

Newport Landscape Profile

Natural resources in the Area	1. Ecosystems and natural resources: What have we got, and what is special or significant about them in this particular place?
	2. Where might we be able to (or most want to) build resilience, and why?
The benefits that natural resources provide	3. How are natural resources currently being managed and used to support wellbeing in this particular place?
	4. What is driving the way they are being managed or used; at what scale, local, national, global? and; is there any scope to change this?
Priorities, risks and opportunities that need to be addressed (national priorities from Natural Resource Policy (NRP) and how they translate in the local context)	5. What do we need our natural resources to deliver for us and for future generations?
	6. What and where are the risks to Wellbeing (including biodiversity and resilience of ecosystems)?
	7. What needs to change to deliver more sustainable management or use? What and where are the opportunities to do that? Whose resources are involved? Who needs to be involved? Which management systems need to change?
What NRW and others can do about them?	8. How do we change it? Do we know yet? Are others doing it? How do we provide information for others in the right format? What are we going to do next?
Evaluation: Learning and informing the State of Natural Resource Report (SoNaRR)	9. How do we monitor the impact we are having on natural resources and wellbeing so that we know whether our interventions are working? What have we learnt throughout this process?

Introduction

Landscape Profiles are one of the products of the Area Statement process. This Landscape Profile covers the urban area of Newport and southern Torfaen and forms one of seven profiles that, **when** combined, will form the South East Wales Area Statement. They are a key evidence base for the South East Wales Area Statement and should inform and influence policy documents and decisions, and must be taken account of when producing a number of policy documents including, National Park Management Plans, Local Development Plans, Area of Outstanding Natural Beauty Management Plans, the Welsh National Marine Plan and future funding decisions.

The process has encouraged much useful discussion relating to valuable ecosystems linked to Newport and identified a number of challenges faced when managing such systems within a predominantly urban area. The Panel has produced this ‘broad-brush’ document which reflects the time and resource constraints, and the sectoral representation and expert advice of the Panel. Consequently, it is considered prudent at this point to highlight some points that may require further consideration and discussion as the process evolves.



Scope of evidence base: Landscape Profiles are the evidence base which Area Statements use to identify opportunities for the delivery of the sustainable management of natural resources (SMNR) and build ecosystem resilience. They have been prepared by a panel of representatives, who have worked together to identify the issues considered to be particularly relevant to the Newport Profile.

This document represents the first stage in the Area Statement process and, as such, it should be used as a work in progress. It aims to highlight many of the issues relevant to the Newport Profile. However, it is acknowledged that these may be restricted in their scope, reflecting the make-up and specialities of representatives on the Panel. It is trusted that the on-going Area Statement process will provide sufficient opportunities for a wider audience to be represented in identifying options for building ecosystem resilience in Newport, as there may be other issues and opportunities relevant to the Profile that have not been identified.

Need for robust comprehensive and comparable datasets: A number of Landscape Profiles have been prepared for the South East Wales Area Statement, each prepared by separate Landscape Panels, but working towards a set list of headings. Whilst this approach facilitates a 'grass-roots' approach to identifying areas of importance, specific to each ecosystem, it is also important to be mindful of the end product and more strategic documents that may evolve from the process. It is important that the background evidence contained within the different Profiles is robust, comprehensive and offers a high degree of consistency. To prepare a meaningful and comparable output, it is important that the background evidence provides a consistent and comparable approach to data sets, to allow for opportunities to be identified within and between Panel areas, and potentially between Area Statements, and more, strategically.

Scrutiny and Consultation of Priorities and Opportunities: Given the weight attached to the Area Statements and the policy strategies and documents they influence, e.g. Local Development Plans, an open and transparent approach should be taken to identifying opportunities and priorities within the Area Statements. It is trusted that sufficient opportunities will be provided for interested organisations to provide input into the priorities, allowing for the timescales of many standard reporting mechanisms, such as board/committee meetings and the political decision-making process. An appropriate level of scrutiny must be given to the Area Statement process, reflecting the legislative processes they feed into, for example, the LDP Examination.

The original Landscape Profile area boundary (Figure 1) has been adapted to reflect the knowledge and priorities of the Landscape Profile Panel (comprising mainly Newport specific staff). For the purposes of making this document a more useful tool, themes from the neighbouring Gwent Levels landscape profile area have been included, therefore this profile encompasses the full urban centre of Newport. The landscape profile area includes part of Cwmbran and Pontypool in the north. However, these areas are more comprehensively covered under the South Valleys landscape profile, which contains similar landscape characteristics.



