Sefton 2030

A confident and connected borough



[DRAFT CONSULTATION]

2030 and beyond



Document Control

Title Draft Sefton Coast Plan 2030 and beyond Owner Sefton Coast Landscape Partnership

Version 1.16

Status Draft for consultation with Partners

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Date of publication December 2016
Approved by Sarah Kemp







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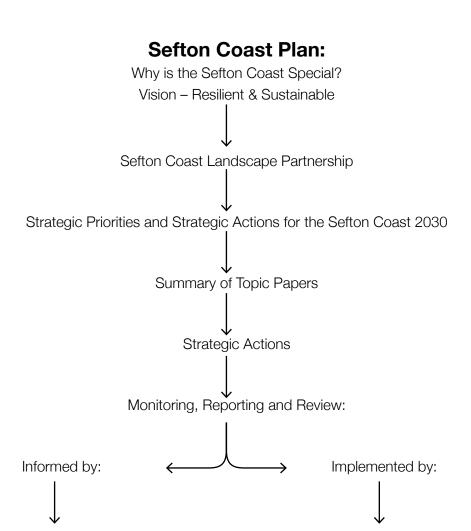
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Structure



Topic Paper Evidence including:

Landscape & Nature
Access & Recreation
Health and Wellbeing
Economy
Access Gateway Masterplans
Regulation & Control
Skills & Lifelong Learning
Water Resources
Energy
Flood & Coastal Erosion Risk Management
Coastal Change, Climate Change & Adaptation

Partnership Delivery

Delivery Plan including:

Nature Conservation Strategy
Visitor Management Strategy
Funding Mechanisms
Communication & Engagement Plan
Adaptation & Sand Dune Management Plan
Water Resources Plan
Shoreline Management Plan
Visitor Gateway Masterplans
e.g. Crosby Coastal Park





Welcome to the draft Sefton Coast Plan

Welcome to the Sefton Coast Plan. This is a non-statutory document prepared by the Sefton Coast Landscape Partnership to deliver a new vision for the Sefton Coast to 2030 and beyond.

For the first time, the Sefton Coast Plan recognises all that is special and treasured about this beautiful natural coastline, including the largest sand dune system in England. It addresses the need to conserve and enhance the coastline and the habitats it provides, for many species of flora and fauna, some of which are rare and need protection. At the same time, the Sefton Coast Plan also recognises that this coastal environment is a place where people live and work and where there are many opportunities to enjoy, discover and celebrate the coast.

In 2016, Sefton Council led a visioning exercise for the communities of Sefton to imagine the Borough they wished to live and work in - Sefton Vision 2030. The coast was identified as an important asset to be valued and cared for. The Sefton Coast Landscape Partnership shares this desire. The Sefton Coast Plan sets a course to deliver to the

same time frame as Vision 2030, a life-span of at least 15 years from publication.

The Sefton Coast Plan area is the whole of Sefton as it is widely used and valued by all the communities of Sefton, most of whom live within a short distance of the shoreline.

The coast here is an ever-changing coast both in terms of accretion and erosion of the coastline but also in terms of human influence on the coast. This change can happen over short timescales, such as movements of the tides or wind-blown sand, and over longer timescales such as land reclamation or coastal erosion. People have used the coast for leisure and recreational purposes, agriculture, tree planting, aggregate extraction, dumping of waste as well as developing on it for housing and employment.

Most of these changes are not in themselves positive or negative, but tensions may arise as a consequence of coastal change. These may be particularly evident where human activity and influence, the ecology and geology of the landscape and climatic conditions, pose competing priorities, for example where natural coastal erosion threatens urban development. Equally, within these same integrated spaces there are many



opportunities for leisure and recreation and enjoying all the health and wellbeing benefits that arise from access to the coast.

The Sefton Coast Plan sets out by theme. the challenges that need to be addressed, and the determination of priorities for action across a broad range of partners and communities, seascapes and landscapes. It takes an integrated approach to the management of the coast as many of the issues need to be addressed at a coastal scale, or on a thematic basis. It presents and determines the route-map to resolution of points of tension. These points of tension have been identified and discussed in a number of Topic Papers that provide the facts, evidence and explanatory context. The Sefton Coast Plan identifies "six big challenges" that the Sefton Coast Landscape Partnership and other partners should work together to resolve.

We will address them in an integrated way using the principles of Integrated Coastal Zone Management to identify the Strategic Priorities and by building the necessary resilience needed to drive long-term sustainability.

The Sefton Coast Plan will be implemented



by a range of organisations including those currently forming the Sefton Coast Landscape Partnership, who will work together, in accordance with the principles we have agreed which are set out in this Plan to support the delivery of our shared vision.

Paul Nolan

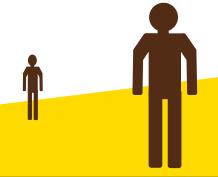
Chair of the Sefton Coast Landscape Partnership

January 2017





Why the Coast is Special



The Sefton Coast has so much to offer, both to residents and visitors. The largest dynamic sand dune system in England, it offers miles of beaches and sand-dunes which connect woodlands and estuaries.

These natural habitats play host to a staggering amount of wildlife, including some of the rarest plants such as Isle of Man Cabbage and animals such as the Sand Lizard and Natterjack Toad, which continue to find refuge in this landscape despite its everincreasing popularity with visitors.

Fascinating ship-wrecks and pre-historic footprints, trapped for thousands of years in sediment beds, can be found with a bit of luck and effort, and at Anthony Gormley's "Another Place" at Crosby, Sefton boasts the biggest coastal open air art gallery in the country.

The significance of the coast extends beyond its stunning natural beauty and its landscapes and seascapes. The important maritime history of Liverpool Bay towards the South of Sefton means we overlook some of the greatest trade routes in the world, which continue to bring new ideas, business and diversity to our doorstep, just as they have done for hundreds of years. At the northern end of Sefton, is a second major economic driver within the Borough, the classic seaside resort of Southport, a popular visitor destination for many decades.

We strive to increase tourism, support business growth and provide accessibility for all residents; the coastline is central to achieving these goals – the geographical outline of the Borough means you are never very far away from the dunes, sand and sea, which all promise an almost infinite universe of discovery. Connectivity to the coast from north to south is amply provided for, by road and rail, and the natural resources of Sefton, provide many new opportunities to contribute



to a clean, green and more environmentally friendly place.

Sefton Coast is a source of inspiration for an active, inquiring and fun-loving population. The coastline is a key element in the character of the borough – exciting and dynamic, always changing as the winds and tides constantly influence the outline of the coast.

The landscape appeals to visitors, young and old, amateur or professional, whether they are day-trippers, anglers, naturalists, kiters, cyclists, golfers, dog owners, horse-riders, walkers, artists, archaeologists or historians.

Sefton is a coastal community striving to forge an identity based on innovation and adaptability – and these are traits that can be found in abundance in the culture and natural heritage of this wonderful coastline.

The nature, land-scape and sea-scapes of the coastal and marine environment are an extremely important asset to Sefton, the Liverpool City Region (LCR) and the nation. The Sefton Coast is an incredibly beautiful and biodiverse area, due to the range and rarity of species and habitats that it supports. The variety and complexity of coastal wildlife habitats in Sefton, owe their existence to a rich and constantly changing coastal setting. Climate and weather combine to influence the extent and quality of those land- and seascapes, wildlife habitats and the species that depend on them.

