. The LFRMSP notes the importance of canals and sets out the risk of canal flooding in detail.
	The Historic Environment (Wales) Act 2023 will be enacted before the SEA is produced. This will replace The Ancient Monuments and Archaeological Areas Act 1979; The Historic Environment (Wales) Act 2016 and The Planning (Listed Building and Conservation Areas) Act 1990. The enactment of the Act will also lead to revisions to Technical Advice Note 24: The Historic Environment 2017 and other guidance notes. The Act is a Consolidation Act and should not alter legislation, but references to the various parts of the Acts that have been consolidated will need to be changed to refer to the 2023 Act.	Noted. Additional text has been added to Section 3 of the SEA Report to clarify this point. It is considered that they key themes identified from the review of PPPs, remains robust and comprehensive.
	The condition of Scheduled Monuments is monitored as part of Cadw's 'Heritage at Risk' programme not Historic England.	Noted – text amended to reflect the role of Cadw.
	Registered historic parks and gardens Registered historic parks and gardens are mapped on Cof Cymru Search Cadw records | Cadw (gov.wales) Archaeological Sites Heneb: The Trust for Welsh Archaeology curates the statutory Historic Environment Record on behalf of Welsh Ministers. Basic mapping of non-designated historic assets is available at Welcome to Archwilio - Archwilio but more detailed information should be sought from Heneb.	The information contained within the Historic Environment Group document 'Historic Environment and Climate Change Sector Adaptation Plan' was considered as part of the SEA and consideration of the substantial risk to heritage assets is noted in the LFRMSP – for example the number of assets (scheduled monuments, listed buildings etc) noted for each risk category is set out. Within the SEA Report, it is noted that heritage assets are vulnerable to the effects of

	Historic Wrecks Historic Wrecks in Wales are mapped on Cof Cymru Search Cadw records | Cadw (gov.wales) Roman Roads Note information given above, however, more information is available from Heneb. Finally, it is noted that Climate Change is a significant issue in the Neath Port Talbot Local Flood Risk Management Strategy Plan. It may be of assistance in the preparation of the plan and the SEA if the information contained in Historic Environment Group document Historic Environment and Climate Change Sector Adaptation Plan (gov.wales) is considered.	flooding through a variety of mechanisms such as direct damage caused by issues such as scouring or increased waterlogging and indirect damage through events such as pollution enabled by flooding. As such, engineered solutions can protect scheduled monuments or specific buildings, conservation areas etc. Nevertheless, they can have an effect on setting – both potentially beneficial or adverse and may also disturb archaeological artefacts, particularly during construction. Changes to the local hydrological environment could have implications for waterlogged remains. Consideration of other aspects of the LFMRSP and implications for heritage are made throughout the SEA.

Appendix F. Note on SSSI in LFRMSP area

F.1 The need to protect SSSI's

A Site of Special Scientific Interest (SSSI) is a conservation designation made to protect an area that is considered extremely valuable for its flora, fauna, physiological and geological features. As such, Natural Resources Wales will select and notify an area as a new SSSI when it believes the land's wildlife, geology or landform is of special interest. Natural Resources Wales identifies and protects SSSIs in Wales under the Wildlife and Countryside Act 1981 (and amendments).

Natural Resources Wales objective is to work toward achieving 'favourable condition' status for all SSSIs. Favourable condition means that the SSSI's habitats and features are in a healthy state and are being conserved by appropriate management.

Natural Resources Wales categorises the condition of SSSIs as one of the following:

- Favourable - habitats and features are in a healthy state and are being conserved by appropriate management
- Unfavourable (recovering condition) - if current management measures are sustained the site will recover over time
- Unfavourable (no change) or unfavourable (declining condition) - special features are not being conserved or are being lost, so without appropriate management the site will never reach a favourable or recovering condition
- Part destroyed or destroyed - there has been fundamental damage, where special features have been permanently lost and favourable condition cannot be achieved

Natural Resources Wales will assess whether proposals to carry out operations within a SSSI have a positive or negative effect on the condition of a site and Natural Resources Wales will take enforcement action where statutory undertakers (including those responsible for flood protection):

- Intentionally or recklessly damage the SSSI;
- Destroy any of the features of special interest;
- Disturb wildlife for which the site was notified; or
- Carry out listed operations without consent.

Substantial fines can be levied should it be found that Natural Resources Wales have not been given notice of intention to carry out or approve an activity likely to damage a SSSI. The process of asking for advice and gaining approval is known as 'assent' and it must be undertaken before carrying out works in line with water company statutory duties that are likely to damage the condition or special features of a SSSI. Note that this includes planned works on land outside the boundaries of a SSSI that are likely to damage it.

The following details those SSSI's that are located within the LFRMSP area and which have protection objectives that may be impacted by Measures and Actions set out in the LFRMSP. Note is made of those operations for which prior notification must be given. Therefore, prior to any scheme being developed, discussions will take place between Neath Port Talbot Council and Natural Resource Wales, in light of the proposed scheme and its design as it develops. In short, there is a need to keep Natural Resource Wales informed of any proposed works that may impact a SSSI and 'Assent' will be applied for as appropriate. In an emergency, utility companies and other bodies may need to enter SSSI land or carry out essential works nearby. It may not be possible to ask for Natural Resource Wales assent or give Natural Resource Wales the 28 days' notice that's normally required before beginning work. In this situation, Neath Port Talbot Council should:

- tell Natural Resource Wales about the work being carried out as soon as possible and preferably within 24 hours of entering a SSSI or nearby land
- make sure the emergency work causes as little damage to the special features as possible.

Note that works that have included planning in advance cannot be regarded as emergency works.

Name	Overview	Operations for which prior notifications are given	Management
Caeau Ton-y-fildre	Area – 7.4 hectares This site, comprising two unimproved herb-rich pastures, lies on the north bank of Nant y Bryn. The westernmost field, dominated by sharp-flowered rush Juncus acutiflorus, supports a wide range of species characteristic of damp, flushed peaty pasture, including globeflower Trollius europaeus, meadow thistle Cirsium dissectum, whorled caraway Carum verticillatum and marsh arrowgrass Triglochin palustris. The eastern pasture lies on a steeper slope with wet flushes and springs interspersed between drier grassland. Notable species here include greater butterfly-orchid Platanthera chlorantha, saw-wort Serratula tinctoria, dyer's greenweed Genista tinctora and petty whin G. anglica. Small patches of alder Alnus glutinosa add diversity to this part of the site, which explains the high species diversity, with over 100 species of flowering plants and ferns having been recorded to date. The area also appears to be attractive to invertebrates, with butterfly species in particular being well represented on this sheltered south-facing slope. These two pastures have been selected as good representative examples of the many species-rich pastures still remaining in this valley in 1981.	13a. - Modification of field drainage, including the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to rivers, streams, ditches or drains including their banks and beds, by re-alignment, re-grading, dredging or cleaning 13c. - Management of aquatic and bank vegetation for drainage purposes. 14. - Changes in the present utilisation of water, including storage, the raising of water levels, irrigation and abstraction from existing water bodies and through boreholes. 15. - Infilling of ditches, drains, ponds, pools, marshes or pits. 21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	▪ Soil Fertility ▪ Drainage ▪ Scrub Encroachment ▪ Burning ▪ Grazing ▪ Mowing
Cefn Gwrhyd, Rhydyfro	Area – 63.9 hectares An upland area supporting types of wetland habitats uncommon in the county. The most important of these is a species-rich valley mire in which Eriophorum angustifolium, Menyanthes trifoliata, Hypericum	13a. - Modification of field drainage, including moor-gripping and the use of mole, tile, tunnel or other artificial drains. 20. - Extraction of minerals including peat.	▪ Grazing ▪ Burning ▪ Drainage