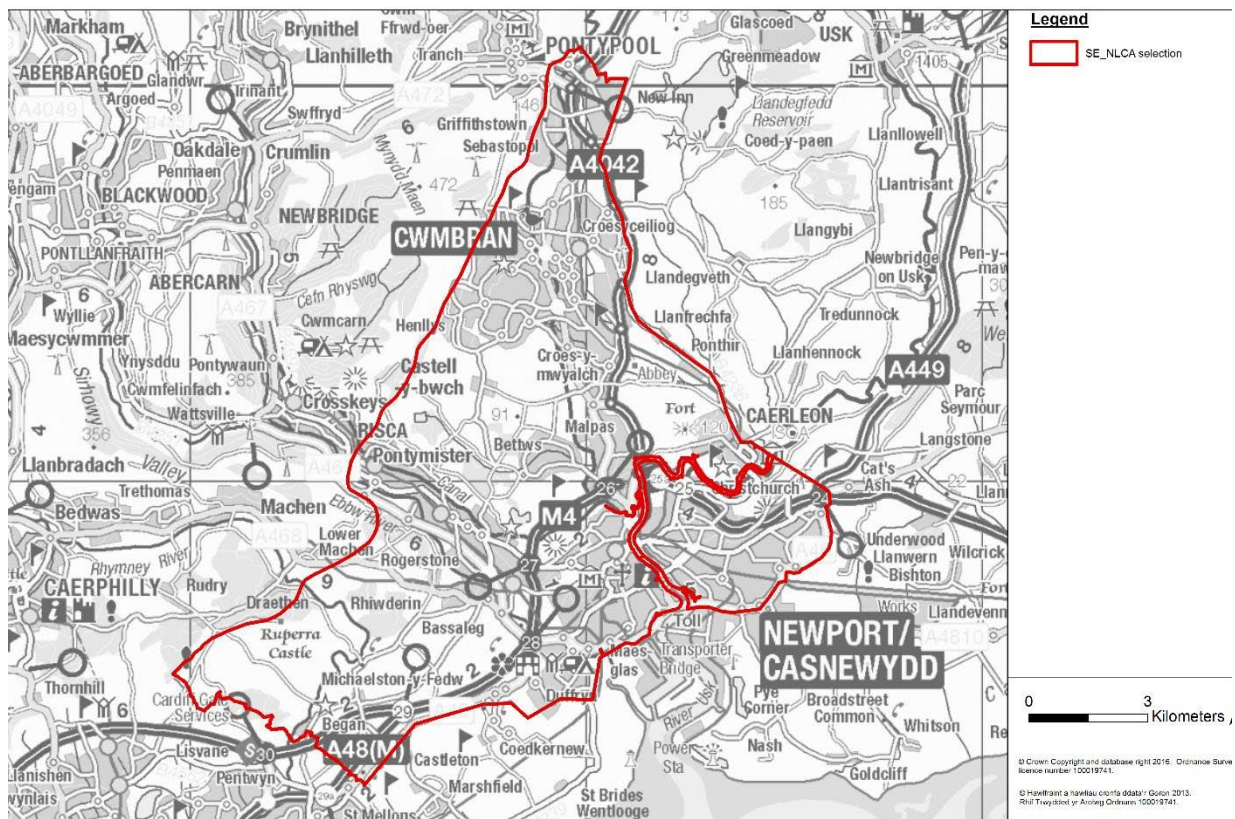


Figure 1: Landscape Profile Boundary

What we are trying to achieve

- Identify what habitats and ecosystem we've got.
- Improve resilience of ecosystems and ecological networks.
- Halt and reverse loss of biodiversity.
- Maintain and enhance green infrastructure based on seeking multiple ecosystem benefits and solutions.
- Ensure resilient locational choices for infrastructure and built development, taking into account water supplies and water quality, and reducing, wherever possible, air and noise pollution, as well as environmental risks, such as flood risk/ coastal change/ land contamination & instability, and also giving full consideration to biodiversity.
- Take actions towards a more circular economy.
- Facilitate the move towards decarbonisation of the economy.



What natural resources have we got, and what is special or significant about them in this particular place?

A significant portion of this Landscape Profile can be characterised as urban or semi-urban landscape, with large areas given to residential, commercial and industrial land-use. Whilst these 'developed' areas have important public green spaces, the urban fringe retains a mosaic of different and key habitats such as woodlands, grassland, agricultural land and the waterway corridors, such as the River Usk and Monmouthshire and Brecon Canal. To the west of this landscape profile, is the South East Valleys, an area of high habitat connectivity. To the east is the Central Monmouthshire Landscape Profile, an area of lower habitat connectivity. To the south is the Gwent Levels Landscape Profile, an area of national importance for biodiversity.

Designated sites are present within this Landscape Profile area. The habitat connectivity map in Figure 2 shows connectivity of natural habitats and their buffer zones, including habitats such as woodland (though it should be noted that waterways are also important connective corridors for certain species). See also Figures 4 and 5. This gives an indication of the current connectivity and resilience of existing ecosystems. Connectivity has not been mapped in urban areas, which is why these areas show no connectivity data. This is a significant gap in the data for this area given that this Profile area has such a large built environment. We do have open green space data that accounts for all open access green spaces within the Newport area.

The River Usk is recognised nationally and internationally for its level of conservation value and is designated as a Site of Special Scientific Interest and Special Area of Conservation. The river's special features include the Otter and the rare fish Allis Shad and Atlantic Salmon. In the past it was also home to the rare Twaite Shad, although it's thought to no longer return to the river.

Within this Landscape Character Area, through the City of Newport and town of Caerleon, the River Usk merges with the strong tidal waters of the Severn estuary. This is a unique section of the river where the large tidal range leaves much of the riverbed exposed as mud banks at low tide. These mud banks may look bare and unattractive, but they contain a wealth of life beneath the surface and birds such as redshank and oystercatcher can often be seen feeding. At intervals along the banks small areas of saltmarsh and fringes of common reed can be seen along with native shrubs and trees higher up.

In addition to acting as a significant wildlife corridor and fish migration route, the river also provides opportunities for people to enjoy the river, providing an active travel route connecting to the Wales Coast Path.



