A Map for Wales

Part One:

Spatial Expressions of Government

Policies and Programmes

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EXECUTIVE SUMMARY

As a result of the success of the Map for England project RTPI Cymru commissioned Map for Wales to analyse Welsh Government (WG) policy and map spatial themes representing policy approach and cross-sector connectivity. No such project had been undertaken for Wales previously but RTPI Cymru were keen to establish if the findings of the Map for England project would be mirrored in Wales.

The project, based on a similar methodology as the Map for England project, appraised over 150 documents and found only 37% contained maps, although 47% did consider the spatial implications of the policy. When broken down into the three categories (environmental, economic and social) the variation in findings was significant with only 5% of social policies referring to spatial issues compared to 50% and 75% for environmental and economic topic areas respectively.

The important role spatial planning and spatial considerations have in policy making appears to be recognised by the WG, however the project found that in some cases it was not always applied to policy development. Where this approach was employed the vocabulary and use of language varied between policies and mapping was predominantly of existing data rather than illustrating a predictive policy approach. The Wales Spatial Plan (WSP) is frequently referred to and encourages cross sector working although the implementation of this is limited by authorities' boundaries and the underpinning concepts of the policies.

Map for Wales only considered policy at the national level and found that the onus was on Local Authorities to implement the spatial aspect. WG guidance on this is limited but documents such as the WSP, Planning Policy Wales 5 and Wales Infrastructure Investment Plan were produced to act as a framework for decision makers. The remit of the project did not extend to analyse whether authorities were applying a spatial approach at a local level or how successful the WG strategic documents were in guiding policy but the report highlights the need for this to be considered further.

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INTRODUCTION

In March 2012 the RTPI published 'A Map for England' a study into the Spatial Expression of Government Policies and Programmes in England. The study followed up from previous reports in 2000 and 2006, examining spatial structure, the connectivity and integration of areas and the need for a "fully integrated national spatial planning framework for the UK" (Wong et al. 2012 p.6). The report set out to appraise Government policies and map those with explicit spatial expressions thus identifying patterns of spatial synergies and conflicts. The aim of the report was to bring together the findings of the two previous reports and use mapping to examine the interplay "between policy needs and spatial contexts" (Wong et al. 2012 p.6).

The Map for England had four main components:

- *"To appraise government policies and programmes (including government departments and their agencies and Non Departmental Public Bodies (NDPBs)) with an explicit spatial expression and/or spatial consequences.*
- *To perform thematic mapping, based on the economic, social and environmental priorities set out in National Planning Policy Framework (NPPF), of government policies and programmes that have an explicit spatial expression and/or consequences.*
- *To identify patterns of spatial synergies and conflicts arising from existing government policies and programmes and to present these spatial synergies and conflicts into 'diagrammatic mapping'.*
- *To highlight key issues and further research work required to fully address the need of providing a spatial framework to support the development of NPPF and the delivery of the Localism Act"*

(Wong et al. 2012. p.7-8).

The objective of the Map for England to map policies and programmes was undertaken to inform spatial planning discussions and encourage the debate of planning issues and priorities. The successful achievement of this objective is recognised by the reference to the findings of the project in the Growth and Infrastructure Public Bill Committee by both the Skills Minister Michael Fallon MP and Shadow Planning Minister Dr Roberta Blackman-Woods MP and the interview with the RTPI Chief Executive Trudi Elliott, aired on the BBC's consumer affairs programme You and Yours about the Project.

As a result of the success of the Map for England and because no such undertaking had been carried out for Wales RTPI Cymru commissioned Map for Wales to appraise Welsh Government policies and plans as a research project. RTPI Cymru were keen to establish if the findings of the Map for England project would be mirrored in Wales and if not, why. The report, produced by a research team of five MSc students from Cardiff University in

consultation with RTPI Cymru, set out to analyse Welsh Government policy and map spatial themes representing policy approach and cross-sector connectivity.

Map for Wales broadly followed the same approach and methodology as the Map for England project however the objectives differed slightly. Whereas the Map for England brought together the findings of previous reports, where the structure of a national spatial planning framework was examined, due to the existence of the Wales Spatial Plan this aspect was not relevant. The influence of the Wales Spatial Plan on the direction of Welsh Government policy, since its publication, is pertinent though and has been considered within the report.

The Map for Wales also sought to differentiate strong and weak examples of spatial planning in policy documents demonstrated either through traditional representational form or expressive terminology. This was developed by mapping of the implied policy direction to demonstrate how the spatial aspects may have more clearly been represented. Mapping was also used to demonstrate areas of spatial conflict and highlight examples where the direction of policies clearly deviated between Government departments.

The Map for Wales report identified areas requiring additional research and these have been highlighted as an agenda for future research to aid the further development of spatial planning in Wales.

The Map for Wales also sought to bring together all Welsh Government policy maps in one place as a reference for policy makers and future work. This has been presented as a discrete document, as such the report is broken into two sections Part 1: Map for Wales, and Part 2: Map for Wales: Welsh Government Policy Atlas.

OBJECTIVES

The objective for RTPI Cymru was the production of a report similar to the Map for England but looking at Wales only. The project was to examine and critically discuss government policy with strong spatial implications using a methodology similar to that followed by the Map for England team. RTPI Cymru were also interested in evaluating whether the findings for England also applied to Wales.

From the brief the Map for Wales project developed the following objectives;

- To critically analyse the spatial content of Welsh Government plans and policies, identify spatial expressions and interpret the synergies and conflicts between Government departments.

- To map strategically strong spatial expressions and visualise mapped examples of policy direction to demonstrate the spatial implications in a representational form.

- To provide a Welsh Government Policy Atlas to encourage and inform spatial planning at the strategic level.

LITERATURE REVIEW

Introduction

The creation of a National Assembly for Wales in 1999 and the newly devolved powers assigned to it resulted in the publication of a vast number of policy documents from various departments within the newly formed government. With the re-emergence of spatial planning which was viewed as a vital mechanism for policy integration, the need for a national policy framework with a spatial dimension became increasingly important.   The publication of the Wales Spatial Plan in 2004, which was later revised in 2008, was an early attempt to produce a spatial document which would inform various policy sectors on spatial matters such as transport, the economy, and the environment, and advise them on how they might relate in order to deliver fully integrated policies for the benefit of Wales. However, the high level nature of the document and its lack of specific instructions made its implementation difficult and it failed to fully integrate into the planning system in Wales. Consequently, there is still no single up-to-date document in Wales that brings together policies with spatial expressions in them.   This project aims to identify policy documents published by the Wales Government which contain spatial expressions. The project will identify spatial tensions and synergies that are created and consider the role of spatial planning and the Wales Spatial Plan on this.

The literature review is designed to enable consideration of the need for a Map for Wales. Firstly, it attempts to define the term 'Spatial Planning' and considers why proponents support the idea and its use within planning and policy making at a wider level. In this context the history of spatial planning is considered and its relationship with the wider public agenda. The European Spatial Development Perspective (ESPD) is discussed as it is considered that the influence of this document is the influence behind much of the spatial planning policy in the UK, during the first decade of the twenty-first Century. The literature review moves onto examine three of the planning systems within the United Kingdom (Wales, Scotland and England) to assess how spatial planning is acknowledged within them. By considering not just the theory and the application but also the social climate in which it relates it may help to understand the context in which the Welsh Government policy documents have been written. The Map for England report is then discussed. The literature review does not consider the policies that have been appraised by the team as this is the main section of the project.

Definition of Spatial Planning

A single definition of spatial planning is not easily found. The literature tends to describe what spatial planning is about, what it does and what it does not do but offers no single definition. The Natural England website suggests that:

"Spatial planning brings together and integrates policies for the development and use of land with other policies and programmes which influence the nature of places and how they function." (Natural England 2012)

Spatial planning can be described as the over-arching policy that joins together cross-sectoral policies in space to enable a coordinated approach to development. It is an ideal that is championed much in academia for its logic and ability to offer certainty to stakeholders (i.e. the business community, house developers and local communities) because in theory it enables contradictory issues and conflicting priorities to be addressed and ironed out at the policy writing stage. However, the reality appears to not always be so straight-forward.

"Spatial planning is about setting frameworks and principles to guide location of development and physical infrastructure" (Healey, P 1997a p.4). Proponents of spatial planning argue its case for a number of reasons. Firstly spatial planning is thought to bring stakeholders together by involving them in the discussions of policy and principle before any specific development is discussed (Healey, P. 1997b). By giving people a voice early in the decision-making process issues should be resolved before any formal application is made. Secondly, by bringing people together earlier it also helps with ownership of projects and development is more likely to be achieved (Healey, P. 1997b). Thirdly, it is considered beneficial in addressing contradictory policies at an early stage (Vigar et al 2000) and so making the development process clearer.