	elodes, and Narthecium ossifragum are abundant; quaking bog communities dominated by E. angustifolium and Sphagnum spp. and several small areas of species-rich soligenous mire. Surrounding areas are comprised of good examples of the damp acid grassland and drier heath communities to be found in the uplands of the county.	21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	
Cilybebyll	Area – 20.8 hectares Cilybebyll is of special interest for its species-rich grasslands and wet pastures, which are host to several uncommon plant species. Such vegetation is now increasingly scarce in the Welsh lowlands, most having been lost to agricultural improvement. Cilybebyll is located to the north east of the village of Cilybebyll, near Pontardawe. It consists of seventeen enclosures on the eastern side of the Tawe valley with a westerly aspect, at an altitude of between 160 and 200 m. The underlying bedrock is sandstone of the Lower Pennant measures of the South Wales coalfield, overlain by brown podsols and pelo-stagnogley soils. Most of the fields support dry, neutral grassland. Here, grasses such as common bent Agrostis capillaris and sweet vernal grass Anthoxanthum odoratum occur, together with red clover Trifolium Dratense, cat's ear Hypochoeris radicata, ribwort plantain Plantago lanceolata, common knapweed Centaurea nigra and bird's-foot trefoil Lotus corniculatus. In fields where the soil is slightly more acidic in nature, plants such as tormentil Potentilla erecta and devil'sbit scabious Succisa Dratensis occur, whilst those with more neutral soils host composites such as rough hawkbit Leontodon hispidus. Wet pasture communities occur in fields where drainage is more impeded, characterised by purple moor-grass Molinia caerulea together with cross-leaved heath Erica tetralix, bog asphodel Narthecium ossifragum, and common cotton grass Eriophorum angustifolium. Where springs meet the surface, the vegetation is	13a. - Modification of field drainage, including moor-gripping and the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to the structure of water courses including streams, springs, ditches, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging. 13c. - Management of aquatic and bank vegetation for drainage purposes. 14. Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps). 15. - Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits. 21. - Construction, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures 23. - Erection of permanent or temporary structures or the undertaking of engineering	▪ Grazing ▪ Bracken ▪ Use of modern fertilisers and other chemicals

	frequently dominated by mosses such as Polytrichum commune, Sphagnum auriculatum, S. fimbriatum and S. papillosum, as well as marsh violet Viola palustris, greater bird's-foot trefoil Lotus uliginosus and soft rush Juncus effusus. There are also some areas of acid flush, scrub and bracken, which add to the structural and ecological diversity of the site. Notable plant species recorded at Cilybebyll include greater burnet Sanguisorba officinalis, meadow thistle Cirsium dissectum, royal fern Osmunda regalis, adder's-tongue Ophioglossum vulgatum and whorled caraway Carum verticillatum, an Atlantic species characteristic of unimproved pastures in the South Wales coalfield.	works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground. 24.- Modification of natural or man-made features and clearance of boulders, large stones, loose rock or scree	
Coed Cwm Du, Cilmaengwyn	Area – 25.6 hectares A predominantly sessile oak woodland with ash, elm, birch and alder locally abundant, and damp base rich flush area typical of such situations in the coalfield. Poorly drained wet meadows along the upper fringes of western slopes of the valley support stands of Osumunda regalis.	13a. - Modification of field drainage, including moor-gripping and the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to the structure of water courses including streams, springs, ditches, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging. 15. - Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits. 21. - Construction, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	▪ Grazing ▪ Removal of Dead and Decaying Woof

Cors Crymlyn / Crymlyn Bog	Area – 279.9 hectares Crymlyn Bog is of special interest for its fen (topogenous mire) communities, wet woodland, associated invertebrate assemblages, a substantial population of the nationally rare slender cotton grass Eriophorum gracile and a population of the nationally scarce hornet robberfly Asilus crabroniformis. It is the most extensive area of lowland fen in South Wales and is situated 3.5 km east of central Swansea within a landscape heavily influenced by past and present industrial activities. The site is part of a larger inter-estuarine complex including Pant-y-Sais SSSI and the Neath flood plain. Crymlyn Bog owes its form to glacial erosion, followed by a series of Boreal marine incursions, giving rise to sequences of clay and peat. The main fen area which developed on these deposits lies between 5 - 7 m above sea level. Recent studies of preserved plant remains in the peat have revealed a complex and unusual pattern of vegetation change extending back over 7,000 years. Some parts of the site at least demonstrate that a classic succession took place from open reedswamp through fen and fen carr to rain-fed bog, with the latter persisting for over 1,000 years before reverting to fen. This reversion from bog back to fen is highly unusual and took place at about 1,000 AD, possibly as a result of increased runoff from the site catchment. The site comprises of a complex mosaic of vegetation types, including communities of both rich and poor fen, swamp, alder carr and acidic grassland. Unusually some of the plant species and communities are more characteristic of East Anglian fens. Several sources of water and differing patterns of flow have created complex environmental gradients resulting in a wide range of fenland communities. These range from Sphagnumdominated poor-fen, with bog asphodel Narthecium ossifragum and greater bladderwort Utricularia vulgaris, through others with bottle sedge Carex rostrata,	13a. - Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains. 13b. Modification to the structure of water courses including rivers, streams, springs, ditches, dykes, drains, including their banks and beds, as by realignment, regrading, damming or dredging. 13c. Management of aquatic and bank vegetation for drainage purposes. 14. - Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps). 17. - Reclamation of land from marsh. 21. - Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures. 23. - Erection of permanent or temporary structures or the undertaking of engineering	▪ Fen ▫ Scrub Encroachment ▫ Non – native invasive plants ▫ Reed Encroachment ▫ Nutrient Encroachment ▫ Water levels and quality ▫ Grazing ▫ Burning ▪ Wet Woodland ▫ Water levels and quality ▪ Slender Cottongrass ▫ Nutrient Enrichment ▫ Grazing ▪ Rare and Scarce Invertebrate Assemblage ▫ Scrub and reed encroachment

	marsh cinquefoil Potentilla palustris and bog bean Menyanthes trifoliata, to more eutrophic and taller associations with lesser bulrush Typha angustifolia, bulrush Typha latifolia, great fen-sedge Cladium mariscus, tufted-sedge Carex elata and common reed Phragmites australis. Purple moor-grass Molinia caerulea becomes dominant in drier areas, with pure Phragmites reedswamp where conditions are wettest. The eastern margin bears greater tussock-sedge Carex paniculata, and alder carr woodland. Plant species of particular interest include the nationally rare slender cottongrass Eriophorum gracile, whilst tufted sedge, bog-sedge Carex limosa, dioecious sedge Carex dioica, cyperus sedge Carex pseudocyperus, saw sedge, greater spearwort Ranunculus lingua, least bur-reed Sparganium natans, lesser water-plantain Baldellia ranunculoides, slender spike-rush Eleocharis uniglumis and black bog rush Schoenus nigricans are close to the limit of their British geographical range and/or of limited distribution locally. The royal fern Osmunda regalis occurs in several communities and is particularly well represented on this site. Carr woodland is a rare habitat and this site contains one of the largest areas of alder carr in Wales, characterised by species such as alder Alnus glutinosa, alder buckthorn Frangula alnus, grey willow Salix cineria and downy birch Betula pubescens. Crymlyn Bog is also of national importance for invertebrates, supporting several rare and nationally scarce species. These include the water beetle Limnoxenus niger, the cranefly Pilaria nigropunctata and the jumping spider Marpissa radiata. Open waterways and marginal flushes support the scarce blue-tailed damselfly Ischnura pumilio and the variable damselfly Coenagrion pulchellum. Also of note is the hornet robber fly Asilus crabroniformis, a declining species nationally, occurring in the traditionally grazed pastures bordering the fen.	works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	▫ Water levels and quality ▪ Hornet Robberfly ▫ Grazing ▫ Scrub control ▫ Livestock parasite treatments