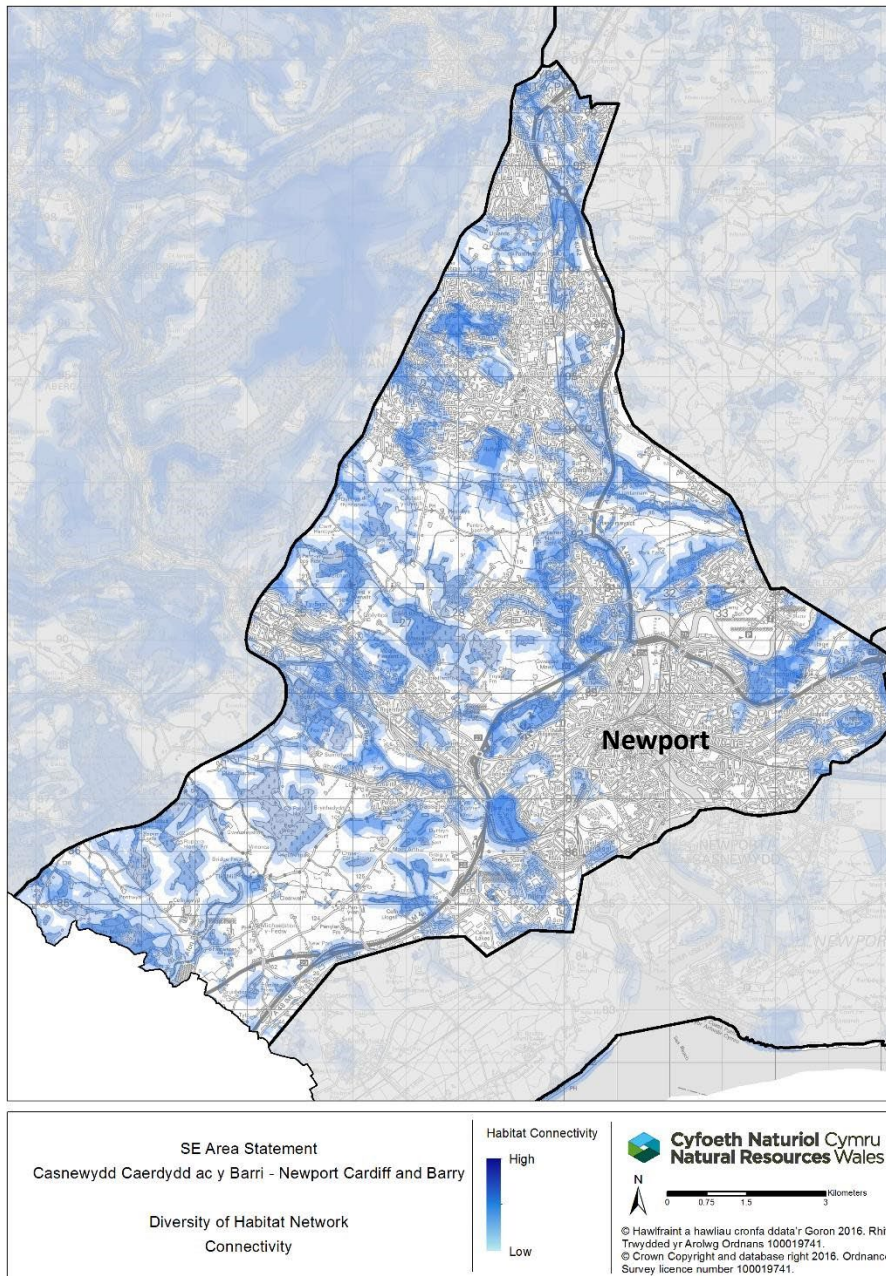


Figure 2; Diversity of Habitat Network Connectivity map based on the Newport, Cardiff and Barry Landscape Character

The fact that so much of the area is urbanised has raised the importance of the ‘green spaces’ both on the urban fringe and within the built-up areas, for providing wellbeing benefits. The surrounding green spaces provide regulatory, provisioning, cultural and supporting services.

Where can we build resilience, and why?

Resilience in the context of the urban environment can be understood as the ecosystem’s ability to provide the same services during disturbance. An example of this could be an urban green space in an unusually hot, dry summer. In a non-resilient system, vegetation may dry out, and no longer provide



the same benefits. In a resilient system, diverse and connected vegetation would allow more plants to survive and provide multiple benefits, such as mitigating the urban heat island effect, providing habitat for pollinators, improving mental wellbeing etc.

Resilience is equally important in the urban environment as it is in more natural ecosystems. The urban systems within this landscape are especially vulnerable to disturbances, such as a varying climate. This is due to low connectivity, small extent of green space and poor condition (lack of diversity).

A high proportion of impermeable ground in towns and cities increases vulnerability to pluvial (surface water) flooding. Development on natural flood plains can also cause issues. The River Usk runs through Caerleon and the urban centre of Newport and poses a risk of flooding (Figure 3). The flood risk from the River Usk through Newport is predominately tidal and there are fluvial risk areas in Newport from smaller watercourses (e.g. Liswerry Reen, Malpas Brook, Bettws Brook). During heat waves, the urban heat island effect could cause dangerously high night time temperatures in urban areas. Due to these risks, resilience must be built in the urban area.

Resilience can be built through improving the connectivity, extent, diversity and condition of current habitats. (*Latham and Rotherm, 2018*). In the urban environment resilience can be built through good management of green spaces, such as reducing mowing (extent and/or frequency) to improve habitats for pollinators and through effective allocation of spaces for green space and improving connectivity and habitat networks. This includes habitat patches, associated features and the intervening land that allows species to move or natural processes to operate across the landscape. This is especially important for reversing the rapid decline of biodiversity that is currently occurring. Reduction of the use of pesticides would also improve diversity and condition. Private gardens are a great opportunity for improving resilience and this could be achieved through effective public engagement campaigns.

Development pressures are one of the key threats to resilience in this landscape profile. However, new developments could present opportunities to build resilience into design, through SuDs, green space provision, promotion of low carbon transport choices and improving connectivity of existing habitats. There may be opportunities outside of development sites through appropriate planning provisions such as 106 contributions (Section 106 of the Town and Country Planning Act 1990).

Spatial areas identified for building resilience include:

- The urban area, including the centre and new developments
- Identified opportunities for improving connectivity of existing green spaces are required, however the Landscape Profile panel agreed that there was not sufficient evidence or time to identify these areas in this process.