The idea of spatial planning is not new; it was strong in many European countries, including the United Kingdom (UK), in the 1960's but generally lapsed during the 1980's only to see a resurgence in the late 1990's and the early part of the twenty-first century. This resurgence is down to a number of factors; the creation of the European Spatial Development Perspective (ESDP); the influence of European development funds area allocation models; the increase of society's voice in decision-making and the added weight given to environmental concerns (Healey, P. 1997b; Harris & Hooper 2004; Nadin 2007; Haughton et al 2010.) Collaborative planning seems to be associated with the process of spatial planning in literature (Healey 1997b p.31 and Fainstein & Campbell 2012 p.157).

The resurgence in spatial planning in the UK and Europe is to a certain extent linked to the increasing political pressure of the environmental lobby and the recognition that the planning system can help to implement the aims of sustainable development (Tewdr-Jones 1996; Vigor et al. 2000; Harris & Hooper 2004; Haughton et al 2010). The rise in environmental politics began to occur in the late 1980's and accelerated in the 1990's. The change of government in the UK in the May 1997 saw a greater political will to bring about greater cross-sectoral coordination (Vigor et al. 2000 p. 271). This political rhetoric was given greater strength when the government brought about devolution resulting in greater autonomy in decision-making for Welsh, Scottish and Northern Irish governments. This increased the emphasis on the politics of place and highlighted the spatial nature of government policies and how regional development plans would enable different physical areas to realise place-focused politics while linking strategically to the UK as a whole (Vigor et al. 2000). There were however flaws in the system. Central government lobby groups retained more influence than local groups on decision makers (Healey, P. 1997a).

The European Spatial Development Perspective

Against the backdrop of changes in the social, economic and political environment the European Union tried to further enhance cohesion with the creation of the European Spatial Development Perspective (ESDP). The European Spatial Development Perspective subtitled 'Towards Balanced and Sustainable Development of the Territory of the EU' is a two part document aimed at encouraging greater co-operation between member states on spatial matters. The document was the result of a six year process during which intensive discussion took place between representatives of the (then) 15 member states. To satisfy the conflicting concerns of all the participants involved, compromises were made to the document's content which has led to some commentators describing it as a 'paper tiger'.

The compromises made by the participating nations are most obvious in the cartographic representations of Europe included in the final version of the ESDP and in particular the absence of any policy maps. "Although the absence of policy maps makes the ESDP a curious spatial policy document, the reasons for this are clear. To represent areas on maps as the 'core' the 'periphery', 'developed', 'underdeveloped', or whatever attribute one might wish to give them could be perceived as stigmatising those concerned. The mapping of future global economic zones would be considered controversial and may affect any excluded regions" Faludi and Waterhout (2002, P155). They also argue that to represent a spatial vision at the scale of Europe was not feasible and that verbal expressions of policy are all that could be aimed for.

Tewdwr-Jones (2006) observed that commentators such as Williams (2000) have noted that the ESDP represented a major step forward in European spatial planning and is a document to assist national, regional and strategic policy-makers in each of the member states, even though it is a product of close collaboration between the various national government departments responsible for planning. Spatial planning associated with the ESDP has stimulated fresh thinking around the promotion of regional competitiveness, territorial cohesion and sustainability and places considerable emphasis on co-operation and co-ordination (Faludi & Waterhout 2002 p.77).

The emergence of the ESDP, and the change of government in the UK in May 1997 saw a greater political will to bring about greater cross-sectoral coordination (Vigor et al. 2000 p. 271). This political rhetoric was given greater strength when the government brought about devolution resulting in greater autonomy in decision-making for Welsh, Scottish and Northern Irish governments. This increased emphasis on the politics of place highlighted the spatial nature of government policies and how regional development plans would enable different physical areas to realise place-focused politics while linking strategically to the UK as a whole (Vigor et al. 2000). The result was the creation of separate development plans for the newly devolved countries.

The Wales Spatial Plan and the Welsh Planning System

Wales was one of the first countries to initiate the development of its own spatial plan.   The Wales Spatial Plan (WSP) entitled 'People, Places, Future' was first adopted by the National Assembly for Wales in 2004 and later revised in 2008. The WSP is an example of an objective led spatial planning document with its contents based around a vision which is supported by a series of five guiding themes. The plan is presented at an all Wales level and identifies six areas containing international and inter-regional hubs and a network of towns and cities.   Each of the identified six areas has a particular vision to guide future collaboration, together with an overall strategy, a series of propositions and a set of actions aimed at local and national levels. A feature of the main policy map is the fuzzy boundaries used to divide the geographical area of Wales into the six sub-regions. Each area has no defined borders and differ to existing local authority administrative boundaries. According to the author 'this enables partners to work together on common issues in a flexible way, and some may be involved in more than one spatial area group'. (Welsh Government. 2006. p.20)

However, the six areas created in the WSP were for many a contentious issue as they represented entirely new spaces for planning policy (Harris & Hooper. 2004 p. 145). Part of the concern was how the areas were chosen and how the unifying characteristics were selected, while the fuzzy boundaries also left some people confused about which localities belonged in what area. By dividing Wales into six different functional areas, the WSP does acknowledge the different roles, functions and meanings attached to different parts of Wales. This supports one of the policy documents key points of respecting distinctiveness. However, by promoting local distinctiveness the document fails to create a sense of national identity despite its emphasis on establishing 'a cohesive identity that sustains and celebrates what is distinctive about Wales' (Welsh Government. 2008. p. 34). Another contentious issue is how the document deals with issues around the welsh language which remain underdeveloped. Consideration of the Welsh language appears as a key issue in only one of the area visions – the north-west.
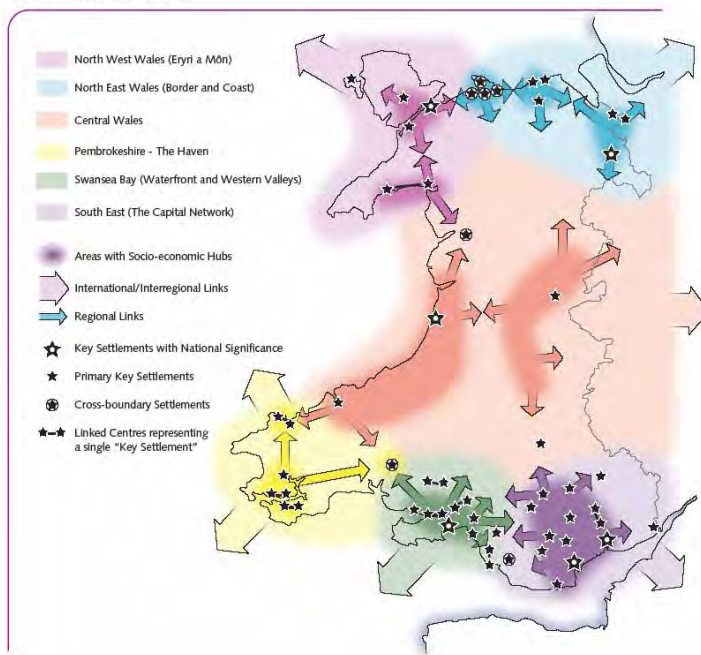

Figure 1 – Map showing the spatial policy for Wales and the fuzzy boundaries used to divide Wales into its six regions (Source: Welsh Government. 2008. p. 28)

In a spatial context the WSP places an emphasis on Wales' position in relation to other regions in the UK and Ireland. The document places particular importance on Wales' economic relationships and transport links with Ireland and neighbouring English regions. Despite the importance placed on Wales position in the UK and Ireland an obvious omission

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in the document is the lack of any maps positioning Wales in the context of the UK and Ireland and beyond into the context of the European Union and worldwide. According to Harris and Hooper this means that the WSP fails to articulate how Wales operates within a wider European or Global context. (Harris and Hooper 2004 p. 141)