The people of Sefton enjoy a wonderful and diverse range of open landscapes and views, with many and various opportunities for leisure and recreation, to reap all the health and wellbeing opportunities the Coast has to offer. The quality of life is highly prized by the people of Sefton, a wonderful place to live, work and play, a wonderful natural resource to discover and explore and celebrate in every way possible.

We are fortunate to be able to draw on many decades of partnership working on the dynamic and ever-changing Sefton Coast. By working together we can implement the Sefton Coast Plan and build the resilience of this special place for future generations to nurture and enjoy.





The sands turn white, then brown, then grey, then bleach out again as the cloud formation races through and casts its huge shadow over the beach, sailing as purposefully up the coast as the Gannets first began to patrol the Irish Sea in search of food for youngsters in colonies off South Wales and Aisla Craig off Scotland.

But the way we see Sefton Coast is constantly changing, its' worth reviewed and re-valued through the eyes of fisherman, hunters and farmers, naturalists, pilots, day-trippers, kite surfers and soldiers over thousands of years.

The "Sandscape" we enjoy today in this unique coastal area, boasts a history as fascinating and as varied as the plant life in its flower-rich dune slacks.

From Marshside in the north to Seaforth in the south, the coastline has provided food, employment, recreation and inspiration to generations.

The conservation bodies and landowners, try to share the riches of the area with many visitors as they can. A 22 mile long strip of estuary, shore, dune and woodland, it has more than its fair share of treasures.

Rare plants, amphibians, insects and reptiles; waves of migrating birds, pre-historic footprints, ship-wrecks and record-breakers – their stories all shelter under vast skies, preserved and protected by experts and enthusiasts, amateurs and professionals, who see the worth of this incredible heritage and history and want to share it with as many people as possible.

John Dempsey

March 2016







Sefton Vision for 2030



In 2016, Sefton Council led a consultation process with the communities and businesses of Sefton, in which they were asked to imagine, the future they wished for, in Sefton, in 2030.

The Council worked closely with partners, businesses, private sector organisations, the voluntary, community and faith sector and the community to help us focus on what's important and to be ambitious for the Borough and its communities in the future

The Sefton Coast featured very strongly in that imagination, as a place they cherished and respected and wished to conserve and enhance, discover and celebrate and which would contribute to their health and wellbeing.

They especially identified our wonderful coast and the need to make the most of it:

"I love the coastal setting of Sefton as it offers access to beaches/ coastal walks and promotes healthy lifestyle options. The beaches are looking much cleaner than they did back in the 70's and 80's and we can now be proud that more people want to visit our beaches."

"The Sefton coast and Rimrose Valley Park because they are green lungs in a densely populated area."

"The beach, the thriving independent businesses, the close-knit community, the wildlife, the housing, the array of activities available and the education."

"Lovely beach countryside walks and food."

"The beach, Pinewoods and Formby Village street scene."

"Amazing beach, lovely parks, local shops and restaurants, good links to the city centre and motorways."

"Its people and the beautiful coast."

"I love its coast, the walks, the sea, Crosby, Waterloo and the Iron Men. I also love Sefton's history and culture, and its deep links with the historic port of Liverpool."

We have taken the important messages about the coast from Sefton Vision 2030 and integrated them into our ambition and aspiration that we are setting for the Sefton Coast Plan.





A clean, green and beautiful borough

In 2030, Sefton is internationally recognised for its outstanding natural beauty and commitment to sustainability.

We are a borough celebrated for its fantastic coast line and respected green spaces. Together, we work hard to preserve our assets, such as the marina, woodlands, parks and canals and ensure that all future generations can enjoy them.

Through eco-friendly and green solutions, we have set the bar in sustainability. Everybody works together to keep Sefton clean and green, with a commitment to recycling, low pollution and better air quality.



On the move

In 2030, Sefton is easy to move around and well linked with the wider city region and beyond.

Night buses, better train links and affordability mean that public transport is sa and available to everyone. We can also enjoy the use of the many bicycle and walking friendly routes, meaning we can keep active.

Investment into the borough's public transport system and road networks have helped reduce congestion and have made it even easier for residents and visitors to reach homes, businesses and attractions.



Open for business

In 2030, Sefton is home to businesses of all sizes, from international organisations and small start-ups to social enterprises and community organisations.

We are a borough with a global outlook, exporting many of our services and goods via the port.

Setton is also a leading coastal tourist destination, with businesses flourishing thanks to our strong visitor economy. While strong support for SME's and Start-ups, coupled with the creative use of commercial space, has resulted in vibrant high streets.

With strong public sector partnerships, an entrepreneurial culture and a strong work force, Sefton is the perfect home for any business and we are flourishing.



A borough for everyone

In 2030, Sefton is a borough that has everything we need to live, learn and

From the moment we are born we are part of the community, with parent and baby groups & outstanding nurseries and schools. Quality apprenticeships, vocational training and university access mean we can follow our dream career path.

We live happy, healthy lives in Sefton. The borough is accessible for everyone and positive approaches are in place for those living with mental health issues and disabilities.

When it comes to enjoying our free time and living socially, there are clubs and groups for everyone.

Sefton Council

Hugh Baird **
COLLEGE





NHS South Sefton Clinical Commissioning Group Southport and Formby

Aintree University Hospital



Southport and Form Clinical Commissioning Gro



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Ready for the future

In 2030, Sefton is at the forefront of technology and research.

Investment in technology means that the borough is covered by comprehensive free Wi-Fi and strong, fast connection speeds. By embracing change, we are ready to seize any opportunity and Sefton is now known across the world as a centre for advancement and research.

we are well connected to the rest of the world and we are always looking to the future. Sefton is a borough connected by people, supported by technology.



Together a stronger community

In 2030, Sefton residents look out for each other. We focus on our similarities and diversities but never on our differences, working together to live a fruitful life.

We are supportive communities, aided by a vibrant voluntary sector, where everyone has the opportunity to live an independent and proactive life. We know our neighbours and we help each other out in any way we can from sparing a from of milk to lending a caring ear.

Our communities are strong, knowledgeable and informed



Living, working and having fun

In 2030, Sefton is the perfect place to enjoy your life

With a variety of jobs and professions, Sefton has fantastic opportunities for everyone, from full time workers to part time workers. While a range of housing, including affordable and luxury, has made the borough one of the most desirable places to live in the country.

Our children and young people enjoy access to some fantastic schools, colleges and universities, meaning they can go on to fulfil their dreams and follow their chosen career paths.

We enjoy shopping on Sefton's vibrant high streets and being social at one of the many bars and restaurants, plus a wide variety of sports facilities, clubs and events help inspire residents to keep active and enjoy sport.

We are borough that offers it all with many people moving to the area and students returning to lay down their roots following graduation.



Visit, explore and enjoy

in 2030, Sefton has something to offer residents and visitors of all ages.

We enjoy activities on our beaches and floral greenspaces, while the rush of adrenaline at Southport Air Show brings visitors from far and wide. Setton is home to a number of great events and festivals, while international sporting events return year after year.

Known for its cultural scene, Sefton has something for everyone.



The Sefton Coast Landscape Partnership

The Sefton Coast Landscape Partnership has existed as a partnership on the Coast since 1978. We came together in recognition of the need to address some of the pressures facing the coast during the sixties and seventies such as development, coastal erosion and damage to the coastal habitats. By working together, as partners, we have achieved great things for the Sefton Coast and have been recognised for our work. Looking to the future the Sefton Coast Landscape Partnership can continue to better co-ordinate our actions and resources to achieve outcomes that alone, no single approach or organisation could achieve.