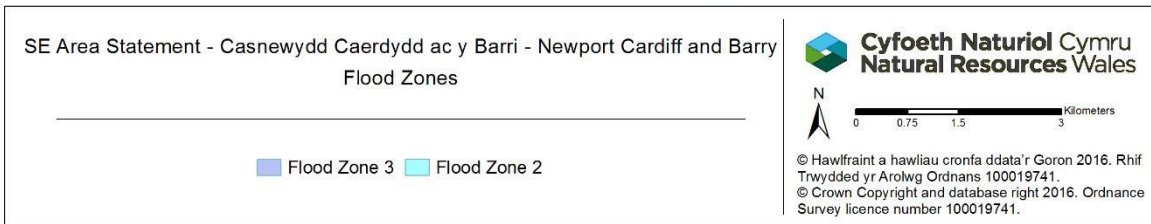
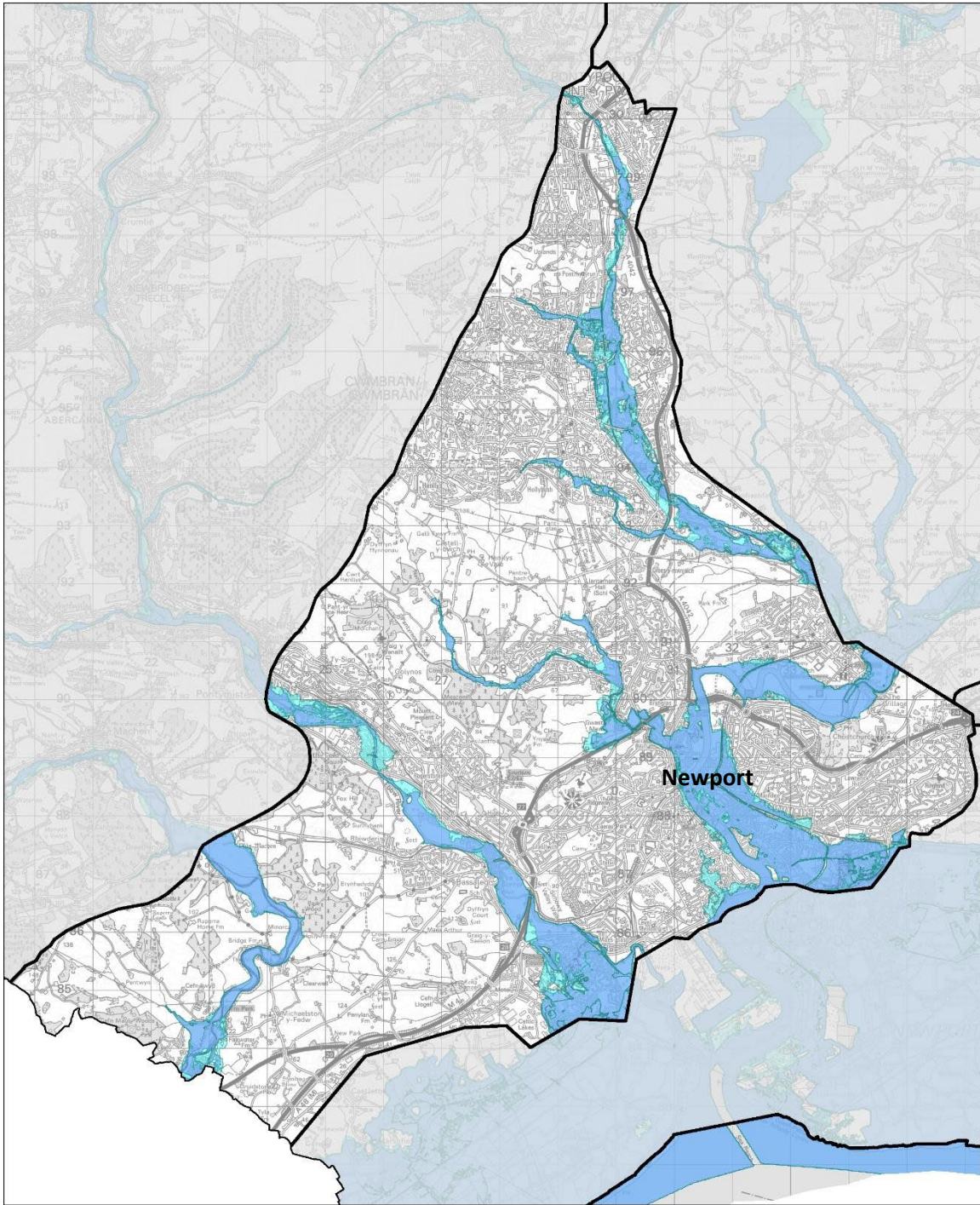


Figure 3; Map of Flood Zones in the Newport Landscape Area



Fig. 3 Key

Flood Zone 3:

- the extent of a flood from rivers with a 1% (1 in 100) chance or greater of happening in any given year • the extent of a flood from the sea with a 0.5% (1 in 200) chance or greater of happening in any given year

Flood Zone 2:

- the extent of a flood from rivers or from the sea with up to a 0.1% (1 in 1000) chance of happening in any given year • contains areas recorded to have flooded in the past

How are natural resources currently being managed and used to support wellbeing in this particular place?

There is scattered woodland habitat across this Landscape Profile area (see Figure 5). Some woodlands are owned and managed by the Woodland Trust, some by NRW. Some woodland is council owned and managed, some is privately owned. The majority of Agricultural land is managed by private landowners or Welsh Government. Some agricultural land is managed for public access, as are some grassland areas.