The Planning and Compulsory Purchase Act (2004) resulted in changes to the Welsh planning system. The Act requires all unitary authorities to create a Local Development Plan (LDP). In creating the LDPs local authorities are expected to collaborate with neighbouring local authorities where relevant (Welsh Government. 2012. p. 19). In reality the extent of this collaboration appears limited and often creates more cross-border tensions than synergies in terms of land-use allocation and housing requirements. For example the creation of out-of-town retail shopping areas in one local authority that due to their location will draw visitors away from another local authorities main town or city centre retail district. The Welsh Government has its own National Level land use planning policies set out in the document Planning Policy Wales (PPW). The most recent Edition was released in November 2012 (PPW5). Much like the National Planning Policy Framework in England it acknowledges spatial considerations with different policies for Conservation Areas and Coastal Areas, for example, yet it does not map where any of these areas are. The PPW5 policies are supplemented by Technical Advice Notes (TANs) from the Welsh Government. The TANs offer guidance on a range of land-use planning subjects from Design and Access Statements to Flooding. The only two TANs that have policy maps included are TAN8: Renewable Energy and TAN15: Flooding. In addition to TANs there are circulars and policy clarification letters. Together with PPW these documents are land-use planning policy for the Welsh Government. PPW5 states, "National planning policy and the Wales Spatial Plan should be taken into account in the preparation of development plans" (Welsh Government 2012 p.9).The role of the WSP in National planning policy is still unclear. It has been argued (Harris et al. 2006 p.102) that the high level nature of the document falls short of outlining many specific actions, its contents is underdeveloped for many expectations and its provisions with respect to implementation is also limited. According to Harris (2006 p.99) one of the most remarkable aspects of the WSP is how it developed from being a primarily land use planning document into a cross cutting, corporate policy instrument of the Assembly. The extent to which this remains the case will be a consideration of the Map for Wales team.

Scotland – The National Planning Framework

In June 2002 Scottish ministers announced that the Scottish Executive would prepare a national spatial strategy that was to be known as the National Planning Framework. One of the influences pointing the Scottish Executive towards the preparation of a national spatial strategy was the European Spatial Perspective (ESDP). The role of the National Planning Framework (NPF) in relation to the ESDP was seen as one of addressing the implications of Scotland's geographical position in Europe and the opportunities and challenges which were presented within the context of devolved government, European enlargement and the global economy (Haughton et al. 2010. p. 114). The document was to be a key element to a wider package of reforms to modernise the Scottish planning system by increasing community involvement in planning and speed up planning applications.

The updated version of the NPF, the NPF2 was published on June 25 2009 and sets the spatial strategy for Scotland's development to 2030. The status of the NPF changed as a result of the Planning Act 2006 which makes the NPF2 a statutory document and requires it to identify priorities for the long term spatial development of Scotland. The difference between the two NPF's is that NPF2 is intended to be far more specific about implementation (Morphet, J. 2010. p.221). Like the NPF1 it maintains a strong economic focus and recognises that it works within the framework of the ESDP. It addresses the criticisms that NPF1 didn't provide a framework to move from plan preparation to deliver by concentrating more on delivery including improved co-ordination with major infrastructure providers. According to the author the NPF2 is a means through which the spatial consequences of policies for economic development, climate change, transport, energy, housing and regeneration, waste management, water and drainage, catchment management and the protection of the management can be considered (Scottish Government. 2009).

The NPF2 identifies priorities and opportunities for different parts of Scotland in spatial perspectives for the following spatial areas:

- The central belt including the cities of Edinburgh and Glasgow.
- The East Coast
- Highlands and islands
- Ayrshire and the South West
- South of Scotland

These spatial perspectives address planning issues of national importance that cut across city-region and local government boundaries to provide a context for land use planning by local authorities (Scottish Government. 2009. p.72). A feature of the policy document is its focus on the cities of Edinburgh, Glasgow, Aberdeen, and Dundee and their important role as drivers of economic activity across Scotland. The proposal that city regions should have their own strategic planning arrangements, which include a number of local authorities in the city region, was first identified in 2006. The city regions have their own Strategic Development Plans (SDPs) which bring together development planning and action planning. The role of the city regions and the SDPs that will accompany their key role was identified in the 2006 Planning Act. In their focus on the economy and greater co-operation with economic delivery agencies it was thought that these plans could provide a means of planning and delivering investment and infrastructure at this sub-regional scale. (Morphet 2010 pg. 222). Work has recently started on the third NPF (NPF3) with a series of stakeholder workshops being held in November 2012.

The Scottish planning system is generally thought of as a better example of a strategic planning system. "The [Scottish] National Planning Framework has been very well received….It has also won recognition as an example of good practice in spatial planning throughout the United Kingdom and internationally" (Purves, G. 2006. p. 121).

Planning System in England

The planning system in England has undergone (and is still undergoing) wholesale changes in the process of plan writing and levels of policy. The effects of the changes have not yet been analysed within the wider literature because they are too new, however comments in the British and American planning journals identify the move away from strategic planning. A British article noted, "…no-one in government is tasked with looking holistically at the full range of issues facing a particular [geographical] area." (Richard Blythe quoted in the article: Garlick, R 2012 p. 11) The Americans noted that, "this shift in policy [decentralisation, Localism, The Big Society] has had many victims, including the system of strategic planning." (Sayer, A. 2010 p. 17) The loss of strategic policy results in a loss of spatial planning policy, which is a retrograde step to all proponents of spatial planning that had gained ground through the 2004 Planning and Compulsory Purchase Act when the planning system in England moved to a more spatial coordinating approach (Haughton et al. 2010).

The current proposals in England are aimed at making the planning system less bureaucratic for industry and more inclusive to all at the lower levels of the system. The arguments today are the same as those stated in the 1980's (Tewdwr-Jones 1996 & Haughton et al. 2010). The changes show that many things, not just the economy (although it could be argued as a result of the economy) are cyclical. The end of the 1980's and the early 1990's saw many calling for greater regulation of the planning system as development was piecemeal and gaining only developers (Tewdwr-Jones 1996). The lack of clear spatial policy in current policy documents suggest the same issues may happen again.

The changes that are being undertaken within the planning system in England generally devolve spatial decision making down to a lower level. Whereas the 2004 Planning Act established the requirement for Regional Spatial Strategies and Regional Transport Strategies the 2011 Localism Act has abolished both document types. The Regional Spatial Strategies have been superseded by the National Planning Policy Framework (NPPF) and the Regional Transport Strategies have been superseded and included into a wider infrastructure development document, the National Infrastructure Investment Plan (NIP). With the Localism Acts removal of regional level policy making these two national documents (NPPF and NIP) feed directly into local authority plan making. In spatial planning this is considered a step backwards as the strategic priorities are now identified at a local level. Paragraph 172 of the NPPF does require local authorities to acknowledge that strategic priorities may be cross-border issues.

> *"Public bodies have a duty to cooperate on planning issues that cross administrative boundaries, particularly those which relate to the **strategic priorities** set out in paragraph 156. The Government expects joint working on areas of common interest to be diligently undertaken for the mutual benefit of neighbouring authorities."*

> Department of Communities and Local Government. 2012. p. 42

Lack of strategic regional co-ordination is, however likely to result in a more piecemeal approach to collaboration and policy development.

The replacement of Regional Transport Strategies with the National Infrastructure Plan (NIP) in 2011 again loses a strategic level of policy co-ordination. The NIP lists and identifies all major infrastructure projects currently underway or in the pipeline. This is across various

sectors including transport, telecommunications, flood defence and energy. The document itself does acknowledge the spatial implications of policies (with maps and text) but it does not acknowledge the cross-sector implications; each sector is analysed on its own. In theory the creation of a Plan that joins together infrastructure development across all sectors should help identify policy tensions and contradictions at an earlier stage. As the sectors are considered individually this opportunity is missed. The national level also means only nationally strategic infrastructure is considered. Local level priorities may be different, or not addressed again resulting in a loss of a more strategic regional approach as local authorities tend to pursue their own priorities.

The decision-making process for major infrastructure projects has also undergone change with the aim to fast-track decision making. Originally this was done through the Infrastructure Planning Commission and requirements were in place for extensive public consultation prior to submission of an application. Proponents of spatial planning also argue the bringing together of stakeholders early in the process or decision-making helps to make the application stage quicker (Healey, P. 1997b. p. 33). However, some major infrastructure projects have failed to even start because, "the pre-application process can take up to a year and is putting some developers off." (Geoghegan, J. 2012a. p. 7). The IPC has been decommissioned with the 2011 Localism Act and all major infrastructure applications are made directly to the Planning Inspectorate (PINS) who then refer it to the Secretary of State for a decision. There is currently another Bill (Growth & Infrastructure Bill) aimed at expanding the major infrastructure fast-track planning system to other major projects, such as science parks, big chemical works and storage and distribution centres, but with no national spatial strategy in place it is difficult for local authorities to even foresee such applications and factor them into their Local Plans.