	There are sizeable breeding populations of reed warbler Acrocephalus scirpaceus and sedge warbler Acrocephalus schoenobaenus associated with the denser areas of Phragmites.		
Craig-y-Llyn	Area – 112.6 hectares Two north-east-facing hollows cut by Pleistocene ice or snow in the edge of the Pennant Sandstone Plateau. The high cliffs, ravines and flushes support many montane species including Sedum rosea, Hymenophyllum wilsonii, Lycopodium selago on the cliffs and the moss Andrea rupstris on flat boulders on the plateau. In Llyn Fach occur Lobelia dortmanna, Isoetes lacustrisis and Sparganium angustifolium in its southernmost locality. Analysis of the pollen preserved in Ffos Cenglau has yielded data on the post-glacial sequence of woodland types in South Wales.	13a. - Modification of field drainage, including moor-gripping, the use of mole, tile, tunnel or other artificial drains. 14. - Changes in the present utilisation of water, including storage, the raising of water levels, and abstraction from existing water bodies and through boreholes. 15. - Infilling of ditches, drains, ponds, pools, marshes, or pits. 16a. - Introduction of, or changes in freshwater fishery management, including use of fish cages. 23. Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipeline and cables	▪ Forestry ▪ Succession to scrub and swamp communities ▪ Grazing ▪ Burning ▪ Agricultural chemicals
Crymlyn Burrows	Area – 243.5 hectares One of the last remaining sections of the Swansea Bay Coastline which has remained substantially unmodified by industrial development. Over the past one hundred and fifty years, parallel sand dune ridges have developed at right angles to the River Neath and these are continuing to accumulate at the present time. Salt water is able to gain access to the system at high tide via the river channel,	13a. - Modification of field drainage, including moor-gripping and the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to streams and ditches including their banks and beds, by	▪ Maintenance of pipeline infrastructure ▪ Recreatiional use of the site ▪ Illegitimate off-road motor-biking

	with the result that the dunes are interspersed by tongues of saltmarsh. These grade westwards into wet dune slacks and carr woodland. Several plant species with local distribution occur within the site including rock sea lavender Limonium binervosum, dittander Lepidium latifolium, rock hutchinsia Hornungia petraea, round leaved wintergreen Pyrola rotundifolia, dutch rush Equisetum hyemale and the variegated horsetail Equisetum variegatum. The rare fen orchid Liparis loeselii is found occasionally within the slacks, whilst the sea stock Matthiola sinuata which was re-recorded in 1964 following its earlier disappearance, is widespread along the strandline and in the dunes. The rare strandline beetle Eurynebria complanata has been recorded from the site. This part of the Neath estuary is also used by part of the population of small waders overwintering in Swansea Bay.	realignment, re-grading, dredging or cleaning. 15. - Infilling of ditches, dykes, drains or marshes. 17. - Reclamation of land from the sea, estuary or marsh. 19. - Erection of sea defences or coast protection works. 21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	▪ Natural coastal processes ▪ Disruption of the natural coastal processes and sediment supply ▪ Invasive plant species ▪ Scrub Control ▪ Maintain a strandline
Cwm Gwrelych and Nant Llyn Fach Streams	Area – 35.3 hectares The best sequence of Westphalian (Carboniferous) rocks in the South Wales Coalfield. About 500 metres of strata are exposed, representing a more or less complete section through the Westphalian A, Westphalian B and lower Westphalian C. Thicker sequences have been shown in boreholes near Swansea, but this is the thickest sequence available in natural exposures. All of the principal marine bands are visible (except the Amman Marine Band), and there are numerous fossil bands yielding non-marine bivalves and plants. Such a complete and well exposed section through rocks of this age is unique in Europe, and will probably be selected as the standard	13b. - Modification to rivers, streams, springs including their banks and beds, by realignment and re-grading. 21. - Construction, removal, or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering	▪ Build-up of rock debris ▪ Removal of infill material from stream sections ▪ Scrub and tree growth ▪ Collection of geological samples ▪ Fly tipping

	reference section for the lower half of the Westphalian. A site of outstanding international significance.	works, including the laying, maintenance or removal of pipelines and cables.	
Cynffig / Kenfig	Area – 777.3 hectares Kenfig is of special interest for its extensive sand dune habitats and standing waters together with a mixture of associated coastal habitats including saltmarsh, intertidal areas, swamp, woodland and scrub. In addition, the site is of special interest for the assemblages of plants, fungi and invertebrates that are associated with the sand dunes and standing waters. The following individual species are also of special interest: petalwort Petalophyllum ralfsii, the medicinal leech Hirudo medicinalis, the fen orchid Liparis loeselii, the shrill carder bee Bombus sylvarum, the hairy dragonfly Brachytron pratense and a weevil Pachytychius quinquepunctatus. This extensive sand dune system is located on the south-eastern edge of Swansea Bay between Margam and Porthcawl. It is bounded by the Afon Cynffig to the north, with agricultural land and the village of Kenfig to the south and east. The exceptional wetness of the Kenfig dune system is of national significance, and the shallow, gently-domed groundwater table is thought to be mainly rain-fed, but it is possible that groundwater inflow from underlying/neighbouring carbonate aquifers also plays a role. Many of the Kenfig slacks flood to a depth of 0.5 metres or more during a typical winter, their peaty soils remaining wet during all but the driest summers. The dune system includes extensive areas of semi-fixed and fixed species-rich dune grassland types. Dune grassland with red fescue Festuca rubra and lady's bedstraw Galium verum is especially common, but there are also areas of more rank neutral dune grassland with yorkshirefog Holcus lanatus, false oat-grass Arrhenatherum elatius, dewberry Rubus caesiusand burnet rose Rosa pimpinellifolia. Leaching of normally calcareous dunes has led to the occurrence of some short-sward acid grassland, particularly near the landward margin of the site. This grassland is characterised by sweet vernal-	13a. - Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to the structure of water courses including rivers, streams, springs, ditches, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging. 13c. - Management of aquatic and bank vegetation for drainage purposes. 15. - Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits. 16a. - Freshwater fishery production and/or management, and alterations to freshwater fishery production and/or management. 16b. - Coastal fishing, fisheries management and seafood or marine life collection, including the use of traps or fish cages, and alterations to coastal fishing practice or fisheries management and seafood or marine life collection.	▪ Sand dune habitat ▪ Standing water habitat ▪ Rare plants ▪ Rare fungi ▪ Rare invertebrates