The Sefton Coast Landscape Partnership continues to work towards our vision for Sefton Coast (shown below) but recognise

the need to regularly review our strategic priorities and engage with our communities and visitors on issues that relate to the coast. We have set out a new direction within the Sefton Coast Plan that reflects the identity of the Sefton Coast as presented in the Vision for Sefton 2030, by the people and communities of Sefton and which serves to contribute to the desired outcomes of the wider Vision 2030 for the Borough.

The Sefton Coast Plan provides a new and ambitious level of delivery for the Sefton Coast Landscape Partnership by addressing some of the more complex points of tension and by committing to co-operate, combine resources and work together to resolve long-standing issues at a strategic level to fully realise the opportunities the coast presents.

Our long-term ambition is for the importance of the wonderful natural assets of the Sefton coast to be universally recognised and celebrated, and for the coast to be managed in a way which:

- Conserves and enhances the important international, national and local network of natural and cultural sites, habitats and species;
- Enables local communities to benefit from sustainable economic growth and successfully adapt to coastal and climate change; and
- Provides long term benefits for the health and wellbeing of local communities, businesses and visitors to our coast.



How we will Work to Deliver Our Strategic Priorities

We seek to work in partnership, at a strategic level whilst maintaining individual organisational operational activities. We will avoid duplication of existing regulatory processes (e.g. planning policy and marine consents). Therefore, to be included in the Sefton Coast Plan, strategic challenges and opportunities are defined as being:

- Relevant across the Sefton Coast Plan area;
- Have a significant likely effect across the Plan area: and
- Require a co-ordinated response or action to maximise positive outcomes.

The Sefton Coast Plan will be governed by the Sefton Coast Landscape Partnership Board who will be accountable for measuring, monitoring and reviewing performance as we implement the Plan. These challenges and opportunities lead to Strategic Actions which will be supported by a Delivery Plan. The Delivery Plan will set out how the overall Plan will be implemented and may identify which partner organisation(s) are responsible for or contribute to delivery, its respective timescale and measures of success (how the action will be monitored).

The Principles that we will Work to

The principles set out below, will guide how we work together.

Integrated Coastal Zone Management

(ICZM) is a management technique for coastal areas with the objective of establishing sustainable levels of economic and social activity in coastal areas, while at the same time, protecting the coastal environment. The principles of ICZM are:

Working with nature

We will seek to work with, and not against, natural processes. This is often more cost effective and sustainable.

Taking a long term view

Whilst we will take account of any short term issues we will take a long term view and plan for up to a hundred years into the future. This is because actions such as construction of coastal defences or development on the coast can have long life expectances in excess of 60 years and we don't want to create problems for future generations through short-term approaches

Considering the bigger picture

When undertaking actions we will consider the wider context. This is because so many of our actions can have an impact on other areas both positive and negative. By considering the bigger picture we can avoid the negative impacts and maximise the positive impacts.



Using an appropriate mix of tools (for example plans, policies, strategies)

We will use the most appropriate mechanism available to us to support the delivery of our vision. This is because there are a wide range of plans and strategies already in place where we have already influenced how they approach the management of the coast. This can be a far more effective way of supporting our vision than trying to consolidate everything into a single document.

Getting the right organisations to work together

We will seek to work in partnership with other organisations on the coast to support the delivery of our vision. No one organisation can deliver our vision because there are so many different organisations responsible for different areas and actions. Working in partnership will allow us to co-ordinate our actions and make the best use of our resources.

Ensuring the wide involvement of people

We will seek to involve local communities and visitors in the management of the coast as they have an interest in how this unique asset is managed. Ensuring we are able to change our approach as our understanding improves

We will take an evidence based approach to our decision making and actively review our priorities and actions as our understanding continuously improves.

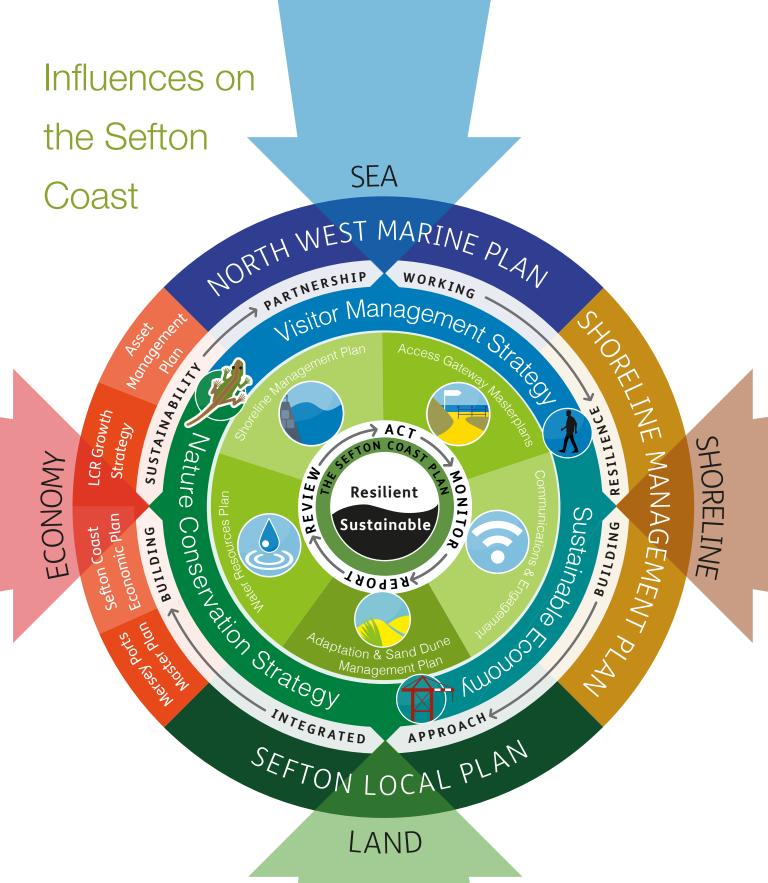
Reflecting local character and need

The approach that we take in managing the Sefton Coast will reflect its unique and special nature.

Guided by these principles and working across the Sefton Coast Plan area, the Sefton Coast Plan will therefore:

- Take a strategic approach;
- Seek to inform management, policy, projects and decision making;
- Complement the existing legislative and regulatory systems that operate on-land, at sea and across the intertidal zone;
- Build resilience and take a sustainable approach; and
- Achieve outcomes and impact that could not be achieved by any Partner alone.







The Operating Model for the Sefton Coast Plan

The operating model of the Sefton Coast Plan is predicated on building resilience at the coast, as the main driver to achieving long-term sustainability for people, the economy and the environment. In the context of the Sefton Coast Plan, we mean:

- Resilience is the capacity of a system to absorb disturbance and still retain its basic structure and viability. In the context of the Sefton Coast this can apply to the economy, environment and our communities. The disturbance can be anything from flooding through to coastal change but the key aspect is about being able to recover from, or adapt to this disturbance.
- Sustainability, in basic terms, is the ability to continue a defined behaviour indefinitely. It is also often referred to as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In the context of the Sefton Coast this means that we need to consider our actions in the context both of their impact on future generations and on the impact of the environment.