Map for England: Spatial Expression Of Government Policies And Programmes

The Map for Wales project is based on the Map for England report, as discussed in the methodology. The extent to which Welsh government policies consider spatial implications is discussed in Chapter 4 of this report.

The Map for England report found policies had explicit spatial data expressed in map form and others had the data listed in tables and others even less obviously within text. The

results identified over 100 existing maps in policy that were not held together in one place. Tensions and contradictions in policy were identified, such as expected household growth areas in areas identified as having water supply shortages (Wong et al. 2012 p. 37) or potential conflicts in locations with high landscape value and high projected household growth (Wong et al 2012 p. 23 & map p. 24) The report acknowledged that both the NIP and another important government document (Growth of Cities) did recognise spatial implications of development and growth, but often only in passing, rather than looking at the details. The team identified many contradictions that mean planning has a key role to play to solve the issues, but this can only effectively be done at a regional or national level.

> *"While the government acknowledges that one size does not fit all and intends to devolve more power to local authorities to address their own local issues, this should not be confused with the need to coordinate activities and to provide spatially integrated guidance to local authorities to deliver policies."*
>
> (Wong et al. 2012. p. 42)

The analysis identified the proportion of London focused and further importance of London on many policies, along with other pockets of the country, such as Birmingham, Manchester and Leeds. The spatial implication of current policy is that the north-east would definitely be at a disadvantage in moving forward economically because it is not receiving as much infrastructure investment. Whether this is by design or accidental is unknown but does highlight the need for spatial analysis in order to clearly see implications of decisions.

> *"The analysis shows that any proposed programme of minor alterations will shift the comparative spatial advantages of places significantly. This is one reason why the Netherlands have a National Spatial Strategy to promote a policy reference framework to address key planning issues."*
>
> (Wong et al. 2012. p. 46)

The findings have been widely received and acknowledged by politicians; indeed two MPs referred to it during the debate of the Growth & Infrastructure Bill in Parliament at the end of November 2012. (RTPI. 2012).

Conclusions

As has been demonstrated in reviewing current literature it can be seen that there is a need, and a demand, for coordinated cross-sectoral policies. The success of these varies within the different planning systems and is much dependent on the will of the Government to provide specific guidance for development. The Scottish government has developed a strong spatial emphasis within its policy making. The Localism Act established by the English coalition government is, to an extent, undoing much of the work undertaken by the 2004 Planning and Compulsory Purchase Act. The result has been to take away the top-teir of strategic planning policy (the Regional Spatial Strategies) and replace them with a 'grass-routes' tier of neighbourhood plans. This will undoubtedly result in a loss of strategic spatial coordination. The Map for England team has identified some of these spatial tensions at the National level already. The Welsh planning system has not undergone such wholesale changes during either episode of English planning reform. The regional tier of land-use plans was not adopted in Wales. Instead Wales has had the constant of the WSP acting as a framework document for not just land-use planning policy but also wider policy making in general. The analysis of Welsh Government policy documents will enable the Map for Wales team to identify the extent to which the Welsh Government has achieved its aims of the WSP in terms of creating a unified Wales.

METHODOLOGY

The research project was commissioned by RTPI Cymru and undertaken by five part-time MSc Planning, Practice and Research students from Cardiff University. The brief outlined the requirements of the project and established that a similar methodology to the Map for England project should be followed.

The Map for England methodology was as follows:

- *"Conducting a scanning and appraisal exercise of government policies and programmes;*
- *Compiling a compendium of spatial maps of key government policies and programmes as well as their wider operational contexts and future prospects of development;*
- *Diagrammatic mapping of spatial synergies and conflicts of key planning issues; and*
- *Analysis and presentation of key research findings"*
  (Wong et al, 2012).

The methodology for the Map for Wales project followed the key tasks as listed above deviating only in the diagrammatic mapping, discussed below. The advantage the Map for Wales team had was a proven methodology, already established by the Map for England team. There were no identified disadvantages of developing a Wales specific project although the objectives differed and were specific to Map for Wales due to limitations, discussed later.

Scanning and Appraisal of Polices and Plans

The project applied only to Wales and the brief stipulated only Welsh Government policies were to be appraised so no Local Authority or other Statutory Organisations documents were included in the scanning exercise.

Three topic areas were used to categorise the policies; environmental, economic and social. This approach was applied to reduce the repetition of scanned documents and allow the team to work independently with a clear brief. This classification would further permit a

sectoral approach to the analysis, teasing out where obvious overlaps or conflicts were occurring.

The vocabulary of the policies was analysed as part of the appraisal, alongside visually represented information in the form of maps and data in tabular form. The language of the policies was another indication of how the spatial inference of the plan was being expressed and whether the document had any spatial implications. For example this may have been demonstrated via an insinuation that development would be encouraged more in the east or that infrastructure should be directed north. This 'spatial implication' in some cases may be the only expression of place or space in the policy but it was still an indication of policy direction and so relevant to the project.

The project also differentiated between maps depicting baseline data and predictive mapping. Maps produced from existing, verified data were referred to as baseline maps, which referenced information relevant to the policies. Maps illustrating the intended outcome or direction of policy or the spatial implication of the plan were classified as predictive maps. These were not necessarily based on figures but depicted a more vague suggestion of a situation.

The results of the policy appraisal were recorded using a proforma to audit the spatial implications and content of the policies. The proforma was developed to extract the required information to meet the project objectives and because the policy 'language' differed between the sectors searching for key words could not be relied upon. Several proforma's were drafted and worked through before the final version was agreed (Appendix 1). This method also ensured a consistent approach was undertaken by all team members in appraising the policy documents.

The results of the appraisal were collated into a spreadsheet to record which policies had a strong spatial aspect, whether this was in a mapped or tabular form and which inferred spatial implications but only communicated through the text (Appendix 2).

Policies were also identified that included;

- Clearly mapped policy implications, rather than baseline data
- The use of spatial terminology and vocabulary but no visual representation

- Maps, which could be improved by the team to demonstrate a stronger element of spatial planning

Compilation of a Policy Atlas

An objective of the Map for Wales project was to provide a Welsh Government Policy Atlas to encourage and inform spatial planning at the strategic level. The Atlas was compiled from all the maps in the policies appraised, categorised into Environmental, Economic and Social topic areas (see Part Two: Welsh Government Policy Atlas). An additional Strategic Policy section was added to cover the maps from the Wales Spatial Plan and the maps created by Map for Wales have been included for reference.

Diagrammatic mapping

Maps were produced using GIS and design software utilising baseline maps from Welsh Government policy documents, direct from the Welsh Government or developed as original maps using other sources of geospatial data.

Two approaches to mapping were undertaken to meet the project objectives. The first was to demonstrate how the spatial implications, conveyed in policy text, could appear if visually represented. Only those policies with enough information or explicit spatial articulation to adequately convey the point were considered for this exercise.

The second approach was to map spatial synergies and conflicts identified from the policy appraisal. Data was compiled from maps and tables from the Welsh Government policies and areas of interaction were overlayed to present an original diagrammatic 2D map.

Analysis and Presentation

A brief synopsis of key findings was recorded for each topic area. Specific information provided at this stage included:

- Headline findings
- Strong examples of spatially implicit policies and clearly mapped policy direction
- Examples where policies did not attempt or manage to achieve any elements of spatial planning
- Conclusions
- Topic specific future projects