	grass Anthoxanthum odoratum, common bent Agrostis capillaris, sheep's fescue Festuca ovina and sheep's sorrel Rumex acetosella. Discrete patches of dune heath with heather Calluna vulgaris occur within this grassland. Areas of scrub are scattered throughout the site, including stands of hawthorn Crataegus monogyna and blackthorn Prunus spinosa. To the northwest of the site, there is a small area of saltmarsh on the floodplain of the Afon Cynffig. This area is dominated by sea rush Juncus maritimus, saltmarsh rush Juncus gerardii, red fescue and sea club-rush Bolboschoenus maritimus. Sand couch Elytrigia juncea dominates the transition zone between saltmarsh and dune. The water chemistry of Kenfig Pool is indicative of a coastal, alkaline lake with a moderate nutrient status. The sandy substrates which characterize the shoreline support significant stands of common reed Phragmites australis dominated swamp on the pool's seaward side, while the inland shoreline is cattle grazed and devoid of emergent vegetation. Kenfig supports populations of petalwort Petalophyllum ralfsii and the largest UK population of the fen orchid Liparis loeselii. The sand dunes of Kenfig support an assemblage of rare macrofungi. Important species include a nail fungus Poronia punctata, an ink-cap fungus Coprinus ammophilae, a stalked puffball Tulostoma brumale and a milk-cap fungus Lactarius controversus.	17. - Reclamation of land from sea, estuary or marsh. 19. - Erection and repair of sea defences or coast protection works, including cliff or landslip drainage or stabilisation measures. 21. Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	
Dyffrynoedd Nedd a Mellte a Moel Penderyn	Area – 421.1 hectares Dyffrynnoedd Nedd a Mellte, a Moel Penderyn is of special interest for its extensive and diverse semi-natural woodland, important populations of several flowering plants and supporting outstanding assemblages of mosses, liverworts and lichens. The site includes a range of geological features, well-exposed in the cliffs and rocky river beds. These include exposures at Moel Penderyn, Craig y Ddinas and Bwa Maen and geomorphological features within	13a. - Drainage including the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to the structure of water courses including rivers, streams, springs, ditches, drains, including their banks and beds, as by re-alignment, regrading,	▪ Woodland management ▪ Grazing ▪ Invasive alien plants ▪ Access and recreation

	parts of the valleys of the Hepste and Mellte are also of special interest. This site includes the wooded valleys of the rivers Nedd and Mellte, and their tributaries above Pontneddfechan, as they pass through a Millstone Grit and limestone plateau, and Moel Penderyn, which lies to the east. The plateau lies at about 300 m, the rivers having eroded deep, narrow valleys with gorges, river cliffs, block scree and waterfalls.	damming or dredging and the erection of flood protection works. 13c. - Management of aquatic and bank vegetation for drainage purposes. 14. - Alterations to water levels and tables and water utilisation including storage and abstraction from existing water bodies and through boreholes. 15. - Infilling or digging of ditches, drains, ponds, pools, marshes, caves, swallow holes, quarries or pits. 16a. The introduction of freshwater fishery production and/or management and alterations to freshwater fishery production and/or management. 21. - Destruction, construction or removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	▪ Engineering works (paths, roads, bridges) ▪ Visibility of geological features] ▪ Fly-tipping/dumping of waste materials ▪ Acidification/ Pollution

Earlswood Road Cutting and Ferryboat Inn Quarries	Area – 6.97 hectares This site consists of roadside cuttings and quarry exposures located on a hillside west of the River Neath near to its mouth, between Port Talbot and Neath. This site is of special scientific interest for its exposures of late Carboniferous rocks which afford the best available sections through the Carboniferous Rhondda Beds, in a deltaic facies. They show exceptionally well developed sedimentary structures, in particular large-scale channels, and also the upward - fining cyclicity of the sedimentation, which is characteristic of such deltaic sediments. This section is of outstanding interest for understanding the pattern of sedimentation in South Wales during the late Westphalian, particularly how the environment changed following the uplift of the landmass to the south of the coalfield during mid - Westphalian C times. A nationally important site for interpreting Westphalian geological history.	21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	▪ Scree accumulation ▪ Scrub and tree growth ▪ Engineering works
Eglwys Nunydd Reservoir	Area – 91 hectares The largest sheet of fresh water in the county. On the site of Margam Moors which, before being reclaimed for the Abbey Steel Works, were a notable site for wildfowl. The reservoir attracts large numbers of wintering waterfowl and passage migrants. Notable species including Great Crested and Little Grebes, Mallard, Gadwall and Coot now breed.	13c. - Management of aquatic and bank vegetation. 16a. - Introduction of, or changes in, freshwater fishery management.	No information available
Fforest Goch Bog	Area – 11.6 hectares Fforest Goch Bog is located 500 metres south of the village of Rhos, near Pontardawe. The bog is at approximately 100m above sea level, in a low saddle in the ridge between the Swansea and Neath Valleys. There are no inflows of water to the bog, indicating it is ombrogenous (rain-fed). The main habitats present at the site are lowland raised bog and marshy grassland with an edging of scrub on the westerly side. Lowland raised bog is a rare resource in Wales, particularly in south Wales, and Fforest Goch Bog represents by far the best and much the least	13a. - Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to the structure of water courses including rivers, streams, springs, ditches, dykes, drains, including their banks and beds, as by realignment, regrading, damming or dredging.	▪ Drainage ▪ Burning ▪ Grazing

	disturbed site when compared with the other three possible examples within the West Glamorgan and Llanelli area of search. The bog has a characteristic domed profile, with two high points. Failed attempts at drainage can be clearly seen around and within the site, most notably a choked drain bisecting the mire. This drain appears to have split a single dome into the two bog domes that can now be seen. The bog supports a range of communities, the patterning of which follows the gradients in wetness throughout the site. The main bog surface is dominated by mixtures of cross-leaved heath Erica tetralix, purple moor-grass Molinia caerulea, and cotton-grasses Eriophorum angustifolium and E. vaginatum. Bog mosses, principally cow horn bog-moss Sphagnum denticulatum and lustrous bog-moss S. subnitens form a patchy understorey here with typical bog liverworts well represented, including Cladopodiella fluitans and Kurzia pauciflora. Towards the western edge of the site, the bog surface is drier - apparent from the presence of heather Calluna vulgaris alongside cross-leaved heath in the dwarf shrub layer. The north-west to south-east hollow across the centre of the bog supports much wetter vegetation. Here, permanently wet peat is over-topped by common cotton-grass Eriophorum angustifolium, common sedge Carex nigra and a bog moss layer of cow horn bog-moss and lustrous bog-moss. Round-leaved sundew Drosera rotundifolia is restricted to the eastern end of the hollow, where it broadens out towards the edge of the site. In wetter areas lacking cotton-grass, near the east edge of the site, mounds of papillose bog-moss S. papillosum dominate, while a small pool near the western edge is dominated by the characteristic bog pool species, feathery bog-moss S. cuspidatum. Around the bog edges, the mire grades into purple moor-grass dominated marshy grassland, characterised by increased cover of purple moor-grass, alongside fringed bog-moss S. fimbriatum and lustrous bog-moss. In the north-east of the site, tormentil Potentilla erecta, devil’s-bit scabious Succisa pratensis, sweet vernal-grass	13c. Management of aquatic and bank vegetation for drainage purposes. 14. - Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps). 15. Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits. 21. Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures. 23. Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	