The operating model is designed to operate with and complement the existing statutory framework. The Sefton Local Plan, prepared by the Local Authority, for example is the main local policy framework to inform decisions over land-use and development. Whilst at sea, the emerging North West Marine Plan, prepared by Marine Management Organisation will act as

the main policy framework for sea-use. These two systems overlap across the intertidal zone and the Coast Plan seeks to ensure maximum integration of the two statutory frameworks.

The Sefton Coast Plan compliments and enhances these and identifies opportunities to deliver improved outcomes through partnership action, especially where the existing system, or control and regulation is not well integrated.

The Coast Plan identifies three overarching **Strategic Priorities** that will be addressed through a set of **Strategic Actions**.

The Strategic Priorities are:

- conservation and enhancement of nature and the environment;
- management of visitors to avoid damage to the environment whilst optimising the value of the coast; and
- development of a sustainable and competitive coastal economy.

The challenges of the coast are described from a thematic perspective and are set out in the Sefton Coast Plan. The themes are expressed in a series of **Topic Papers** which set out the importance of the coast to each theme, the opportunities that might be realised and any significant points of tension that must addressed, in order to fully realise those opportunities.

Strategic
Priorities

Challenges
- Opportunities
and Tensions

Strategic
Actions

Delivery
Plan

Monitor, Report,
Improve and
Review impact



The **Delivery Plan** will capture the Strategic Actions and delivery mechanisms which seek to resolve the challenges. It sets out which Partner(s) will be accountable for delivering the action, critical milestones to reach, timescale for delivery and the resources required to achieve this.

The Sefton Coast Landscape Partnership
Board will continue to monitor and review
the delivery of the Plan and its consequent
impact and outcomes. As and when
required, any new opportunities and related
challenges identified, and any remedial action
or enhancing activity to the Plan will be
expressed through updated Topic Papers and
a refreshed Delivery Plan.

Challenges and Strategic Actions for the Sefton Coast 2030

The Sefton Coast Plan guides what is intended for the Sefton Coast for the future, the challenges to be addressed and how this will be delivered. We are drawing on the challenges raised by partners, consultees and the communities of Sefton through a wide process of engagement. Implementation of the Sefton Coast Plan will lead to a more resilient and sustainable coast.

There are six big challenges for the Sefton Coast Plan. These are a combination of the challenges identified within the Topic Papers because the big challenges affect and influence several themes, topics and sectors. For the Vision to be realised and our aspiration for the Sefton Coast Plan to become reality the big challenges must

be resolved. Our joint commitment to work together, prepare and implement the Delivery Plan is the route map to resolve the challenges. **The six big challenges are:**

Sand Dune and Woodland

The integrity and connectivity of the Sefton Coast sand dune system is restricted by coastal woodland. Review of the Nature Conservation Strategy is our route map to resolve this tension by leading to actions including removal of coastal woodland.

Sustainable Access

Current Access arrangements to the Sefton Coast are not sustainable because it is damaging sensitive coastal habitats and affecting local communities. Preparation of a Visitor Management Strategy is our route map to resolve these tensions by leading to actions that provide a sustainable approach to provide visitor facilities, including car parking and amenities, avoiding damage to sensitive habitats and local communities.

Not Resilient due to Increasing Pressure

The Sefton Coast is under increasing pressures from people, climate and coastal change and does not have the resilience to meet the increasing demands placed upon it. The strategies and plans that will be prepared and implemented (for example Visitor Management Strategy and Nature Conservation Strategy) will put in place integrated solutions to build the resilience of the coast for the future.

Investment in Infrastructure and Management

The Sefton Coast is already at risk from an increasing lack of resources to manage its special places. We will prepare and



implement a Sustainable Resourcing Plan as our route map to resolve this tension that leads to new investment in improved management of the Sefton Coast through better sharing of resources, knowledge and capacity.

Sustainable Economic Growth of the Port of Liverpool

Expansion of the Port of Liverpool is required to harness the full potential of this transformational economic driver but its development will lead to partial or complete loss of internationally designated sites. Working together with the Regulatory processes habitat compensation for loss of designated sites in the Port is required and the preparation and implementation of the Access Gateway Masterplan for the Crosby Coastal Park, is the route map to our contribution to help resolve this challenge.

Housing and Employment Growth

Sefton offers a highly valued residential and living offer for its citizens, but needs to build more houses to accommodate its growth in demand which will inevitably lead to increased visitor pressure. Sefton also seeks growth in employment opportunities for its residents but needs to create the places where businesses can grow and thrive, even those employment sites set away from the coast, create additional pressures on our natural environment. The Visitor Management Strategy is our route map to resolve this tension.

In addition to the six big challenges, other challenges that more specifically relate to individual themes are addressed within the Topic papers.

The Plan identifies a number of strategic actions, which together, comprise the Delivery Plan.

The actions themselves are interconnected and interdependent and mutually inform and support each other. The **Nature Conservation Strategy** and **Visitor Management Strategy** will be key amongst these in supporting the emerging Sefton Local Plan and ensuring compliance with the Habitats Regulations.

To help statutory organisations work together more efficiently for economic development projects on the coast, joint working practices have been prepared by the Marine Management Organisation. We have the opportunity to implement this approach in the Sefton Coast Plan area by signing up to the Coastal Concordat.

The plans are symbolised to easily identify their integrated role across the Delivery Plan. They are:

- Nature Conservation Strategy
- Visitor Management Strategy
 - » Communications and Engagement Plan
 - » Adaptation and Sand Dune Management Plan
 - » Water Resource Plan
 - » Access Gateway Masterplans e.g. Crosby Coastal Park

Other strategic actions include:

 Developing and implementing resourcing mechanisms to deliver resilience and sustainability of the Sefton Coast Plan;



- Monitoring any changes in law particularly in relation to Brexit;
- Partners to sign up to the Coastal Concordat; and
- Undertake a review of the governance and operation of the Sefton Coast Landscape Partnership and its Groups.

Further to the development and implementation of the plans and strategies above there are a number of areas where we would seek to add value by:

- Supporting opportunities to develop skills and lifelong learning, employment, health and wellbeing, renewable energy and low carbon technology, port expansion, sustainable and inclusive growth; and supporting infrastructure; and
- Supporting the development of the Sefton Coast as a centre of excellence for monitoring and research.



Plan on a Page





Topic Papers



Topic Papers will be updated individually as and when appropriate, for example, when new legislation is passed or new evidence emerges. The Topic Papers are:

- Landscape and Nature
- Access and Recreation
- Health and Wellbeing
- Economy
- Regulation and Control
- Skills and Lifelong Learning and Employment
- Water Resources
- The Historic Environment
- Energy
- Flood and Coastal Erosion Risk Management
- Coastal Change, Climate Change and Adaptation
- Delivery through Partnership Working

The focus of the Sefton Coast Plan is on challenges relating specifically to the Topics, where working together, across the Plan area and Partnership, we can deliver better outcomes in the long-term for the benefit of our communities, our economy and our natural environment.

Each topic paper sets out why the Sefton Coast is important to that particular topic. It identifies the relevant strategic issues - the opportunities that are evident and challenges that must be resolved to fully realise that opportunity. By applying the principles of ICZM the challenges are taken forward in the Sefton Coast Plan, in a way that allows

for them to be considered together, with integrated actions set out in the Delivery Plan, to address them.

The following sections present a brief summary of the Topic Papers and the main challenges that have identified, when considered together have led to the six big challenges.