Team discussions were held to examine the outcomes and along with the Literature Review, the Policy Atlas and the original maps, analysis of the spatial implications developed from here.
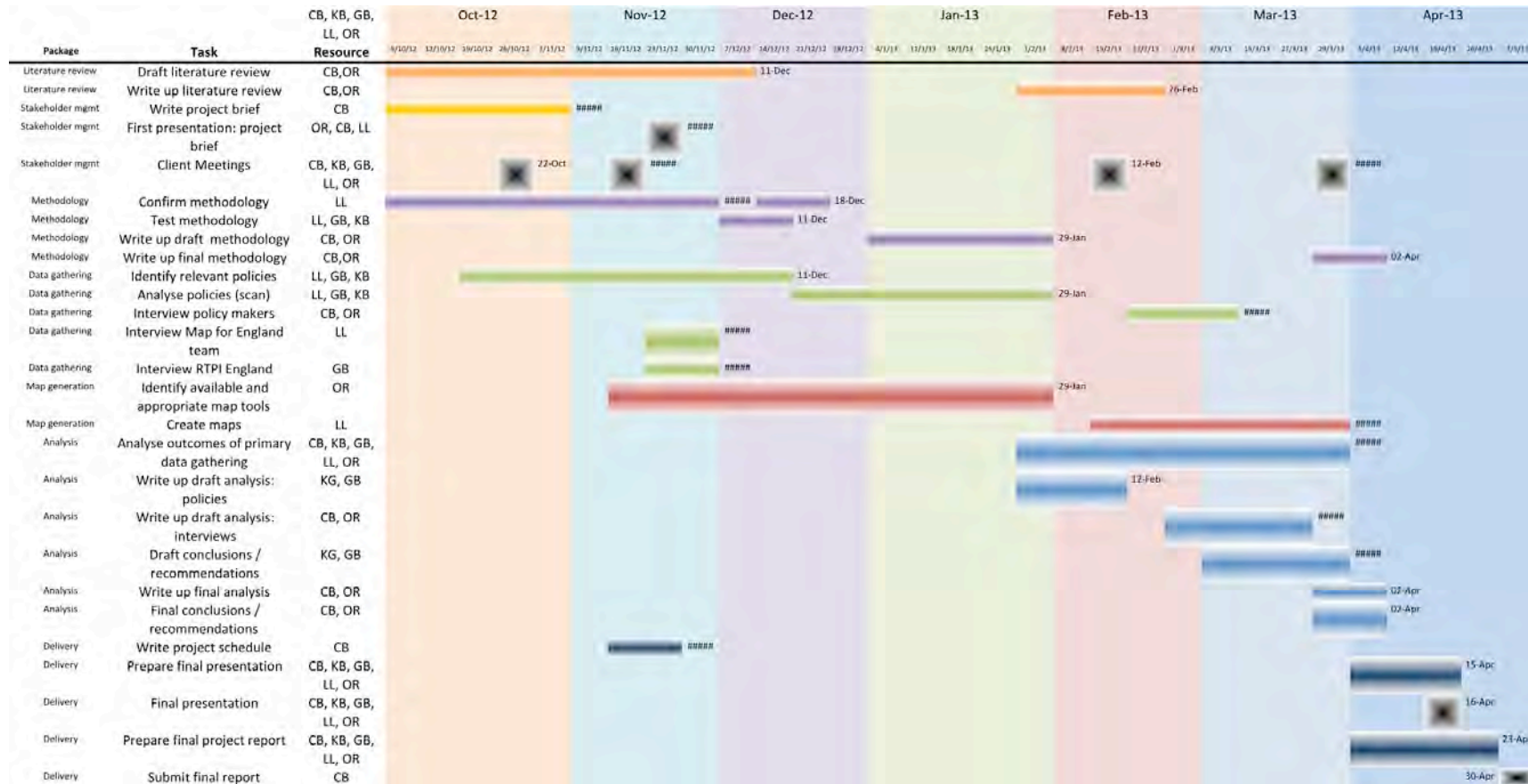
Limitations

Map for Wales was commissioned by the RTPI Cymru as an option in the Live Project module, project number 1213_2 (see Appendix 3 for the Project Brief), in the Planning, Practice and Research (PPR) MSc Course at Cardiff University. There was no financing behind the project and so it was developed to make use of existing and available resources.

As a result of the PPR course being part time the team only met for two hours one day a week during term time and so face-to-face discussions and debate was limited and email correspondence heavily relied upon. The Map for Wales project ran for 8 months, from September 2012 to April 2013 and throughout all members of the Map for Wales team worked full time. To alleviate the pressures of distance working under a strict timeframe a Team Leader was assigned who directed the project and delegated the workload, which was allocated based on the individual's strengths and abilities. A timetable (Figure 2) was drawn up and each week the team had a clear brief with deadlines for draft reports, presentations and meetings with the clients.

Access to software and maps was limited and although in some cases the information was available the resources or aptitude within the team was not and so the outcome may have differed as a result.

Figure 2: Map for Wales Project Timetable

Package	Task	CB, KB, GB, LL, OR Resource	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13
Literature review	Draft literature review	CB,OR			11-Dec				
Literature review	Write up literature review	CB,OR						26-Feb	
Stakeholder mgmt	Write project brief	CB	#####						
Stakeholder mgmt	First presentation: project brief	OR, CB, LL		#####					
Stakeholder mgmt	Client Meetings	CB, KB, GB, LL, OR	22-Oct	#####			12-Feb		#####
Methodology	Confirm methodology	LL			##### 18-Dec				
Methodology	Test methodology	LL, GB, KB			11-Dec				
Methodology	Write up draft methodology	CB, OR				29-Jan			
Methodology	Write up final methodology	CB,OR							02-Apr
Data gathering	Identify relevant policies	LL, GB, KB			11-Dec				
Data gathering	Analyse policies (scan)	LL, GB, KB				29-Jan			
Data gathering	Interview policy makers	CB, OR						#####	
Data gathering	Interview Map for England team	LL		#####					
Data gathering	Interview RTPI England	GB		#####					
Map generation	Identify available and appropriate map tools	OR				29-Jan			
Map generation	Create maps	LL					#####		#####
Analysis	Analyse outcomes of primary data gathering	CB, KB, GB, LL, OR						#####	
Analysis	Write up draft analysis: policies	KG, GB					12-Feb		
Analysis	Write up draft analysis: interviews	CB, OR						#####	
Analysis	Draft conclusions / recommendations	KG, GB						#####	
Analysis	Write up final analysis	CB, OR							02-Apr
Analysis	Final conclusions / recommendations	CB, OR							02-Apr
Delivery	Write project schedule	CB		#####					
Delivery	Prepare final presentation	CB, KB, GB, LL, OR							15-Apr
Delivery	Final presentation	CB, KB, GB, LL, OR							16-Apr
Delivery	Prepare final project report	CB, KB, GB, LL, OR							23-Apr
Delivery	Submit final report	CB							30-Apr

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ANALYSIS OF POLICY

As previously described in the methodology the policies were divided into three categories (Environmental, Economic and Social) to assess the extent of spatial data within them and the use of maps to convey this. This analysis will overview each policy area and critically analyse example policy documents. These will include a policy with clearly mapped policy implications, rather than baseline data, a policy that adopts the use of spatial terminology and vocabulary but with no visual representation and a policy that failed to acknowledge any spatial implications but could be more effective if it did.

Maps created by the Map for Wales team are introduced where relevant and as discussed in the methodology either demonstrate how the spatial implications, conveyed in policy text, could appear if visually represented or map spatial synergies and conflicts identified from the policy. The vocabulary of the documents will be assessed in terms of whether they acknowledge or discuss spatial implications in general.

The context of the document is considered with regard to how it relates to other Welsh Government policies and whether it acknowledges its role within the Wales Spatial Plan (WSP).

Environmental

Overview

In assessing environmental policy documents the analysis concluded that the mapping within the documents was poor and given the subject matter there is substantial baseline data that could be mapped on the physical geography aspects of the subject areas. This has not been done to a large extent.

The findings of the policies analysed show that about half of the policies had spatial implications and of these only half had maps. Furthermore most of these maps were existing baseline data, rather than predictive mapping of the spatial implications. The maps identified within the policies are collated in Part 2: the Policy Atlas. The maps showing soil carbon densities per 1km square in Wales (Welsh Government. 2009[1]. p.10), are reflective of

the baseline nature of the maps. Figure 3 & Figure 4 are examples of predictive policy maps. These maps are taken from Planning Policy Wales Technical Advice Note 8 (TAN 8) (Welsh

Figure 3: TAN 8 Map identifying the strategic search areas
(Source: Planning Policy Wales *Technical Advice Note (TAN) 8: Renewable Energy,* 2005. p.15)

Figure 4: TAN 8 Map example of a strategic search area
(Source: Planning Policy Wales *Technical Advice Note (TAN) 8: Renewable Energy,* 2005. p.16)

Government. 2005 pp. 15-22). Both types of maps have their uses but in terms of considering the spatial implications of a policy the predictive maps have greater clarity.

There is scope for more, better and wider use of mapping. Only two policies, TAN 8 and the Climate Change Strategy for Wales achieved any level of spatial mapping for local authorities to be able to develop local polices that acknowledge wider spatial implications with more joined up thinking. Indeed, the general findings were that the Welsh Government policies had a strategic overview, but with visions, aims and generic outcomes rather than specific spatial decisions. It could be argued that this should be expected because policies are developed at the strategic, national level however there are spatial implications even at this stage and it would appear they have not always been considered.