The Landscape Profile has a vast network of Public Rights of Way, allowing members of public the opportunity to access and explore the countryside- offering multiple benefits to both mental and physical well-being. A large proportion of the network crosses private land not managed by Newport City Council (NCC), however, both landowners and Highway Authorities have responsibilities to ensure these are kept open and accessible at all times.

Industrial and 'brownfield' land within this Landscape Character Area can provide a refuge for certain plants and animals. Many common species of birds and insects can benefit from ruderal and flowering plants which provide food, nectar and nesting and hibernating areas. Newport has a population of the Small Ranunculus moth, which until recently was thought to be extinct in Britain. The caterpillars of this moth feed on a fairly common plant called Prickly Lettuce, which grows on disturbed ground and the moth is now found in various locations around the city of Newport. The nationally scarce goat moth is also present. This includes the Newport docks area.

Public green spaces are generally owned and managed by the local authority to provide recreational opportunities for play, sport, walking etc. These sites include parks, nature reserves, allotments etc. Many of these sites provide opportunities for members of the public to volunteer and assist with the maintenance tasks. Local Authorities also maintain and manage non-accessible green spaces (roundabouts etc.) that also provide ecosystem benefits.

Where resources allow, Local Authorities can implement policies and planning guidance to aid the future management of green spaces. For example, NCC is currently in the process of becoming a bee friendly city, which will drive management of all public green spaces for pollinators and biodiversity.

Local Authorities face many challenges which have put increasing pressure on the departments tasked with managing green spaces. With guidance, these departments can alter the management of these spaces in a way that is beneficial to wildlife (e.g. reduced cutting regimes), to encourage wildflowers and pollinators which can reduce the costs of managing them. To combat these challenges, parking charges have been introduced at a number of popular publicly accessible sites in Newport in order to generate income, that can be used to improve these green spaces for both people and wildlife.



The Newport LDP allocates Special Landscape Areas (landscapes that are unique, exceptional or distinctive to the local area), which were identified through the LANDMAP process (A Wales wide landscape quality assessment). They're not a specific management plan but do highlight landscapes that are considered worthy of protection. The LDP also identifies SINC's (Sites of Importance for Nature Conservation).

Other key land management roles include housing associations, private businesses and private residential properties. Management of housing association sites varies, some engage residents with green spaces on site. For example, Linc Cymru who have employed a biodiversity officer, the POBL group (Charter Housing) who support resident community gardening and Derwen Cymru housing who offer onsite growing space to residents at some of their sites. Newport City Homes are also involved in engaging residents with greening on some sites.

Private businesses and developers require more support/incentive to incorporate wellbeing through natural resource into their designs. This could be provided through changes to legislation and through the planning system. Currently this is generally not seen as a priority unless required by law.

What is driving the management of natural resources, and at what scale? Local/ national or global? Is there scope to change this?

Development pressure is driving land use on the periphery and in the centre of urban areas, particularly in Newport. Newport is undergoing a time of growth. This growth period is in part attributed to the closure of the Severn Bridge toll, improving connectivity between Newport and areas across the Severn Bridge. The current housing shortage across Britain is attributed to a rise in single person households, an increase in second homes and a rising population. In Newport 10350 new housing units were required in the 2011-26 LDP (p65 <https://www.newport.gov.uk/documents/Planning-Documents/LDP-2011-2026/LDP-Adopted-Plan-January-2015.pdf>

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Management is also driven by legislation. Within the Environment Act (Wales) 2016, the Section 6 duty requires all public authorities, when carrying out their functions in Wales, to seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "promote the resilience of ecosystems". In future, local authorities must have regard for the area statements when writing their LDP. Renewable energy pressures may also drive future management.

On a national scale, Welsh Government plans to increase woodland canopy cover in Wales, this will drive land management in some areas. NCC currently has an adopted Tree and Woodland policy (2012) and Supplementary Planning Guidance for Trees, Woodland, Hedgerows and Development sites (2017) for the management of trees within the Local Authority area. All trees in Council owned land are treated "as if" protected under a Tree Protection Order and felling is not authorised unless dead/dying or dangerous. Where a tree is required to be felled by a utility company in order for them to carry out statutory works NCC operates a 2 for 1 policy for like for like replacements.

Management of agricultural land is likely to change with the new Basic Payment Scheme coming into effect in 2021. These Welsh Government changes are intended to encourage management of agricultural land to create environmental benefits, e.g. through afforestation.

The Future Generations Commissioner has recently released 'A journey to a Resilient Wales' as part of the Art of the Possible programme, which encourages management for resilience. The Newport PSB has identified Green and



Safe spaces as a priority within the Newport Wellbeing Plan. This is affecting management on a local scale. [Resilient-Wales-Topic-4.pdf \(futuregenerations.wales\)](#); [Local Wellbeing Plan \(newport.gov.uk\)](#)

What do we need our natural resources to deliver for us and for future generations? What and where are the risks to Wellbeing (including biodiversity and resilience of ecosystems)?

By 2050, 90% of people in the UK are predicted to live in the urban environment (*World urbanisation Prospects, 2018*). Adequate green space provision and strategic planning for resilience are priorities in growing urban areas such as Newport. Accessible green space is vital for wellbeing, with direct links to physical and mental health. This is represented in the wellbeing plans, for example through the Green and Safe intervention of the Newport Wellbeing Plan. Natural resources provide connection with nature, recreation, social spaces, physical exercise and more.

Looking ahead to the future, climate predictions suggest environmental change. This comes with an increased risk of flooding due to sea level rise and more intense rainfall, an increase in extreme climate events, and more erratic seasonal weather. Our natural resources can provide resilience and stability in these conditions. Such as drainage, mitigating for the urban heat island effect, carbon sequestration, reduction of air pollution (through trapping particulate matter), oxygen production etc. The resilience of this profile area to climate change has not been formally investigated.