	Anthoxanthum odoratum and mat-grass Nardus stricta occur amongst the gorse Ulex spp. scrub. This scrub is cut through with a rush Juncus spp. dominated flush containing flat-topped bog moss S. fallax. At the eastern and south-west edges of the site are scrub fringes, with an understorey of purple moor-grass, velvet bent Agrostis canina and Yorkshire fog Holcus lanatus in the birch Betula pubescens scrub, and marsh-bedstraw Galium palustre, soft rush Juncus effusus and marsh violet Viola palustris forming the understorey in the wetter willow Salix cinerea scrub areas.		
Frondeg	Area – 8.7 hectares Frondeg is of special interest for its neutral grasslands, fen - meadows and wet grassland, which are host to several uncommon plant species. Such vegetation is now increasingly scarce in the lowlands, most having been lost to agricultural improvement. Situated north west of Pontardawe, near the village of Rhyd y Fro, Frondeg lies at an altitude of approximately 150 m. It consists of five enclosures lying either side of a minor road known as Gwrhyd Road, which runs north-eastwards from Rhyd y Fro to Cwmllynfell. The underlying bedrock is sandstone of the Lower Pennant Measures of the South Wales coalfield, overlain by cambic stagnogley soils. The fields to the east of the road support a fen-meadow community dominated by purple moor-grass Molinia caerulea, sharp-flowered rush Juncus acutiflorus and compact rush J.conglomeratus, with scattered meadow thistle Cirsium dissectum. Other species present include water mint Mentha aquatica and saw-wort Serratula tinctoria. In drier areas, the sward is grassier, with quaking grass Briza media, sheep's-fescue Festuca ovina and mat-grass Nardus stricta, together with betony Stachys officinalis betonica. Where the ground is particularly wet, such as along drainage lines, wet grassland communities with purple moor-grass, tormentil Potentilla erecta and wild angelica Angelica sylvestris have developed. Other species present here include cross-leaved heath Erica tetralix, bog asphodel Narthecium ossifragum, deer-grass Trichophorum cespitosium and heath spotted	13a. - Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to the structure of water courses including streams, springs, ditches, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging. 13c. - Management of aquatic and bank vegetation for drainage purposes. 14. - Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps). 15. - Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits.	▪ Grazing ▪ Use of modern fertilisers and other chemicals

	orchid Dactylorhiza maculata, together with frequent Sphagnum mosses. By contrast, the fields to the west of the road support drier grassland communities. Common knapweed Centaurea nigra is locally abundant, with a large population of great burnet Sanguisorba officinalis. Other plants associated with this area include bird's-foot trefoil Lotus corniculatus, meadow vetchling Lathyrus pratensis and oxeye daisy Leucanthemum vulgare. Where the soil is of a slightly more acidic nature, devil's-bit scabious Succisa pratensis is a prominent component of the sward. Amongst the rarer species to be found at Frondeg is the nationally scarce soft-leaved sedge Carex montana. This is a local species found on limestone or mineral - rich soils, confined mainly to the New Forest area, south west England and south Wales. Other notable plant species present include petty whin Genista anglica and whorled caraway Carum verticillatum.	21. - Construction, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	
Gorsllwyn, Onllwyn	Area - 39.9 hectares This site contains a range of peat-depositing vegetation communities which has developed on a col between the Pyrddin and Dulais valleys. These peatlands are surrounded by an area of acidic grassland. Peat deposition has been sufficiently great in part of the Neath Port Talbot portion of the site to form a dome shaped mass of peat above the general water table of the site. Such a feature is known as a raised mire. There are very few other examples of this formation known in mid and south Wales. Unfortunately, regular burning and grazing of the site has grossly modified its surface vegetation. Much of this mire drains north into an area dominated by common reed Phragmites australis. The spectacular development of clumps of greater tussock-sedge Carex paniculata, in many cases over one metre high, amongst the common reed, affords drier sites for the establishment of willow species Salix spp., and willow carr now covers most of the area bordering the main east-flowing drainage stream. A	13a. - Any new or improved drainage, altering present water levels (including moor-gripping, mole, tile, tunnel or other artificial drains). 13b. - Maintenance of rivers, ditches, dykes, drains or other water bodies, including bankside vegetation. 13c. - Removal or selective clearance of aquatic vegetation. 14. - Abstraction of water from any water bodies. Artificial irrigation.	▪ Nutrient Enrichment/ Pollution ▪ Drainage/ Water Levels ▪ Woodland and Scrub Management ▪ Burning ▪ Grazing

	range of woodland species including royal fern Osmunda regalis occurs beneath the tree canopy. Peat has not completely infilled the area. In some parts, the vegetation has grown as floating lawns over water. The more nutrient-rich sites support an extremely diverse flora with up to 28 species recorded in an area of 4 square metres. North-east of the complex of mires an area of acidic pasture is included in the site. Drier ridges divide up a series of wet flushes which support a range of wetland species not encountered elsewhere in the site, e.g. whorled caraway Carum verticillatum, meadow thistle Cirsium dissectum and sharp-flowered rush Juncus acutiflorus. These plants form a clearly defined community of extremely limited distribution in Europe, occurring only along the southern Atlantic seaboard. At the north-west corner of the site, several hay meadows are included on account of their diverse flora. Species now of limited occurrence in mid Wales due to the ploughing and reseeding of grasslands, such as globe flower Trollius europaeus and meadow fescue Festuca pratensis, are recorded here.	15. - Infilling of ditches, dykes, rhymes, drains, ponds or other water bodies. 16a. - Introduction of or change in fishery management. 17. - Reclamation of land from sea, estuary or marsh. 21. - Removal or destruction of walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	
Hafod Wennol Grasslands	Area – 18 hectares Hafod Wennol Grasslands consist of an extensive series of hay meadows, pastures and rough grazings situated approximately 6 km south-east of Ammanford. The site lies at an altitude of 210 - 260 metres on Mynydd-y-Betws and is drained by the Nant Melyn, a headwater tributary of the Lower Clydach River. Most of the land slopes gently to the south and supports brown podzols and gleyed soils derived from boulder clay overlying sandstone of the Upper Pennant Measures. These meadows and pastures have long been managed using traditional farming methods and form the third largest example of lowland neutral grassland in in the former county of West Glamorgan and the old Llanelli Borough. Unimproved grassland of this type and	13a. - Modification of field drainage, including the use of mole, tile, tunnel or other artificial drains. 14. - Changes in the present utilisation of water including storage, the raising of water levels, irrigation and abstraction from boreholes. 15. - Infilling of ditches or drains 21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks	▪ Fertiliser application ▪ Stockfeeding ▪ Drainage ▪ Scrub encroachment ▪ Grazing ▪ Rush topping

	quality supporting such a wide range of uncommon plant species is increasingly scarce in Wales. A wide range of grassland and mire communities occur within the site including dry hay meadow, rush pastures and flushes, purple moor grass mire, with smaller areas of fenmeadow and swamp. These habitat mosaics are enhanced by the presence of hedgerows and scattered scrub with peripheral areas of broadleaved woodland. Approximately half the site (9.8 ha) consists of dry neutral and lightly flushed grassland characterised by crested dog's-tail Cynosurus cristatus and common knapweed Centaurea nigra, with common bent Agrostis canillaris and sweet vernal-grass Anthoxanthum odoratum, plus a wide range of herbaceous associates including meadow vetchling Lathyrus pratensis, oxeye daisy Leucanthemum vulgare, rough hawkbit Leontodon hispidus, yellowrattle Rhinanthus minor and common spotted-orchid Dactylorhiza fuchsii. Notable plant species recorded in this community include broad-leaved marsh-orchid Dactylorhiza majalis, greater butterfly-orchid Platanthera chlorantha, adder's-tongue Ophioglossum vulgatum, pale sedge Carex pallescens, great burnet Sanquisorba officinalis, petty whin Genista anglica and whorled caraway Carum verticillatum. The remainder of the site is dominated largely by mire communities of purple moor grass Molinia caerulea, frequently with cross-leaved heath Erica tetralix characteristic of damper poorly drained areas. Several small stands of fen meadow occur in these rough grazings, creating interesting vegetation transitions dependent upon drainage patterns. Additional notable species recorded here include meadow thistle Cirsium dissectum. The marsh fritillary butterfly Eurodryas aurinia has also been recorded from this site.	23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	
Margam Moors	Area – 108 hectares The last remaining example of the once extensive coastal levels in West Glamorgan. Bounded to the seaward by dunes and to landward	13a. - Modification of field drainage including moor-gripping and the use of mole, tile, tunnel or other artificial drains.	▪ Maintaining good water quality