Evidence maps could be more widely used as a simple tool to guide decision-makers on spatial implications. Much of the spatial decision making is tasked down to the local authority level. The inclusion of simple evidence maps would enable local authorities to

easily access data beyond their boundaries and potentially highlight cross border tensions and synergies at an earlier stage of the implementation process. If the argument is that policies are not specifics then the opportunity for more imaginative maps to be created is being missed. The WSP included maps with 'fuzzy boundaries' (Welsh Government, 2008[1]) to reflect that the line on a map is not always reflective of the spatial reality. This more imaginative interpretation of mapping could be used to aid spatial understanding of policies aims and objectives.

As previously mentioned much of the spatial decision making is tasked down to the local authority level. If an assessment of local authority policies had been undertaken it would be expected that a higher degree of mapping would have been found. However, the extent to which the spatial implications of policies are mapped at this level is unclear and is likely to vary between local authorities. By mapping at the micro-scale the opportunity to map at the regional and national level and cross-sectorally is lost, but further research would be required to confirm this hypothesis.

Within the Welsh Government policies there is no guidance on mapping or a spatial approach to individual policies. Planning Policy Wales – Edition 5 (PPW5) makes reference to the need for neighbouring authorities to discuss and consult on various issues. These include Development Plans, Conserving & Improving Natural Heritage and the Coast and Infrastructure and Services (Welsh Government. 2012[1])**.** In these examples no definitive guidance is given in terms of when and where cross boundary working should be undertaken and it is left to local authorities to decide on the extent and relevance of collaboration. For example in reference to the creation of an authorities Local Development Plan (LDP) PPW5 states, "cross boundary work should be integrated into LDPs where relevant" (Welsh Government. 2012[1].p. 19). With reference to renewable and low carbon energy development PPW5 states, "local planning authorities are encouraged to work collaboratively in order to gather evidence on a sub-regional basis wherever possible" (Welsh Government. 2012[1].p. 172). In both cases Welsh Government policy acknowledges the potential spatial implications (and possible benefits) of working at a regional level but no firm guidance is given as to how it should be done or indeed that it has to be done at all. To what extent this is undertaken and the extent to which neighbouring authorities' opinions are taken into account is unknown. This does mean there is less potential for co-ordinated regional approaches to service provision, for example.

Document 1: Planning Policy Wales Technical Advice Note 8: Renewable Energy

In the context of this project an example of a good policy is one that has spatial implications, acknowledges these implications and includes predictive maps relevant to the policy objectives. An example of a policy that considered potential spatial implications of its approach was Planning Policy Wales Technical Advice Note 8: Renewable Energy (TAN 8). TAN 8 is one of the policy documents that local authorities refer to when making planning decisions and policy decisions with regard to renewable energy provision. It was created because local authorities identified a need for national level guidance on the implementation of renewable energy targets. Wind Farms are a key part of the renewable energy strategy but are controversial and attract high levels of opposition during the planning process. By establishing spatial locations where the Welsh Government considered wind farms were acceptable and the site suitable the perceived lottery of decision-making in the planning process is reduced for the investor. The document has a strong spatial element specifically relating to land-use planning and as mentioned, it places particular emphasis on Wind Farms, with eight maps showing the preferred areas for their locations. The document identifies (section 1.4, page 3, TAN 8) the megawatt capacity target that is required by the Welsh Government to meet its renewable energy targets and how much of this needs to come from on-shore and off-shore wind energy. It then identifies seven Strategic Search Areas (SSAs) where it considers large scale wind farms could be located. These maps can be found on pages 15-22 of TAN 8 and 11-15 of the Policy Atlas. Figure 5 is a map the Map for Wales Team has created. It shows the number of on-shore and off-shore wind turbines that would be required to achieve the Welsh Governments renewable energy targets from wind energy. The numbers required are vast and show the extent of the policy. Equally mapping the wind energy targets helps to increase the debate on what is required and the best possible mix of energy sources.

As previously acknowledged TAN 8 makes appropriate use of maps and addresses the spatial implications of policy making at the local authority level. It is not definitive and so allows Local Authorities to make individual decisions, but it gives direction and guidance that should result in a more co-ordinated approach to renewable energy development. Indeed, TAN 8 states, "It is a matter for Local Planning Authorities to undertake local refinement within each of the SSAs [Strategic Search Areas] in order to guide and optimise development within each of the areas." (Welsh Government. 2005 p.5). Not only does the document state it is flexible within these areas as to where local authorities allow the wind farms it also acknowledges that the boundaries are not definitive and that there is scope, where

necessary, for local authorities to extend the boundary line, "If there is robust evidence that land outside (but close to) the SSA is suitably unconstrained local planning authorities might wish to consider the possibility of development of wind farms in these areas as well." (Welsh Government. 2005 p.5). Although the wind farm areas are mapped well and are held up as good examples of a policy that give clear strategic and spatial guidance to local authorities the document does not consider other areas of renewable energy, such as biomass, off-shore or solar energy production to the same extent.

There is also potential for other Welsh Government documents to link with this policy, such as the Marine Renewable Energy Strategic Framework (MRESF) and the Renewable Energy Route Map (RERM). The RERM is currently only a consultation document and the MRESF is not a planning document but it would be useful for TAN 8 to be updated to take into consideration these policy documents and the spatial implications of renewable energy targets for the planning system.

Figure 5: Off-shore & On-shore Wind Turbine requirements to meet wind renewable energy targets. (Source: TAN8, 2005. p.3)

Document 2: The Climate Change Strategy for Wales

The Climate Change Strategy for Wales (CCSfW) was identified as an example of a policy with the potential to be improved. It includes some maps, including prediction of temperature increases, precipitation changes and sea level rises (see Map Atlas pp.9-10 and Figure 6 below). These maps are at a national level but the document does not consider specific threats or opportunities for areas, such as the potential creation of new wetlands or the loss of existing dwellings due to flooding. The document is currently target driven and considers industrial areas only. It does not address wider land areas or spatial implications. It could be used as a tool to convert vision into practical direction for industry and planning

authorities. The document considers how emissions could be reduced in transport, industrial, residential and agricultural sectors amongst others. No specific policies are listed; "this strategy and its delivery plans must be seen as a starting point from which to build" (Welsh Government. 2010.[1] p.5) but the general inference is one that would have spatial implications. In the introduction the document states that, "we need to make some big and urgent changes to how we travel, manage our land, heat our homes and run our economy" (Welsh Government. 2010.[1] p. 4). However these wider spatial implications are not addressed. For example Chapter 8 discusses the need to reduce greenhouse gas emissions from transport, and the, "development of Sustainable Travel Centres," (Welsh Government. 2010.[1] p.52) is suggested, but no further reference is made to what they are where they would be located or how they would work – whether they are new and what possible implications there maybe for Local Planning Authorities. Another area where spatial implications are mentioned but not acknowledged is with reference to the agricultural and land-use sector. In land-use terms it states that forests and peat soil areas are natural sinks for greenhouse gas emissions (Welsh Government. 2010.[1] p. 67). Yet, no maps of land-use areas are included. In a broad statement acknowledgement is made to cross-sectoral issues as well as possible spatial implications, such as the need to increase home-grown produce. "Food is a significant component of Wales' ecological footprint and, as a result, we take a broad view of food and its climate change impact….It also means that we recognise the need
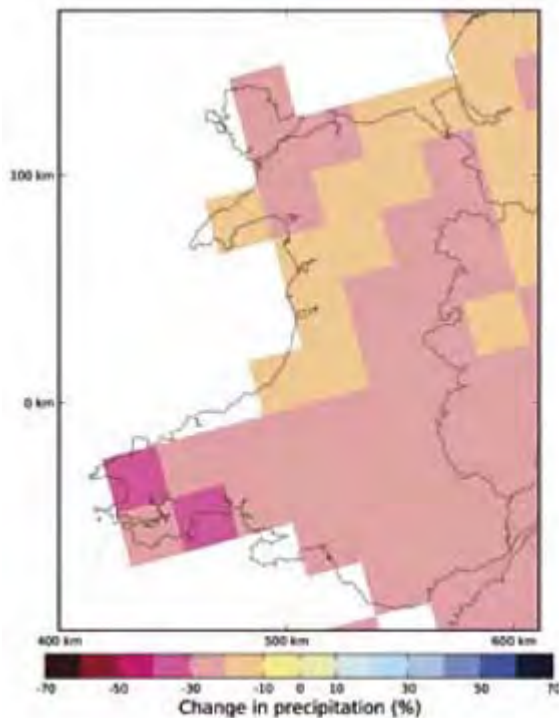
Figure 6: An example of a map that showed predictive data (Source: Climate Change Strategy for Wales, 2010. p84)

to consider the health and wellbeing implications and economic impact of food consumption and production in making decisions" (Welsh Government. 2010.[1] pp. 46-47). The document later explains that most of Welsh food produced is exported and that most food consumed within Wales is imported and distributed through the 'supermarket system' (Welsh Government. 2010.[1] p.67). It does not offer any reasoning for this current status quo. The inclusion of maps showing food miles of some products may help to emphasise this point. Indeed one action area of the document is to map red meat and dairy road maps (Welsh Government. 2010.[1] p.70).