The nature, land- and sea-scape of the coastal and marine environment is an extremely important asset to Sefton, the Liverpool City Region, Lancashire and the nation. The Sefton Coast is an incredibly beautiful and biodiverse area, due to the range and rarity of species and habitats that it supports. The range and complexity of coastal wildlife habitats in Sefton owe their existence to a rich and constantly changing coastal setting. Climate and weather combine to influence the extent and quality of those land- and sea-scapes, wildlife habitats and the species that depend on them.

Challenges - These coastal habitats are under pressure. Coastal change is impacting on the physical shape of the coast through erosion, accretion and sedimentation; significant erosion in particular, occurs at Formby destroying habitat leading to fragmentation and reduced viability. Coastal



change will increase with climate change which will also change the patterns of weather that we experience, putting even more pressure on the habitats. Addressing issues such as the extent and connectivity of sand dune habitats will require the removal of woodland.

Our use of the coast as humans, puts pressure on the coast and this will increase as more houses are built and businesses developed. This creates a tension between the desire for access and access infrastructure and the need to maintain these important habitats. Coastal change in itself also creates stress on access infrastructure, heightening the tension at certain points along the coast e.g. erosion of car parks and caravan sites.

Working with natural processes, generates opportunities to improve the resilience of the coastal habitats, better link them along and across the coast and make space for nature to enable residents, visitors and businesses to cherish the specialness of the coast. As we improve the quality of this habitat through positive management and reduce the impact of visitors by directing them to less vulnerable areas we will increase coastal resilience.

Preparing and implementing both an integrated **Nature Conservation Strategy** and a **Visitor Management Strategy** will help to address these tensions. Securing sustainable resources to prepare and implement these strategies is essential to retain and improve the specialness of the Sefton Coast and the Sefton Coast Plan area. The preparation and delivery of these strategies will be based on the evidence that we have available and supporting plans

and actions such as a communications and engagement plan, adaptation and sand dune management plan and a water resources plan.

Access and Recreation

The Sefton Coast has a history of recreational use of the beaches and sand dunes, for bathing from the 19th century and aviation from the early 20th century, to more recent activities such as kite surfing and sand yachting. Sefton has good and excellent bathing beaches at Ainsdale, Formby and Southport which are assets to be protected.

More formal recreation and tourism events include the hugely popular Southport Air Show, National Musical Fireworks Championships, Anthony Gormley's "Another Place" iron men statues, Southport Pier, various triathlons, the Royal and Ancient 'Open' golf championship and other golfing tournaments which tend to be concentrated in specific locations.

Informal recreation such as walking and running, playing on the beach, cycling, and horse-riding tend to be spread more widely across the coast. Both formal and informal recreation activities are supported by a range of paths and trails, roads and public transport facilities and generate income and visitor spend. In some locations, facilities are limited and investment is required to enhance the quality of visitor and recreation experience and at the same time, respect the wishes of local residents. Beach car parking creates challenges within the biodiversity duties



and legislation, but the Visitor Management Strategy is an opportunity to provide a route map for resolution.

Challenges - All visitor access and recreation add to the pressure and if not properly managed, will cause damage to coastal habitats. We will need to direct this activity to less vulnerable areas where it can be more easily managed, thereby creating a series of gateway sites for access and recreation along the coast. Proposed sites for housing and employment developments will be required to demonstrate that there would be no significant increase in recreational or visitor pressure on the Sefton Coast as a result of the development plans or provide appropriate mitigation or compensatory habitats.

Access to and enjoyment of all coast related activities can make a big contribution to improving the health and wellbeing of people and communities and also support economic growth within the tourism economy. The coastal location is also an important amenity for residents, both existing and those looking to move here.

Preparing and implementing a **Visitor Management Strategy** will help to address these challenges. Securing sustainable resources to prepare and implement this strategy is essential to retain and improve the specialness of the Sefton Coast and the Sefton Coast Plan area. Preparation and delivery of the Visitor Management Strategy will be based on the evidence that we have available and supporting plans and strategies, especially the Nature Conservation Strategy.



The Sefton Coast provides a beautiful and inspiring outdoor environment for communities and visitors to enjoy, with associated benefits to physical and mental health and wellbeing, for the local community and visitors by providing:

- Clean, safe outdoor space for land and water-based exercise, play, and other activities
- Opportunities to get close to and enjoy nature and local culture and take time out from the hustle and bustle of busy lives
- Opportunities to enhance learning and skills, contributing to community wellbeing
- An inspiring landscape and seascape and a sense of place and belonging which is valued by many; and
- By providing resilience to the impacts of climate change and other coastal change for Sefton's coastal communities.

The natural environment of the Sefton Coast Plan area provides important ecosystem services for the *benefit of health and wellbeing*. Enjoyment of the coast directly contributes to achieving the objectives set out in Living Well¹, Sefton's Health & Wellbeing Strategy, led by the Health and Wellbeing Board. It is important that the Sefton Coast Plan and the Borough-wide Health and Wellbeing Strategy are aligned to deliver

¹ Sefton Health and Wellbeing Strategy, 2014-2020, NHS England, Healthwatch, South Sefton Clinical Commissioning Group and Southport and Formby Clinical Commissioning Group, 2014,



positive health and wellbeing outcomes and that increased use of the coast to deliver such outcomes will need to avoid damage to sensitive habitats.

Addressing these challenges as the coast and needs of our communities change will help us realise the coast's potential to improve health and wellbeing. The **Nature**Conservation Strategy and Visitor

Management Strategy will support our objectives for improved health and wellbeing.

Economy

The significance of the Sefton Coast is recognised as an important contributing asset at the level of the Liverpool City Region and its City Region Growth Strategy and Destination Management Plan. Locally, the draft Sefton Coast Economic Plan, emerging Sefton Economic Strategy and the Coastal Communities Teams all identify important economic opportunities and challenges. Unique and distinctive coastal assets, including the natural coast, the resort town of Southport and features such as 'Another Place', present a significant opportunity to attract more visitors to Sefton, increase their stay time and spend within the visitor economy. The visitor economy of the City Region is growing strongly, with many accessing Sefton from the City of Liverpool, often arriving on cruise-ships at the Pier Head in the Port of Liverpool.

The Port of Liverpool, located in the south of Sefton, is one of the UK's major ports, with state of the art facilities, the most strategically important Port for trans-Atlantic shipping, capable of receiving the largest

shipping vessels in the world. Together with the Manchester Ship Canal and docks at Birkenhead, it forms an integral part of the Mersey Ports and Atlantic Gateway with a combined capacity of 40million tonnes of cargo. The capacity of the Port has doubled with the development of Liverpool 2 to create the most centrally, located deep water terminal in the UK which will allow global services to connect with the City Region as one of the most operationally efficient and modern terminals in northern Europe.

Challenges - In order to harness the full potential of the Port of Liverpool as an important transformational economic driver the Port will need to expand to handle more cargo. This would also facilitate the transfer of as much container freight as possible from road to rail and water, relieving road congestion and noise and air pollution. However the positive impacts of sustainable economic growth and job creation also create environmental and ecological pressure, such as accidental pollutant spillages from ships to the impact of dredging on coastal processes. Port expansion will require the relocation of a designated nature reserve to compensatory habitat, directed by regulatory frameworks and processes. A long term Master Plan for Crosby Coastal Park will reflect proposed Port expansion and other requirements, such as the replacement of the seawall in the next decade.

Fishing, whilst not as important economically, has a long history on the coast and can contribute to the local economy. There are challenges regarding safety that need to be managed whether it is the low key activity of the shrimpers or the more significant



but less frequent, cockling activities.