	by high ground, the meadows provide an agriculturally-managed freshwater habitat which hosts many species of plant on the edge of their geographical range, and nationally important invertebrates. Mesotrophic marsh, fen meadow and ditch communities support Flowering-rush Butomus umbellatus, Frogbit Hydrocharis morsus-ranae, Arrowhead Sagittaria sagittifolia, Cyperus Sedge Carex pseudocyperus and Brown Sedge C. disticha on the edge of their range, with others such as Lesser Water-plantain Baldellia ranunculoides, Tubular Water-dropwort Oenanthe fistulosa and Marsh Helleborine Epipactis palustris of local interest. The nationally rare beetle Haliplus mucronatus, the dragonfly Sympetrum sanguineum the regionally rare beetle Anacaena bipustulata, and the water-bug Corixa panzeri have all been found in the ditches.	13b. - Modification to streams, ditches, dykes, drains, including their banks and beds, as by re-alignment, regrading, dredging or cleaning. 13c. - Management of aquatic and bank vegetation. 15. - Infilling of ditches, dykes, drains ponds, pools, marshes or pits. 17. Reclamation of land from sea, estuary or marsh. 21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	▪ Maintaining water levels ▪ Ditch clearance ▪ Cattle grazing ▪ Stock feeding ▪ Rush topping ▪ Haycutting
Mynydd Ty-isaf, Rhondda	Area – 322 The cliffs and crags of the glacial corries at the head of the Rhondda Fawr Valley reach a height of 558 metres and dominate the landscape within the boundary of the Mynydd Ty Isaf Site of Special Scientific Interest. The three cliff systems formed during the erosion of the corries include Tarren Saerbren, Graig Fawr and Graig Fach. The Pennant Sandstone strata exposed in the corrie cliff systems, and also underlying the rest of the Mid Glamorgan uplands, supports a range of vegetation types including Calluna dominated heath, Vaccinium	13a. - Drainage including moor-gripping and the use of mole, tile, tunnel or other artificial drains. 13b. - Modification of the structures of water courses e.g. streams and springs, including their banks and beds, as by re-alignment, re-grading or dredging.	▪ Grazing ▪ Woodland and plantation management ▪ Burning ▪ Fertilisers ▪ Drainage

	myrtillus heath, a range of species poor grasslands, bracken-dominated slopes and fern-rich screes and rock outcrops. Recently planted coniferous trees occupy much of Cwm Saerbren and some cliff top land. The Pennant Sandstone crags are of particular interest as they support a number of arctic-alpine and other plant species of local distribution in Wales. The parsley fern Cryptogramma crispa occurs here at what is thought to be one of its most southerly British stations. Other ferns growing on crags within the SSSI include beech fern Phegopteris connectilis, mountain fern Oreopteris limbosperma, broad buckler fern Dryopteris dilatata, lady fern Athyriurn filix-femina and brittle bladder fern Cystopteris fragilis. In addition to supporting an interesting pteridophyte flora, the higher crags within the SSSI provide nesting sites for a Schedule 1 raptor.	21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks or the laying, maintenance or removal of pipelines and cables, above or below ground. 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including drilling.	▪ Bracken encroachment
Pant-y-Sais	Area – 19.5 hectares Predominantly an area of lowland fen located in a narrow valley which was a former course of the River Neath. The site supports a range of fenland communities including Sphagnum and bryophyte dominated areas of poorer fen vegetation, Molinia caerulea communities, swamp areas with abundant Typha latifolia and Typha angustifolia, and developing fen carr. Formerly part of the same hydrological system as Crymlyn Bog. The Tennant Canal section acts as a refuge for aquatic plants, including Butomus umbellatus which is rare in the county.	13a. - Modification of field drainage, including moor-gripping and the use of mole, tile, tunnel or other artificial drains. 13b. - Modification to canal, including its banks and beds, by dredging or cleaning 13c. - Management of aquatic and bank vegetation. 17. - Reclamation of land from sea, estuary or marsh. 21. - Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks.	▪ Scrub encroachment ▪ Invasive non-native species ▪ Nutrient management (Eutrophication) ▪ Water levels and quality ▪ Grazing ▪ Burning of reed

		23. - Erection of permanent or temporary structures or the undertaking of engineering works, including the laying, maintenance or removal of pipelines and cables.	
Tairgwaith	Area – 4.5 hectares Tairgwaith is of special interest for its species-rich grasslands, which are host to several uncommon plant species. Such vegetation is now increasingly scarce in the Welsh lowlands, most having been lost to agricultural improvement. The site is located to the south of the village of Tairgwaith, near Brynaman. It consists of four enclosures that lie on gently north-west and south-west facing slopes at an altitude of about 180m. Together they display a range of species-rich grasslands, and their transitions to wetter, marshy grassland. The westernmost field supports dry, neutral grassland. Here, grasses such as common bent Agrostis capillaris and sweet vernal-grass Anthoxanthum odoratum occur, together with red clover Trifolium pratense, cat's-ear Hypochaeris radicata, ribwort plantain Plantago lanceolata, common knapweed Centaurea nigra and bird's-foot trefoil Lotus corniculatus. The soil in this field has a slightly acidic nature, indicated by species such as tormentil Potentilla erecta and devil's-bit scabious Succisa pratensis. Great burnet Sanguisorba officinalis also occurs here in profusion. The easternmost enclosure supports similar grassland, but here there is no acidic element to the soil. Species such as tormentil and devil's-bit scabious are replaced by meadow vetchling Lathyrus pratensis, ox - eye daisy Leucanthemum vulgare, autumn hawkbit Leontodon autumnalis and rough hawkbit L. hispidus. The central field also supports neutral grassland, but here it grades into fen-meadow and marshy grassland communities, characterised by purple moor-grass Molinia caerulea together with meadow thistle	13a. - Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains. 14. - Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps). 15. - Infilling or digging of ditches, drains, or marshes. 21. - Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks 23. - Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.	▪ Scrub encroachment ▪ Fertilizer application ▪ Application of lime ▪ Grazing ▪ Hay cutting

	Cirsium dissectum, and sedges such as oval sedge Carex ovalis and carnation sedge Carex panicea. In places, a slightly base-rich nature to the soil is indicated by the presence of species such as quaking grass Briza media. Across the southern half of this field, where drainage is more impeded, sharp-flowered rush Juncus acutiflorus, greater bird's-foottrefoil Lotus uliginosus, and common marsh-bedstraw Galium palustre become prevalent. Notable plant species recorded at Tairgwaith include greater butterfly-orchid Platanthera chlorantha. Up to eighty spikes of this species are present in the easternmost field, and it is also present in the central enclosure of the site. Whorled caraway Carum verticillatum, an Atlantic species characteristic of unimproved pastures in the South Wales coalfield, also occurs across much of the site.		

Appendix G. Note on Water Framework Directive

Introduction

The Water Framework Directive is a key tool in addressing challenges to the water environment, as well as promoting an integrated approach to planning and managing water and the wider ecosystems while balancing environmental, social and economic priorities. This approach has resulted in management plans being developed for each river basin across the United Kingdom. In Wales, three river basins were identified and plans developed. Neath Port Talbot falls within Western Wales River Basin Management Plan. This note sets out an overview of this RBMP, what it is trying to achieve and how the Measures and Actions set out in the LFRMSP link to this.