The CCSfW document is one for which this project has created an example map. When reading the document it was identified that a map that showed the spatial implications of the predicted impacts of climate change and the effects on national-level land use would be very useful. Figure 7 has been created to demonstrate how the impacts of climate change would appear if mapped altogether. The data used for the map comes from within the CCSfW document. None of the data is explicit it is all implied within the text. The map is not a definitive land-use plan, rather an acknowledgement to spatial implications.

In keeping with Welsh Government policy guidance the aim of this map is for local authorities to consider the exact policy details, but it encourages a more co-ordinated approach and stimulates discussions on the effects of climate change, both on the environment per se and in the local authority land-use planning context.

Figure 7: Mapped Impact of Climate Change (Source: data from Climate Change Strategy for Wales, 2010)

Document 3: Towards Zero Waste

In the context of this project, a poor policy is considered to be a policy that has spatial implications but no maps to demonstrate them. An example of such a document is the Towards Zero Waste document (Wales Government, 2010.[2]). The document sets out a long-term framework with outcomes, targets and approaches to delivery. "It identifies the outcomes we [the Welsh Government] wish to achieve, sets high level targets and lays out our general approach to delivering these targets and other key actions." (Wales Government. 2010.[2] p.5) Within the document itself there are references to the Wales Spatial Plan and acknowledgement that different areas have different requirements but there is no identification of individual regional needs. The document states that, "the [sector] plans will also build on the regional waste plans and will integrate with the delivery of the WSP area strategies. Attention will be paid to spatial differences in the distribution of key business sectors and their potential differing needs for waste infrastructure" (Welsh Government. 2010.[2] p. 71).   A map showing areas of projected population increase, thereby identifying areas where more waste will be generated thereby increasing demand for waste sites would have been useful.

The document also discusses increased targets for recycling but does not map where strategic recycling facilities should be located to address the shortfall. Economies of scale would benefit local authorities joining together in waste recycling provision but this would require a national level approach filtering down to regional decision making bodies. Maps showing road networks and approximate regional area boundaries would help and such maps may demonstrate how cross-border (Wales-England) working may be a more efficient option, but without a more considered national level approach in terms of spatial implications of provision it is difficult to establish.

Indeed Regional Waste Strategies, such as the North Wales and South East Wales Regional Waste Plans (2004) exist but these documents have no spatial data in them. The documents contain significant data on volumes of waste created by different sectors in local authority areas and the role of land-use planning in delivering new facilities but have no spatial data with which to visualise this. It does not acknowledge, for example, a household waste volume per head of population so does not know where policy should be targeted – at education or facility provision. The document again pushes the responsibility for decision-making onto local authorities but gives no mandate for collaboration. "In line with the Principle of Flexibility and respecting the role of local decision-making, the way in which

capacity requirements are met and the location of facilities is for each authority to determine either unilaterally or in collaboration with others. This relates both to the provision for or sharing of facilities and to the size of those facilities." (Regional Waste Plan for South East Wales Members Steering Group. 2004. p. 59).

Economic

Overview

The overwhelming observation is that the economic policies of the Welsh Government under-utilise specific spatial data and all the maps are for baseline data, rather than predictive mapping of policy implications. There are documents covering many different issues including rural development, broadband provision, infrastructure investment and economic renewal. However many of the documents consider baseline data which is not always spatial and consider aims and objectives of what the Welsh Government would like to achieve rather than how this will be achieved. Much of what is hoped to be achieved does have spatial implications; some of the documents recognise this and directly reference the Wales Spatial Plan (WSP) (Welsh Government, 2010[3]; Welsh Government, 2009[2]). This direct reference to the Wales Spatial Plan is more as an over-arching framework document rather than as a document that has prescriptive implementation policies. The WSP acts as the context in which other policy documents are set, rather than the method by which policies are delivered. The 2010 Economic Renewal document states, "The WSP provides a framework for engagement and planning at a regional level," (Welsh Government, 2010[3]).

At the policy level maps and spatial data can emphasise problems but have not been used. For example, the Fuel Poverty Strategy 2010 states, "vulnerable communities with historically high levels of unemployment and poverty have been hit harder by the rise of [recent] unemployment putting pressure on their ability to avoid fuel poverty," (Welsh Government, 2010[4]. p. 30). However, there is no map to identify these vulnerable areas and so no quick reference to where fuel saving or energy efficient policies should or are being targeted. Simply including an existing map, such as the Areas of Multiple Deprivation in Wales produced by the Office of National Statistics would help to spatially identify areas and focus policy makers. The same document refers to a £14 million fund for 22 community scale projects but makes no reference to whether this money has been allocated or is still open for bids. If it has been allocated it would have been useful to know when and where and therefore the spatial implications of both parts of the policy.

The Delivering a Digital Wales Delivery Plan (Welsh Government, 2011) has spatial implications but does not expand or acknowledge the implications of this. The goals within the Delivery Plan refer to the need to increase knowledge and understanding of where the broadband 'notspots' are (Welsh Government, 2011 p.38) and where mobile phone coverage needs improving (Welsh Government, 2011 p.39). Mapping the locations of these groups would enable better targeting of policy actions. For example is the lack of broadband use because broadband provision is inadequate, unaffordable or not perceived to be required because of the proximity of physical services such as shops and libraries? These factors should influence the relevant policy to promote broadband use. The findings may be for local level implementation but the document states that national government will collate the areas of lack of coverage (Welsh Government, 2011 p. 38 & 39) and this information could begin to help identify reasons.

The evidence pack contains two maps, the first showing Communities First Areas and the second (Figure 8) mapping digital inclusion by percentage of the population for those aged 18 years or over (Welsh Government, 2010[5] pp.15 &16). These were not referred to in the Delivery Plan document yet the Delivery Plan discusses the groups that do not use broadband (mainly the elderly, the unemployed and children) and possible reasons why, but these sub-groups are not considered spatially. The documents references to broadband, telecommunications and digital radio coverage improvements through greater investment again do not detail where this investment is planned spatially (Welsh Government, 2011).
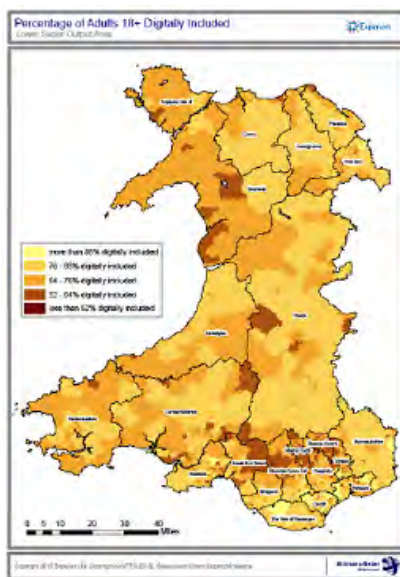
Figure 8: One of two maps included in Delivering a Digital Wales Evidence Pack, but not in the final document (Source: *Delivering a Digital Wales: Evidence Pack to support the Main Document version 1.1* p. 16)

On a more positive note two of the regeneration documents acknowledged the appropriateness of collaborative planning. The Local Government (Wales) Measure 2009 is a statutory document that requires short-term and long-term local authority community projects to be considered in the context of each other. It requires local boards to be established with other local service providers (such as the Local Health Authority and Fire Authority) to develop a co-ordinated approach to projects and acknowledges that cross-border working between local authorities may well be appropriate in some geographic locations and that the role of Welsh Government Spatial Plan Ministers is important. The consultation documents do not acknowledge any specific areas for cross-boundary working, it simply states that some, "…communities are close to the England borders and therefore should take this into account," (Welsh Government, 2009[3] S.4.64). The statutory status of the document is definitely an acknowledgement of the importance and role of collaborative planning in the development and support of areas. Again, the consultation document stated that, "…community planning can and should take place at various levels and across boundaries" (Welsh Government, 2009[3] S.3.34). However, although the document is statutory there is no statutory requirement for local board members to participate other than the local authorities concerned so the effectiveness of the document is unclear.