There are opportunities to work with other partners such as the Inshore Fisheries and Conservation Authority (IFCA) to coordinate activities in relation to fishing.

There are also opportunities to work with other businesses such as farming to influence how they work so as to minimise their impact on this special coastal environment.

Regulation and Control

Legislation and policy has developed in response to an increasing awareness of the value of our environments and the need to protect them. In recognition of the very special value of the Sefton Coast, National Trust and Sefton Council bought land in the sixties at Formby Point to protect it from development and waste. Up until this time the coast was often exploited economically through the extraction of sand, growing of crops and dumping of waste such as tobacco waste.

The Sefton Coast Plan does not duplicate existing legislative and regulatory mechanisms of control and follows the established principle that it should be assumed that these mechanisms of control will operate effectively and, where necessary, in an integrated way. For existing statutory plans such as the Sefton Local Plan (including Neighbourhood Plans), the Sefton Coast Plan will act in conformity with the Local Plan and other relevant plans and avoid conflict with the policies and directions

of those plans. Where needed, the Coast Plan will provide a mechanism to address unresolved coastal challenge and tensions.

Sefton's Local Plan is the main local policy framework on land, to inform decisions over land-use and development projects. The Marine Management Organisation is the main regulator at sea and is in the process of preparing the North West Marine Plan. These two systems overlap across the intertidal zone where better integration is needed. Therefore, the Sefton Coast Plan compliments these but also identifies opportunities to deliver better outcomes through partnership action, especially where the existing system or control and regulation is not well integrated. Regulators, such as Environment Agency, and advisors, such as Natural England, have both signalled their willingness to continue to work positively and pro-actively to help resolve the challenges including implementation of the Sefton Coast Plan.

Challenges - Increased recreational and visitor pressure on designated coastal habitats and communities will occur as a consequence of the development of new housing and employment sites, allocated in the Sefton Local Plan. Preparation and implementation of a Visitor Management Strategy is necessary to comply with the requirements of the Habitats Regulations because it will provide a mechanism for developers to demonstrate how damage to designated habitats in the Sefton Coast Plan area will be avoided.

With the pending exit from the European Union (Brexit), we will need to keep the regulatory framework under review as much



of the legislation developed by Europe is transposed into UK law. It is unclear if the UK law will be changed as a result of leaving the European Union.

A further tension and challenge that the Sefton Coast Plan will address is to improve integration between regulatory processes and working between organisations responsible for regulation on land and at sea. There is an opportunity to improve the working of the regulatory system and a Strategic Action is included for partners to sign up to the Coastal Concordat as a framework to achieve this.

Skills, Lifelong
Learning
and Employment

Sefton's coast and wider green infrastructure across the Borough provides a wealth of opportunities, both formal and informal, for developing skills and knowledge, improving employability and quality of life. It also provides a range of opportunities for volunteering and community engagement. The coast is significant for these reasons as a major contributor to achieve key aspirations of 'Living Well in Sefton: Sefton's Health and Wellbeing Strategy 2014-2020 '(2014) as well as Sefton's Vision for 2030, to:

- Create a place where all members of our community can live, work and enjoy life as valued members of the community.
- Promote independence and help build personal and community resilience.
- Improve opportunities and support

residents to make choices so that people are able to live, work and spend their time in a safe and healthy environment.

Of particular note is the prediction of an increasing proportion of older residents in Sefton who may require more sufficiency of support, but who will also have more time to make voluntary contributions, an important resource by scale and experience to be harnessed through the delivery programmes of the Coast Plan and the Sefton Coast Landscape Partners.

It is important that the Sefton Coast Plan recognises these opportunities and seeks to support skills, lifelong learning and employment.

Water Resources

Access to clean, safe water is fundamental to the health and well-being of our entire planet or biosphere. The natural environment of the Sefton Coast is dependent on healthy water resources. This includes, for example, biodiverse coastal waters, healthy dune slacks, wetlands with hundreds of thousands of birds or thriving water vole populations on the many ditches and drains that intersect the farmland.

The Sefton Coast Plan area is hydrologically complex with much of the land below sea level. The interconnected nature of water resources places a wider responsibility on the citizens and businesses of Sefton to use water wisely, avoid pollution and support the processes that sustain clean and healthy water. The management of this water can cause problems ranging from the shrinkage



of peat in the low-lying agricultural areas as a result of extensive pumped drainage through to problems discharging water across beaches where beach levels have increased as a result of coastal change. The watercourses within the pumped catchment of Sefton are currently failing to achieve good ecological status largely as a consequence of water quality issues and lack of habitat provided by modified channels.

Challenges - There are opportunities to better coordinate the management of water and recognise both the interconnected nature of the hydrological system and the long term change that will impact on it. This could include approaches such as Natural Flood Management where a whole system approach is taken to flood risk management, seeking to slow the flow of water and returning the systems to a more natural way of working.

Preparing and implementing an integrated Water Resources Plan will help to address these issues. This would also provide an opportunity to better coordinate the delivery of works and outcomes, such as improving water quality at the same time as we reduce flood risk. Before starting the water resources plan it would be sensible to check that we have the right partners to deliver this coordinated approach.



The Sefton Coast has been utilised and occupied by humans for over 8000 years. Traces of this activity survive as buried and

exposed sites, features and structures, with increasing visibility and examples with more recent periods of history up to the recent past. The area remains a dynamic landscape with coastal erosion and new developments exposing new sites.

Features such as ship wrecks may last decades before they are lost to the natural processes of decay but others, such as the pre-historic footprints at Formby, may be exposed and lost within days after having remained buried for several thousand years. The challenge in relation to these historic environments is to sufficiently record new discoveries to permit preservation by record and dissemination of the information to specialist and general interest groups.

There is a massive interest in the historic environment both from people visiting the coast to the documentary coverage on television. There is an opportunity to enhance people's enjoyment and understanding of the coast through raising awareness and interpretation of this prehistoric and historic evidence.

Preparing and implementing a

Communication and Engagement Plan

will help to identify and act upon a number of opportunities around raising of awareness and understanding of the coast, how to avoid damaging it and helping visitors to enjoy it. Such a plan would look across all the issues identified in the Sefton Coast Plan and develop a coordinated approach to communication and engagement. This can include encouraging land owners to report the discovery of any historic features and help, where possible, in their recording.



The Sefton Coast Landscape Partnership will continue to support the history and archaeology task group and the volunteers who have an interest in this area.

Energy

The Sefton Coast offers opportunities for the development of low carbon and renewable energy technologies. These technologies can make a significant contribution to the overall energy security and resilience of the area and wider Liverpool City Region. There is already significant wind energy development on the coast, both onshore and more significantly offshore. Tidal power has regularly been proposed within the Mersey and Ribble estuaries and recently on the Sefton Coast.

There is no specific benefit of locating solar power at the coast but it is often implemented as part of new industrial developments and may also offer some benefits through the development of visitor facilities for example. Biomass is significant as it is a major import into the Port of Liverpool for use in power stations. There is also fossilbased energy on the coast the evidence of which can be seen when looking at the offshore rig extracting gas to the west of Formby. Energy projects, such as investment in modern energy infrastructure, whilst strictly regulated, have the potential to impact upon habitats, designated sites, coastal processes and coast defences.

Challenges – The resilience and financial viability of new coastal visitor developments could be increased through installation of low carbon and renewable energy technology. This is also an opportunity as a powerful communication and education

message regarding our commitment to reducing emissions.