Western Wales River Basin District

The Western Wales River Basin District (RBD) covers an area of 16,653 kilometres. It covers the entire western half of Wales, from the Vale of Glamorgan in the south to Denbighshire in the north[224].

The population centres within the RBD are restricted to the coastal strip and the westernmost part of the South Wales valleys. The urban centres include Swansea, Bridgend and Neath in the south, Aberystwyth on the coast in mid-Wales and the North Wales coast including Colwyn Bay, Rhyl, Llandudno and Bangor. The RBD is primarily rural, with land mainly used for agriculture and forestry. Marine, oil and gas industries remain important economic activities, along with heavy industry such as the steel works at Port Talbot and commercial fisheries, shellfisheries and tourism, notably around the Welsh coastline.

Some other economic practices within the RBD:

- Cockle Beds at Traeth Lavan in the north and The Burry Inlet in the south
- Mussel harvesting naturally in the Conway and farmed in the Menai Strait
- Livestock farming and commercial forestry in the uplands
- Dairy farming in the lowlands, particularly in Pembrokeshire and Carmarthenshire
- Arable farming in South Pembrokshire

The lakes, rivers, estuarine and coastal waters of the district are important fishing locations. Around 70% of the District's coastline is designated in UK law for its environmental quality, including many bathing beaches and internationally important conservation sites. All groundwater in this RBD forms part of a Drinking Water Protected Area (DrWPA).

The coast, bathing waters and the proximity of significant population also help explain the importance of the coastal tourism industry which continues to be a major contributor to the Welsh economy. This includes the Wales Coastal Path route which covers 870 miles along the Welsh coastline. In 2015, 40% of water bodies achieved good or better overall status, and has improved in 2021 to 42%.

Table 2 - Number and types of water bodies in the baseline third cycle RBMP (2021-2027)

Number of water bodies	Natural	Artificial	Heavily Modified	Total
River	378	3	48	429
Lake	24	2	35	61
Coastal	18	0	5	23
Estuarine	18	0	10	28
Groundwater	25	0	0	25

[224] Western Wales RBMP 2021_2027 Summary (naturalresourceswales.gov.uk)

Table 3 - Total number of water bodies in the baseline third cycle RBMP (2021-2027)

Number of water bodies	Natural	Artificial	Heavily Modified	Total
Total	463	4	99	566

Surface Water Status

Covers river, canals, lakes, and coastal and estuarine water bodies. It is based on the ecological and chemical condition of the water body. For some human activity may change water bodies meaning achieving good ecological status may be impossible.

Ecological Status – Determined from a combination of data for biological, physico-chemical and specific pollutants.

Chemical Status – Assessed by compliance with environmental quality standards for chemicals.

Table 4 - Ecological Classification for assessed surface water bodies (2021)

No. of water bodies	Bad	Poor	Moderate	Good	High
River	2	31	194	202	0
Lake	1	15	31	13	1
Coastal	0	1	11	10	1
Estuarine	0	1	20	7	0
Total	**3**	**48**	**256**	**232**	**2**

Table 5 - Chemical classification for assessed surface water bodies (2021)

No. of water bodies	Fail	Good
River	27	402
Lake	1	60
Coastal	9	14
Estuarine	8	20
Total	**45**	**496**

Groundwater Status

Quantitative and chemical status are combined to a single classification for groundwater: good or poor. Poor conditions can occur if there is widespread diffuse pollution in the groundwater body.

Table 6 - Classification of quantitative classification for groundwater

No. of water bodies	Poor	Good
25	0	25

Table 7 - Classification of chemical classification for groundwater

No of water bodies	Poor	Good
25	12	13

Challenges in the Western Wales RBD

A list of issues that threaten the current and future uses of the water environment. Pressures to this have been identified known as Significant Water Management Issues (SWMIs):

- **Physical Modifications –** Man made changes to the natural habitat, like poorly designed or redundant flood walls and weirs, and changes to natural river channels for land drainage and navigation and shellfisheries on estuaries and coastal waters. Can cause changes to natural flow levels, build-up of sediment and loss of habitat
- **Pollution from sewage and wastewaters –** Could potentially contain phosphorus, nitrates, ammonia, bacteria and other damaging substances.
- **Pollution from towns, cities and transport –** Rainwater carrying pollutants into waters from contaminated land. Atmospheric pollution causing acidification and sewage from houses misconnected to surface water drains rather than sewers.
- **Pollution from rural area –** Poor agricultural practice and forestry can result in nutrients and sediments affecting the water environment.
- **Pollution from mines -** Contaminated water draining from mines, most of which are now abandoned.
- **Changes to natural flow and levels of water -** Taking too much water from rivers lakes and underground causes problems for wildlife and reduces the water available for people to use.
- **Invasive Non-Native Species -** The presence of invasive non-native plants and animals in our watercourses poses a threat to biodiversity, increases flood risk, affects the state of our water environment and can cost the economy billions.

Risk assessments are carried out to assess how susceptible water bodies are to pressures affecting them and used as an estimation on the likelihood of water bodies failing to meet their environmental quality objectives in the future or deteriorating from their current conditions. It was an assessment of the scale of the pressures and sensitivity of the water bodies.

Table 8 - List of available risk assessments per pressure type and water category

Environmental pressure	Water category
Phosphates	River and lakes
Chemicals and metals	River, lakes, groundwater, estuarine and coastal waters
Dissolved inorganic nitrogen	Estuarine and coastal waters
Dissolved oxygen and ammonia	Rivers
Physical Modification	Rivers
Faecal indicator organisms	Shellfish and Bathing Water Protected Areas
Acidification	Lakes, rivers
Abstraction and flow	Rivers, groundwater
Invasive non-native species	Rivers, lakes, estuarine and coastal waters
Sediment	Rivers

Waterbodies in the LFRMSP area and their quality

The following table sets out those waterbodies within Neath Port Talbot and their water quality.

Name	Waterbody type	Modification	Water quality	Waterbody Information
Afan – conf with Corrwg to confluence with Pelenna[225]	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical - High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 483m Dominant Geology – Siliceous Dominant Land Cover – Coniferous Woodland
Afan - confluence with Pelenna to tidal limit	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 366m Dominant Geology – Siliceous Dominant Land Cover – Suburban
Afan - headwaters to confluence with Corrwg	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 566m Dominant Geology – Siliceous Dominant Land Cover – Acid Grassland
Aman - headwaters to confluence with Garnant	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Loughor to Taf Area – 10 – 100km^2 Maximum Altitude – 611 Dominant Geology – Siliceous Dominant Land Cover – Acid Grassland
Baglan Brook - headwaters to conf with River Neath	River Sub catchment	Heavily Modified	Overall – Moderate Ecological – Moderate	River Basin – Ogmore to Tawe Area – Less that 10km^2

[225] Category:Subcatchment - RESTORE (restorerivers.eu)

			Chemical – High	Maximum Altitude – 311m Dominant Geology – Siliceous Dominant Land Cover – Suburban
Clydach - headwaters to conf with River Neath	River Sub catchment	Natural	Overall - Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area Category – 10 – 100km^2 Maximum Altitude – 419 Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Clydach Brook - HW to conf with River Neath	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area Category – 10 – 100km^2 Maximum Altitude – 569m Dominant Geology – Siliceous Dominant Land Cover – Coniferous Woodland
Corrwg - headwaters to confluence with Afan	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 605m Dominant Geology – Siliceous Dominant Land Cover – Coniferous Woodland
Crymlyn Brook - HW to conf with Tennant Canal	River catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 221m Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Cwm Du	River Sub catchment	Natural	Overall – Good Ecological – Good	No information available