Legislation enforcing SuDs came into effect in January 2019, however developments created prior to this may lack resilience to surface runoff flooding during severe conditions. The development advice maps contained in Technical Advice Note 15: Development and Flood Risk ([TAN15 Text English.qxp \(gov.wales\)](#)), indicate areas at risk of flooding and where appropriate, it is necessary for developers undertake a Flood Consequence Assessment as part of the planning application process. NRW are consulted on these and advise the local planning authority accordingly on whether the flood risk associated with the proposed development is acceptable and can be managed. NRW is responsible for several major flood management schemes, however some areas are still at risk.

Biodiversity is essential for long term health of the habitats within this profile, as low diversity makes species especially vulnerable to disease, extreme weather etc. As climates change, connectivity will become even more important to allow species to move with their ecological niches.

This Landscape Profile area would have been affected by the construction of the M4 relief road, plans for which have now been cancelled. An alternative sustainable, low carbon transport scheme is required as an alternative, there is potential for significant investment in alternative sustainable solutions to congestion issues around Newport. Renewable energy provision will become increasingly important.

Due to political and environmental uncertainty, food production may need to become more localised. Due to high density populations in urban areas, viability of land for food production within this landscape profile may also be important. This could be through agricultural land or community-based such as community orchards/ allotments etc. Community gardening and growing spaces have a multitude of other benefits, such as improving community cohesion and reducing isolation. The panel recommends promoting biodiversity in private gardens. Private gardens account for a significant proportion of land and can act as important corridors for wildlife. Reversing the trend for decking/ paving gardens and using plastic vegetation, then promoting planting for pollinators and avoiding pesticides could have a significant effect on wildlife.



What needs to change to deliver more sustainable management or use? What and where are the opportunities to do that? Whose resources are involved? Who needs to be involved? Which management systems need to change?

This Landscape Profile contains a high proportion of urban habitat, and expansion of this land use type is predicted, particularly in Newport. Past development guidance and governance was not suitably focused to ensure a sustainable and resilient urban system. A new edition of Planning Policy Wales was published at the end of 2018 with a complete refresh of its structure and content. Its focus is very much on the Wellbeing of Future Generations and Well-being Act and the drivers of sustainable development. It is essential that the city and its hinterland is designed with inbuilt resilience. More innovative and sustainable design is central to future sustainable management. More legislative weight is required to achieve this, for example, better governance is required to direct and enforce green space provision within new developments. This has proved effective for interventions such as SuDs, which improve the resilience of the urban system.

One of the key resources involved in this work will be strong partnership working between local authority, Welsh Government, NRW, NGOs etc. Due to challenges, many departments in the public sector are experiencing cut backs and reduction in capacity. Currently there is a disconnect between the different elements that contribute towards management of this Landscape Profile area. A systems change is required to better integrate the different components of the urban system, e.gi, between sustainable travel design (vital for reducing carbon and improving resilience), development, planning, regeneration and ecological expertise. A culture shift is required within these key partners to recognise the importance of integrating naturalness not as a tokenistic gesture, but as a vital design feature for a healthy and resilient urban system. The Wellbeing of Future Generations Act, and the local authority wellbeing plans offer an opportunity to achieve this.

There is a potential opportunity for the better management of PROWs within the Landscape Profile through increasing the extent to which these are considered within the existing agri-environment subsidy schemes, including the Basic Payment Scheme. Such changes could lead to Local Authorities and private landowners working together to achieve higher levels of quality and accessibility.

There may also be opportunities to combine active travel routes with corridors to improve connectivity and therefore resilience of the Newport ecosystem. Green Infrastructure Assessments, as required in Planning Policy Wales 10, will provide the evidence needed for strategic planning.

How do we change it? Do we know yet? Are others doing it? How do we provide information for others in the right format? What are we going to do next?

Welsh Government provides support to local authorities by providing the governance to encourage sustainable development. This has been proven to be effective through the introduction of SuDs legislation in 2019. Similar and ambitious governance is required for other aspects of urban resilience, such as green space provision and connectivity. Better management of urban green spaces may also be supported by the WG-required Green Infrastructure Assessments (an evidence base of green infrastructure), if used effectively. Guidance relating to the production of such assessments is currently unavailable, so it is unclear whether they are to include key aspects such as extent of green infrastructure, condition, connectivity and diversity. This baseline understanding of 'what we've got' is essential before moving forward to next steps.



Partnership working, and a joined-up approach to planning is essential for these management changes to occur.

How do we monitor the impact we are having on natural resources and wellbeing so that we know whether our interventions are working? What have we learnt throughout this process?

Measuring human impact on natural resources requires baseline evidence, in the case of urban systems, this baseline evidence is currently incomplete. The Green Infrastructure Assessments could provide this, if comprehensive. Monitoring impact is almost certain to have significant cost implications.

Measuring wellbeing impacts is challenging, and this is highlighted through the LA wellbeing plans, where performance indicators have only recently been determined. Metrics such as green space provision, distance of local green space, air quality, perceived happiness, etc. are available. However, bringing this information together into a reliable format will be time consuming and costly. It is not yet clear how this is to be monitored.

Landscape Panel Priorities and Recommendations

Connectivity- Habitat connectivity (see Figure 2) should be maintained and enhanced, building ecosystem resilience. Due to the lack of habitat connectivity data for urban areas, Green Infrastructure Assessments will play an important role in identifying connectivity opportunities.