Challenges - The Sefton Coast Plan area offers significant opportunity for large-scale renewable energy generation, especially from tidal technology in estuaries such as the Mersey. Each project will need to be assessed on its merits through the regulatory frameworks, taking into account the special environmental value and character of the Sefton Coast Plan area, the landscape and seascape, and also the significant economic benefits that could accrue from a more resilient energy generation infrastructure.

The Sefton Coast Landscape Partnership will seek to work positively and pro-actively with energy scheme promoters to avoid impacts to the Sefton Coast. They will also seek to raise awareness of the impacts of climate change and the potential to avoid damaging emissions through use and investment in low carbon and renewable energy.

Flood and Coastal Erosion (Risk Management

The coast is an important asset for flood and coastal erosion risk management. Saltmarsh and beaches reduce the energy of the waves before they reach shore which in turn, reduces the scale of defences we need at locations such as Southport and Crosby. The sand dunes provide a buffer for coastal erosion, allowing us to work with natural processes rather than introducing artificial



and expensive defences. Sediment is brought in by the tides and storms from beneath the sea to replenish our beaches. Flood risk and coastal erosion are both significant issues for Sefton. Details of this risk and the policies for its management are set out in the Flood and Coastal Erosion Risk Management Strategy (FCERMS) for Sefton and the Shoreline Management Plan for the North West of England and North Wales.

The development of coastal defences can have a significant impact on the coast both during construction and after as their presence influences coastal processes. This has to be considered carefully during the development of any proposal to ensure that we don't damage the coast and to ensure that any proposal, delivers impact and outcomes as intended. This requires a good understanding of the coastal processes based on robust record-keeping and evidence analysis. We also have to consider such schemes over the long term, as a typical coastal defence will last 60 years. It is not possible to remove all risk, so we have to plan for the times when there is flooding, erosion or damage to defences and help our communities to be more resilient.

Challenges - Coastal defences, significant by scale, present opportunities to achieve multiple benefits for both people and our natural environment. This could be putting in place infrastructure for visitors or designing schemes in such a way as to enhance the local habitat. Sharing our understanding of coastal processes, can help to form the evidence base for decisions at the coast and to be able to suggest how the coast might develop in the future. This is especially important in relation to the impacts of

coastal and climate change which will lead to changes in both the long and short term.

Preparing and implementing a masterplan for Crosby Coastal Park will help to identify and secure multiple benefits for the area, as the proposals to replace the coastal defences are developed. Preparing and implementing an Adaptation and Sand **Dune Management Plan** will inform our response to coastal change over the long term and also develop our approach, working with the sand dune system as a natural defence. The development of a Water Resources Plan has already been mentioned. Undertaking to coordinate and share monitoring and research and aspiring to be a centre of excellence for this will support the development of our evidence base. Communicating this understanding and the implications associated with it, such as the residual flood risk, will support our communities to be more resilient.

Coastal Change, Climate Change and Adaptation

The coast is changing, it always has done and always will. There is a history of change at the coast both in terms of the features on the coast and the way that humans use and live on the coast. As an example, Formby Point has been eroding around its central section since around 1900 at a rate of 3-4 metres per year. Over the same period of time, our use of the coast has changed from one of exploiting it for minerals, agriculture and dumping of waste products, to recognising and valuing it as a natural asset.



Climate change arises because of increased greenhouse gas emissions since the start of the industrial revolution. The impacts of climate change on the Sefton Coast will include sea level rise, warmer wetter winters, hotter drier summers and more frequent extreme and intense storms.

The natural response to coastal and climate change would be for the coast to adapt by rolling back and habitats to change to ones more suited to the new climate. However, humans have built on the coast and constrained the space for the coast to roll back. We are also home to a number of rare and important species and we need to maintain a viable habitat for them. We have a general idea of how the coast will evolve but there are significant gaps in our understanding that need addressing.

Challenges - There is an opportunity to reduce the impact of coastal and climate change by adapting to it in a timely manner, avoiding short term and potentially expensive decisions. Recognising what the coast might look like in the coming decades and planning now, for how we will adapt to this change such as relocation of infrastructure, creating space for the sand dunes to roll back is an important focus of the Sefton Coast Plan.

The Adaptation and Sand Dune

Management Plan will guide future
adaptation and development supported by
the Partners' undertaking to coordinate and
share monitoring and research. Preparing
suitable plans for extreme weather events will
mitigate some of the consequences of the
increase in frequency and intensity of storms.
Communicating an understanding of coastal
and climate change and the implications

associated with it will help our communities to be more resilient.

Delivery through Partnership Working

Partnership working is an effective approach which brings together a range of organisations that can't alone, deliver their desired outcomes, an approach that forms the foundations of the Sefton Coast Plan. Partnership working requires strong leadership and organisational commitment of time and resource.

There are a range of landowners, regulators and advisors who share a common vision for the coast some of whom are members of the Sefton Coast Landscape Partnership. The Partnership is supported by a number of Task Groups who collectively will take responsibility for the actual delivery of the Plan along with other partners. For strategic action to be truly effective many individuals and organisations, including our communities, including but not restricted to the Sefton Coast Landscape Partners, will all have a role to play and by working together, the benefits of the coast can be fully realised.

The Sefton Coast Landscape Partnership is similar to other partnerships in that its activity tends to increase or decrease in response to the issues and opportunities at any point in time. The Partnership has changed and evolved over time and recognised the benefits of regular review to ensure that governance is strong and the partner representation is



balanced and committed to the strategic agenda of the Sefton Coast Plan.

Challenges - The new Sefton Coast Plan presents a timely opportunity to review partnership governance and membership, to align with the broader strategic agenda and ensure delivery and implementation. The following chart sets out the main roles and activities of Sefton Coast Landscape Partnership, including the Task Groups, for delivery and implementation of the Sefton Coast Plan.

Resources are essential for effective implementation and many partners have important roles and contributions to make. When agreed, the Sefton Coast Plan is intended to be used by partners to support bids and applications for new funding and resources for implementation and action. A Strategic Action is included to develop a sustainable approach to resourcing delivery and we are committed to prepare and implement a **Resourcing Plan**.

Delivery Plan

A mechanism to identify how the Sefton Coast Plan will be implemented is needed and this is a strategic issue. As a partnership we are committed to the Strategic Action of preparing and implementing a Delivery Plan in close consultation with other partners **ready for adoption** of the Sefton Coast Plan.

The Delivery Plan is our "Route Map to Resolution". It will set out how the challenges and tensions identified within the Sefton Coast Plan will be resolved. It will also help use realise the opportunities and full potential of the Sefton Coast. A challenge for the partners is to work together to identify, agree and implement those solutions. For each strategic action it is very important that the right people and organisations are involved and have the opportunity to contribute – where there are gaps within the existing partnership arrangements these will be addressed as an early priority within the Activity Plan.

The Delivery Plan will include for each of the Strategic Actions, the following:

- A description of the Strategic Action;
- An Activity Plan including actions, governance arrangements, milestones and target dates for completion of each activity;
- Lead partner(s) and their role;
- Other partner(s) and their role;
- Estimate of cost and resources;
- A Risk Management Assessment based on the likelihood and severity of impact of risks:
- Outcomes and measures of success; and
- A mechanism for reporting progress to and being held accountable by the Sefton Coast Landscape Partnership.



As our Route Map to Resolution the Delivery Plan will be a live document, regularly updated and reported to the Sefton Coast Landscape Partnership Board and will need to be supported by strong partnership arrangements.





