			Chemical – High	
Dulais - headwaters to confluence with River Neath	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 479m Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Eglwys Nunydd Reservoir[226]	Lake	Artificial	Overall – Moderate Ecological – Moderate Chemical – High	Surface Area – 91 hectares Mean Depth – 3.6m Catchment area – 247 hectares Elevation – 7m
Ffrwd Wyllt - headwaters to tidal limit	River Sub catchment	Heavily Modified	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 374m Dominant Geology – Siliceous Dominant Land Cover – Coniferous Woodland
Garnant - headwaters to confluence with Aman	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – Moderate	River Basin – Loughor to Taf Area – 10 -100km^2 Maximum Altitude – 355m Dominant Geology – Calcareous Dominant Land Cover – Rough Grassland
Garw - headwaters to confluence with Ogmore	River Sub catchment	Heavily Modified	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 565m Dominant Geology – Siliceous Dominant Land Cover – Acid Grassland

[226] UK Lakes Portal (ceh.ac.uk)

Kenfig - headwaters to tidal	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 22m Dominant Geology – Calcareous Dominant Land Cover – Supra-littoral Sediment
Llynfell - headwaters to confluence with Twrch	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 597m Dominant Geology – Calcareous Dominant Land Cover – Rough Grassland
Llynfi - headwaters to Lletty Brongu STW	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 553m Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Llynfi - Lletty Brongu STW to conf with Ogmore	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 355m Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Loughor - confluence with Aman to tidal limit	River Sub catchment	Natural	Overall – Poor Ecological – Poor Chemical – High	River Basin – Loughor to Taf Area – 10 – 100km^2 Maximum Altitude – 372m Dominant Geology – Calcareous Dominant Land Cover – Improved Grassland
Lower Clydach - headwaters to	River Sub catchment	Natural	Overall – Good	River Basin – Loughor to Taf

confluence with Tawe			Ecological – Good Chemical – High	Area – 100 – 1000km^2 Maximum Altitude – 372m Dominant Geology – Calcareous Dominant Land Cover – Improved Grassland
Nant Cwm Philip - headwaters to conf with Kenfig	River Sub catchment	Natural	Overall – Poor Ecological – Poor Chemical – High	River Basin – Ogmore to Tawe Area 10 – 100km ^{2} Maximum Altitude – 361m Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Nant y Fendrod - headwaters to conf with Tawe	River Sub catchment	Heavily Modified	Overall – Moderate Ecological – Moderate Chemical – Moderate	River Basin – Ogmore to Tawe Area - 10 – 100km^2 Maximum Altitude – 268m Dominant Geology – Siliceous Dominant Land Cover - Suburban
Neath Canal[227]	Canal	Artificial	Overall – Moderate Ecological – Moderate Chemical – High	Catchment – Neath Canals Length – 20.9km Locks – 19
Neath - conf with Nedd Fechan and Mellte to TL	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical - High	River Basin – Ogmore to Tawe Area – 100 – 1000km^2 Maximum Altitude – 608m Dominant Geology – Calcareous Dominant Land Cover – Coniferous Wood
Nedd Fechan - to conf with Neath	River Sub catchment	Natural	Overall – Good Ecological – Good	River Basin – Ogmore to Tawe Area – 10 – 100km^2

[227] Neath and Tennant Canals - The Inland Waterways Association

			Chemical – High	Maximum Altitude – 239 Dominant Geology – Calcareous Dominant Land Cover – Improved Grassland
Ogwr Fawr - headwaters to confluence with Ogmore	River Sub catchment	Natural	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 564m Dominant Geology – Silcieous Dominant Land Cover – Acid Grassland
Pelenna - headwaters to confluence with Afan	River Sub catchment	Natural	Overall – Poor Ecological – Poor Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 460m Dominant Ecology – Siliceous Dominant Land Cover – Coniferous Wood
Pyrddin - headwaters to conf with Nedd Fechan	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 412m Dominant Geology – Calcerous Dominant Land Cover – Rough Grassland
Rhondda R - source to conf Afon Rhondda Fach	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – South East Valleys Area – 10 – 100km^2 Maximum Altitude – 607m Dominant Geology – Siliceous Dominant Land Cover – Acid Grassland
Swansea Bay	Coastal	Heavily Modified	Overall – Moderate Ecological – Moderate Chemical – Moderate	NRW Area – South West Wales; Marine Management Catchment Area – Tawe to Cadoxton Beach Length – 8km

Swansea Canal	Canal	Artificial	Overall – Moderate Ecological – Moderate Chemical – High	Catchment – Tawe Canals Length – 26.6km Locks – 36
Swansea Carboniferous Coal Measures	Groundwater	Natural	Overall – Poor Quantitative – Good Chemical – Good	Management Catchment Area – Tawe to Cadoxton
Tawe - conf with Giedd to confluence with Twrch	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 - 100km^2 Maximum Altitude – 346m Dominant Geology – Calcerous Dominant Land Cover – Rough Grassland
Tawe - confluence with Twrch to tidal limit	River Sub catchment	Natural	Overall – Moderate Ecological – Good Chemical – Moderate	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 370m Dominant Geology – Siliceous Dominant Land Cover – Improved Grassland
Tennant Canal	Canal	Artificial	Overall – Moderate Ecological – Moderate Chemical – High	Catchment – Neath Canals Length – 13.7km Locks – 1
Twrch - conf with Nant Gwys to conf with Tawe	River Sub catchment	Heavily Modified	Overall – Moderate Ecological – Moderate Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 261m Dominant Geology – Calcerous Dominant Land Cover – Improved Grassland
Twrch - headwaters to	River Sub catchment	Natural	Overall – Good Ecological – Good	No information available

confluence with Gwys			Chemical – High	
Upper Clydach - headwaters to confluence with Tawe	River Sub catchment	Natural	Overall – Good Ecological – Good Chemical – High	River Basin – Ogmore to Tawe Area – 10 – 100km^2 Maximum Altitude – 354m Dominant Geology – Siliceous Dominant Land Cover – Rough Grassland

Implications of LFRMSP on WFD Objectives

The Measures and Actions set out in the LFRMSP may result in physical modifications to watercourses, as well as changes to natural flow and levels of water. Construction activities, or poor maintenance activities, could also allow invasive species to spread, or poorly executed work activities can result in pollution such as increased sedimentation.

On the other hand, there are a number of Measures and Actions which are in keeping with the aims of the WFD and River Basin Management Plans. In particular, the implementation of SuDS, Natural Flood Management and Nature Based Solutions will provide opportunities for more natural runoff rates in catchments, improvements in water quality, reduction in pollution, reduction in the need for hard infrastructure (or allow for the removal of some manmade features) and so on.

Nevertheless, note is made in this SEA Report that any scheme being developed in the fluvial, estuarine or coastal environment (such as those set out under Measure 10) should undergo assessment in respect of implications for the WFD and the objectives of the RBMP. Any design should consider the findings of all such assessments. Note that consideration should be made of waterbody classifications prevailing at that time.

It is worth noting that Neath Port Talbot Council already require consideration of WFD for many of their activities and it is anticipated that this would continue for any schemes derived from the LFRMSP. For example, as the Lead Local Flood Authority, they are responsible for ordinary watercourse consent applications under Section 23 of the Land Drainage Act 1991 and Section 3 of the Flood and Water Management Act 2010 on the 06 April 2012. As part of their consenting process for culverts and works to these, they note the requirement to consider the key aims of the WFD through the consenting process. See Culvert policy - Neath Port Talbot Council (npt.gov.uk) for further information.

Appendix H. Figures

Note that due to file size, figures are produced as a separate Volume.

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