Opportunities- Using the existing evidence, and evidence provided in the future Green Infrastructure Assessment, identify opportunities to build resilience. The panel does not feel we currently have sufficient evidence to identify these areas. We recommend working alongside other urban areas for a joined up approach, e.g. Cardiff, Swansea and Newport. Latham and Rothwell 2018 provide a good mechanism for identifying opportunities/ hot spot areas / areas specifically at risk. Areas that would provide multiple benefits should be prioritised. An example of this would be a community orchard that was located to improve the connectivity of a near-by woodland, that was also along an active travel route to a neighbouring school, located on a high-risk flood area. In terms of connectivity, the Panel considers the River Usk and generally, all water courses as key wildlife corridors.

Management plans- Further investigation is required to understand whether all areas within the Landscape Profile have management plans. Management plans should consider nearby sites, not just those adjacent. When writing a management plan, consider the management plans of surrounding areas. When updating management plans, look at connectivity mapping.

Wellbeing provision- Green space provision disproportionality benefits the health and wellbeing of low socio-economic groups. Therefore, these areas need to be prioritised for provision.

Planning- It is important that when any standards/targets are set that there is an achievable process in place to monitor the base data. The Green Infrastructure Assessment will be a key piece of evidence for the LDP Review.

Connectivity is more likely to be achieved through mitigation measures, which can be clarified through Supplementary Planning Guidance (SPG) like NCCs Wildlife and Development adopted SPG. To date not much ecological compensation will be achieved through S106 agreements.



Concerns- The panel has concerns about inconsistencies between different Landscape Profiles, the scale of the evidence (not localised enough for site specific use e.g in LDP) and gaps in the expertise on the panel (for example no county ecologist). Due to time and resource limitations, this profile principally consists of generic information likely to be common to other profiles. It contains little specific evidence and site related recommendations that could inform specific decision making in the profile area. Should these generic policy and planning measures and other themes common to all the profiles have been set within a standard format prior to the process, it is likely that this panel would have been able to concentrate on the profile area specific details.

Evidence- maps

Maps are based on OS data and NRW data (Jim Latham connectivity work maps from 2012, same as have been used in the wellbeing plan).

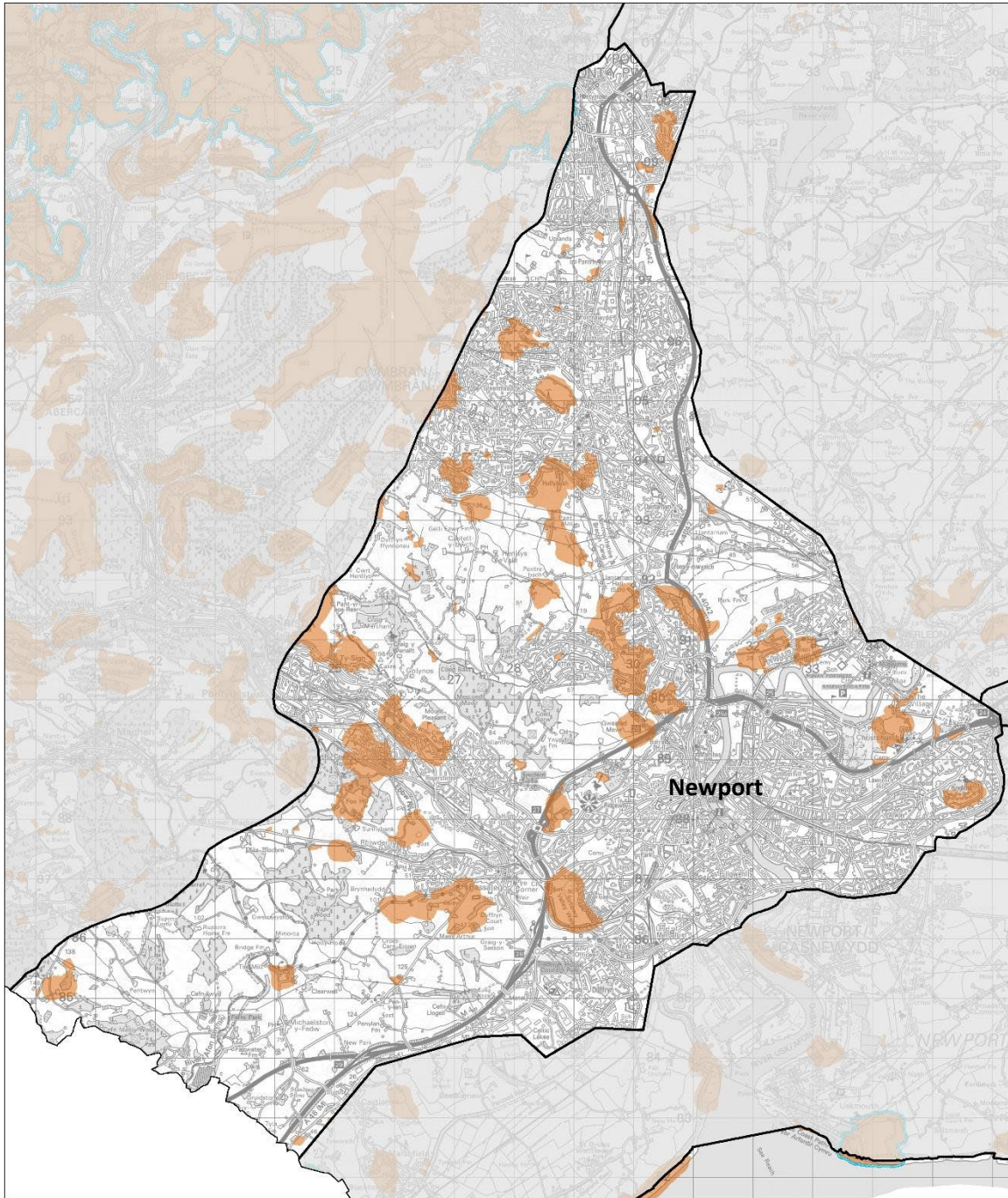
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Challenges of mainstreaming green infrastructure in built environment professions. Adriana A. Zuniga-Teran, Chad Staddon , Laura de Vito , Andrea K. Gerlak , Sarah Ward , Yolandi Schoeman, Received 20 May 2018, Accepted 05 Apr 2019, Published online: 12 Jun 2019