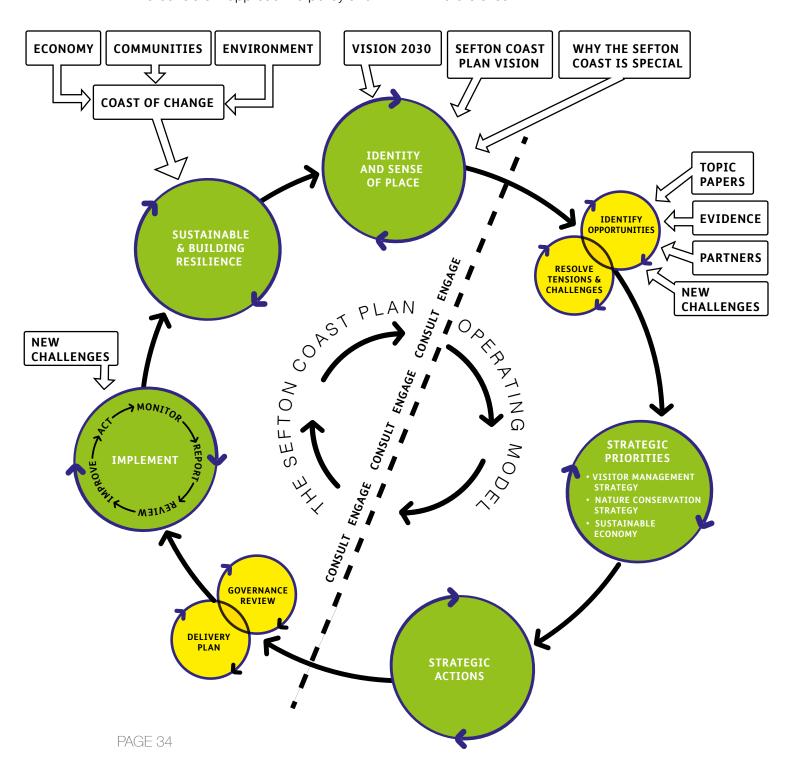






Monitoring, Reporting and Review of the Sefton Coast Plan

Regular monitoring and review of the Plan is essential to ensure that the Sefton Coast Plan achieves its desired impact and outcomes, with a consistent approach to policy and legislation compliance. This especially includes the monitoring of visitors to the coast and monitoring of the internationally important nature sites.



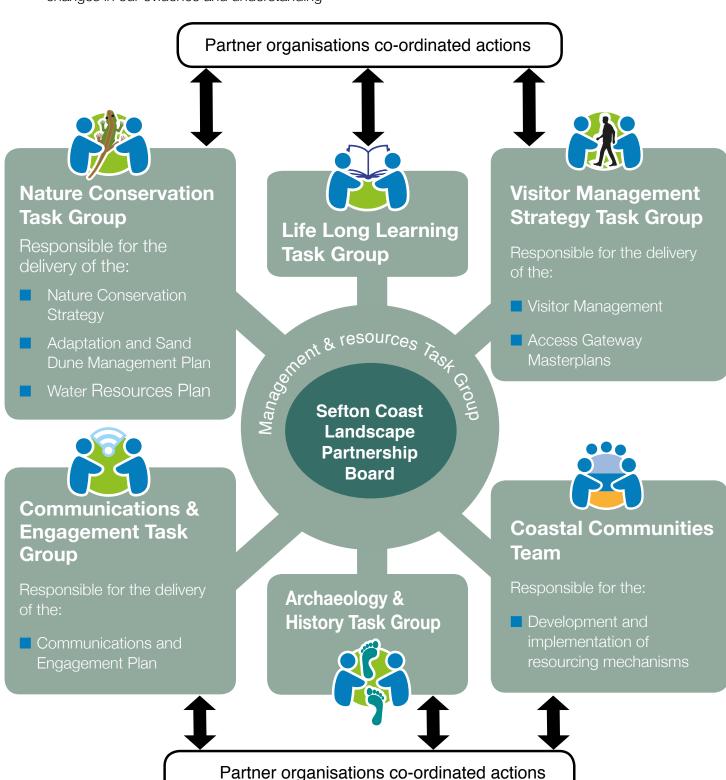


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To ensure progress, the strategic actions set out in the Delivery Plan will include key milestone dates and detailed activity plans.

The Topic Papers will be updated as and when required due to such things as changes in our evidence and understanding

or changes in legislation. The Delivery Plan will be reviewed on an annual basis and the entire Coast Plan will be reviewed every five years or more often where additional strategic issues are identified or changes in legislation occur.





Glossary

Abstraction - the process by which water in its natural environment may be artificially removed through a manmade structure or by changing the flow of the water from its usual course to alternative other course.

Accretion - growth or increase by the gradual accumulation of additional layers of matter.

Aggregate extraction -

the extraction of material or structures formed from a mass of fragments or particles loosely compacted together.

Aquifer - an underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials from which groundwater can be extracted.

Artificial water body - a

body of water that is not naturally occurring such as a man-made lake, as opposed to naturally occurring bodies of water, such as rivers or the sea. Bathing Water Directive

Bridleway - a path or track along which horse riders have right of way.

Built heritage - the part of an area's heritage that consists of buildings and structures, as opposed to natural or aesthetic assets.

Business continuity -

planning and preparation to ensure that an organisation can continue to operate in case of new challenges or adversity.

Coastal Change Management Area

Coastal defences -

measures taken to protect the coast against erosion and flooding by the sea.

Contaminated land - land where substances in or under the land make it actually or potentially hazardous to people's health, or hazardous to the environment.

Conurbation - an extended urban area, typically consisting of several towns merging with the suburbs of a central city.

Dredging – the process of clearing the bed of a harbour, river, or other area of water by scooping out mud, weeds, and rubbish with a dredge.

Dynamic coast – a coast characterized by constant change or activity.

Ecology – the scientific analysis and study of interactions among organisms and their environment.

Erosion - the action of surface processes that remove soil, rock, or dissolved material from one location on the Earth's crust, then transport it away to another location.

European Marine Site

Fauna - the animal life of any particular region or time.

Flora - plant life occurring in a particular region or time, generally the naturally occurring or indigenous—native plant life.



Fossil fuels - a natural fuel such as coal, gas or oil, formed in the geological past from the remains of living organisms.

Fragmentation of habitat

 where habitats are not connected resulting in smaller, less resilient habitats.

Geomorphology - the study of the evolution and configuration of landforms.

Good Environmental Status

Green Belt - an area of open land, on which building is restricted.

Groundwater - water held underground in the soil or in pores and crevices in rock.

Habitat - the natural home or environment of an animal, plant, or other organism.

Hard coastal defences

- measures to protect the coast against erosion and flooding by the sea, by the introduction of man-made structures such as sea walls.

Hinterland - land lying behind something, especially a coast or the shore of a river.

Hydrography - the science of surveying and charting bodies of water, such as seas, lakes, and rivers.

Intertidal area- the area of seashore which is covered at high tide and uncovered at low tide.

Isle of Man Cabbage - is a species of cabbage plant that is found in coastal habitats on the west of Great Britain and around the coasts of the Isle of Man. It is listed as a nationally scarce British species and is in serious risk of extinction.

Kite surfing - the sport or pastime of riding on a modified surfboard while holding on to a specially designed kite, using the wind for propulsion.



Appendices