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SE Area Statement - Casnewydd Caerdydd ac y Barri - Newport Cardiff and Barry
 Combined Grassland Connectivity Mapping

 Priority Grassland Networks

 Combined Grassland Network

 **Cyfoeth Naturiol Cymru**
Natural Resources Wales



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Figure 4; Combined Grassland Connectivity



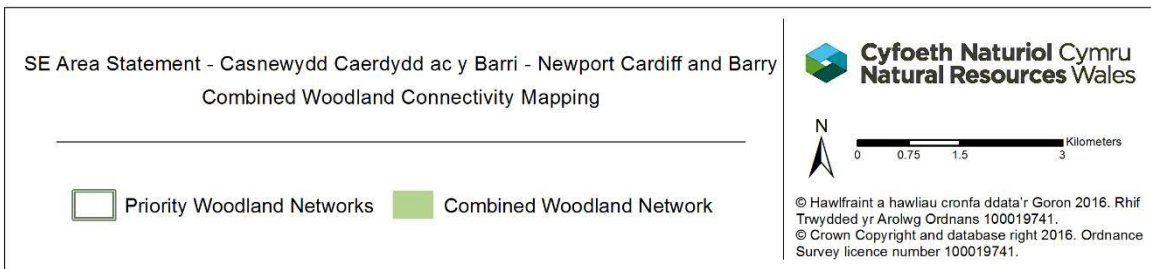
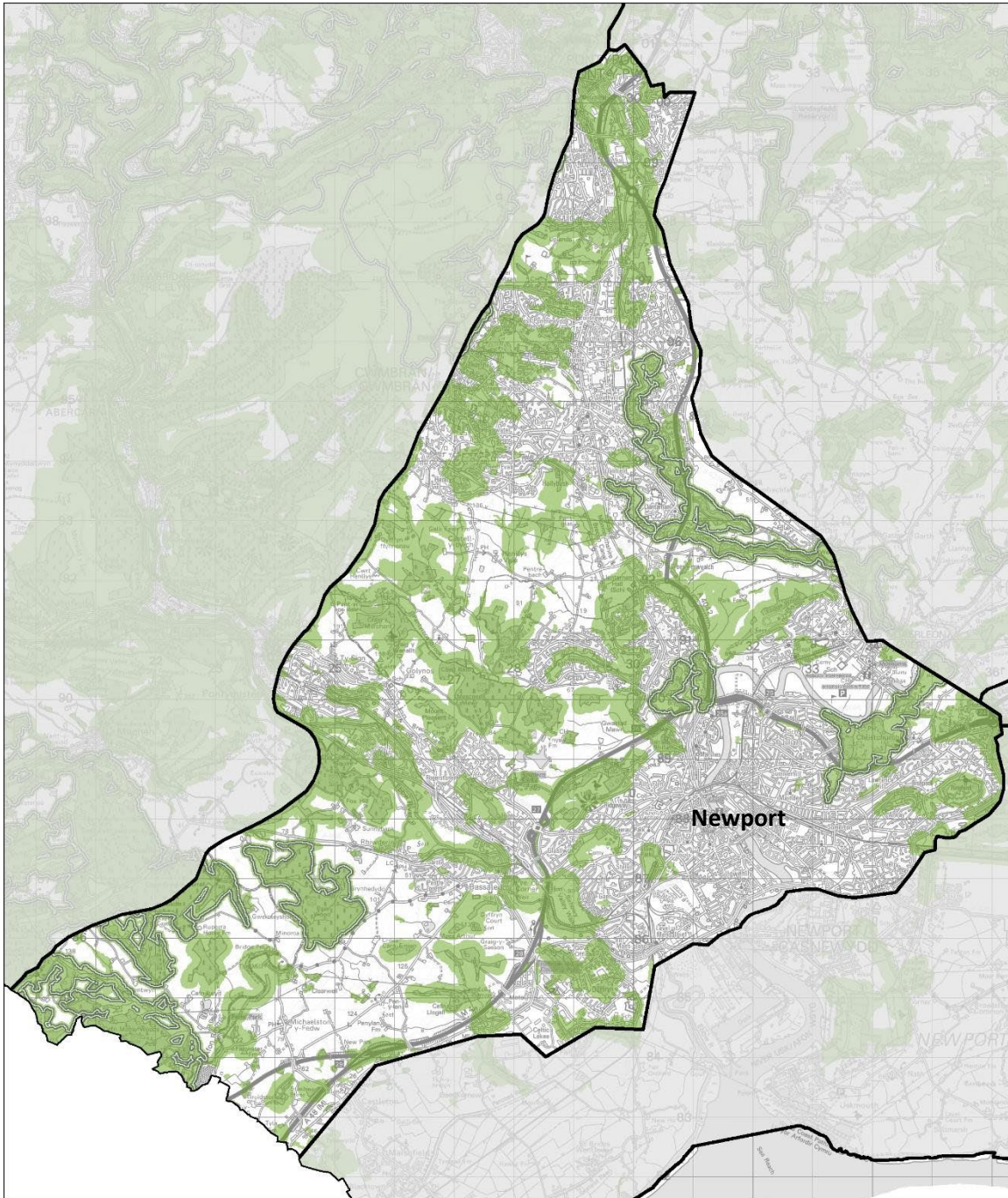


Figure 5; Combined Woodland Network