Another document to widely acknowledge the need for greater spatial understanding and awareness is a current consultation document into the government's regeneration work: Vibrant and Viable Places: New Regeneration Framework (Welsh Government, 2012[2]). The consultation of the document closed in mid-January 2013. The language throughout the consultation document supported spatial and collaborative planning for effective regeneration and development and although there were no maps it did suggest that two mapping tasks should be imminently undertaken to enable more effective regeneration work. The two tasks were identified on pages 27 and 28 of the document and required a map of existing resources to be created and a map of all Communities First cluster areas to be identified (Welsh Government, 2012[2]). Both maps would be useful baseline data for other policies to consider their objectives in a spatial context. Other parts of the document encouraged spatial planning for example on page 1 it states that, "strengthened governance is needed to improve delivery. In particular there is an opportunity to drive regional collaboration in a more structured way including effective spatial planning for regeneration" (Welsh Government, 2012[2] p.1). Later the document acknowledges that regional collaboration areas would help but that these would have to be blurred and over-lap existing boundaries, no mapped examples of this had been provided in the consultation document.

In the context of the WSP this document is a step on from other pre-existing documents in terms of vocabulary, however the extent to which it translates to work at the regional and local level will be determined over time. The final document released in April 2013 still did not include any maps and interestingly it made no reference to the WSP, despite using the language and acknowledging the concepts within it (Welsh Government, 2013[1]).

Document 1: A) One Wales: Connecting The Nation – The Wales Freight Strategy And B) One Wales: Connecting the Nation- The Transport Strategy

As expanded upon under environment three economic policies have been analysed further to consider the spatial implications of the document and how effective it is in communicating this.

The One Wales: Connecting the Nation – The Wales Freight Strategy and the One Wales: Connecting the Nation – The Transport Strategy (Welsh Government, 2008[2] and Welsh Government 2008[3]) discuss the freight networks and private/public transport networks within and beyond Welsh borders. The documents, like many economic ones, are largely theoretical and consider the proposed development possibilities and desired outcomes rather than setting out a plan of execution. Both documents contain spatial data in map, tabulated and text forms however this is baseline data rather than predictive mapping. Figure 9, Figure 10 and Figure 11 are examples of some of the maps found within the Wales Freight Strategy and Wales Transport Strategy documents.

The Wales Freight Strategy discusses the challenges to the freight infrastructure within Wales and the implications for Wales within the wider global context. "Transport networks within Wales must not be considered in isolation, as both the road and rail networks are intrinsically linked to those in England…there are also international road freight movements between Ireland, the UK and the rest of Europe, much of which passes through Wales.." (Welsh Government, 2008[2] p.x). The document also considers the European Spatial Development Perspective (ESDP) revised blue banana map (Figure 12) that shows an eastward shift of the bananas curve (Welsh Government, 2008[2] p.26) and reflects on the spatial implications of the geographic location of Wales within Europe in terms of economic development and its transport connectivity to this zone.

Figure 9: Population densities map included within the Wales Freight Strategy Document
(Source: The Welsh Government. 2008. *One Wales: Connecting the Nation – The Wales Freight Strategy* p.35)

Figure 10: Railway network within Wales & key connections to/from Wales
(Source: The Welsh Government. 2008. *One Wales: Connecting the Nation – The Wales Freight Strategy* p.37)

Figure 11: Transport links both within Wales and connections beyond the Welsh boundary

(Source: The Welsh Government. 2008. *One Wales: Connecting the Nation – The Wales Transport Strategy* p.12)

"The eastwards shift of the so-called 'blue banana' (the area of the European Union with the highest GDP per head) and the recent entry of geographically near member states with low labour costs (such as Poland and Lithuania), means that existing peripheral nations such as Wales will seek to partly balance those lower labour costs with efficient freight operations, making an efficient and effective international freight network even more important."
(Welsh Government, 2008[2] p.26)

The document considers the implications of the increasing size of containers used in shipping and the resulting requirements for deep water ports and railway gauge improvements. The document considers the role of Welsh ports as possible feeder ports to the deep water ports beyond the country's borders (Welsh Government, 2008[2] p.26).

Figure 12: Revised 'Blue Banana' map showing the zone of core economic activity within the European Union. (Source: The Welsh Government. 2008. *One Wales: Connecting the Nation – The Wales Freight Strategy* p.26)

The document also discusses pinch points within the railway's capacity, but does not map these or other transport connections to domestic or foreign locations. The Transport Strategy document (Welsh Government 2008[3] p.12) contains a map showing multiple transport modes and their connections beyond Welsh borders (Figure 11) but the map has not been shared between documents.

The Freight Strategy document also identifies spatial implications of rural living and identifies the possibility of creating neighbourhood post boxes and collection points to act as consolidation centres for domestic deliveries (Welsh Government, 2008[2] p.18) but no implementation options are discussed. No acknowledgement is made as to how these proposals would fit in with Planning Policy Wales' rural development policies or whether proposed developments cross existing settlement boundaries. Like many Welsh Government policy documents the expectation is that the implementation will be worked out by local

authorities. Although acceptable in principle the difficulty arises in balancing local knowledge of viable locations with the stipulations of the post office and private national operators. Negotiations would need to be coordinated by the Welsh Government and cascaded down to local level policy makers but no such ownership of the project is established in the policy.

The Wales Transport Strategy has proposals with spatial implications and Welsh Government chapter 4 discusses both the creation of Travel Towns and the desire to see a reduction in travel times between North and South Wales (Welsh Government 2008[3] p.49). However there is no mention of where the Travel Towns could be located, nor does it discuss any specific routes of infrastructure development to reduce travelling times between North and South Wales. There is tabulated data on travelling times from London to various Welsh towns and cities (Welsh Government 2008[3] p.13), North-South travelling times throughout Wales and East-West travelling times within South Wales (Welsh Government 2008[3] p.14) Mid Wales and North Wales (Welsh Government 2008[3] p.15). A creative use of maps to distort the shape of Wales relative to travel times may have been a more effective way of conveying this data and the issues it is trying to highlight. (Duhr, 2007 p.46)

A positive observation of these tables of data is that they compare methods of transport; road and rail travel times. Most of the other baseline data records within the two documents are for individual transport methods rather than an acknowledgement of where transport methods could link up. The only exception is the map previously identified in Figure 11.

The Transport Strategy document also acknowledges the WSP, noting how boundaries are fuzzy and how boundaries vary for different areas of co-operation. The document does map the Regional Transport Consortia with the WSP area (Welsh Government 2008[3] p.56) demonstrating the need for cross-boundary and cross-sector collaboration.

The Freight Strategy develops a number of case studies where investment has been undertaken by the Welsh Government both in terms of grants to private companies or in national infrastructure development to increase usage of non-road freight. The analysis of these case studies considers not just the financial cost savings for those involved but also the improved sustainability of the freight movements, thereby linking the document to the wider sustainability agenda.

Figure 13: Examples of Maps in the Wales Infrastructure Investment Plan: for Growth and Jobs

(Source: Welsh Government, 2012. *Wales Infrastructure Investment Plan: for Growth and Jobs*)

Figure 13.1: Transport Network map (p. 31)
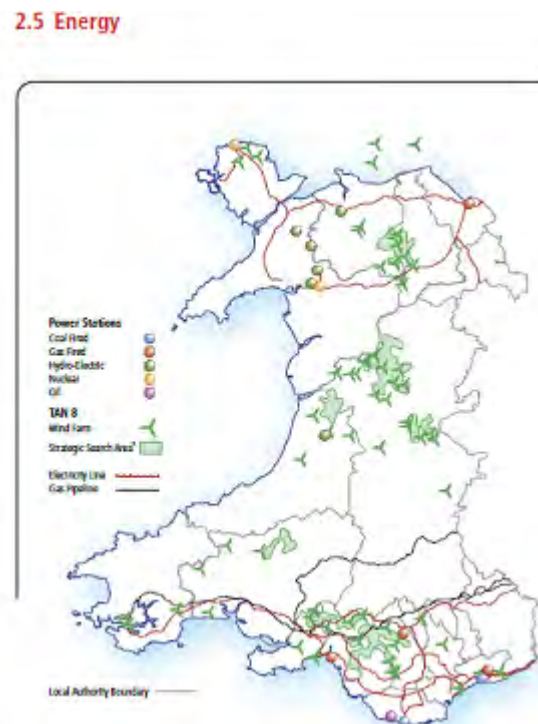
Figure 13.2 Energy Supply Infrastructure (p.57)
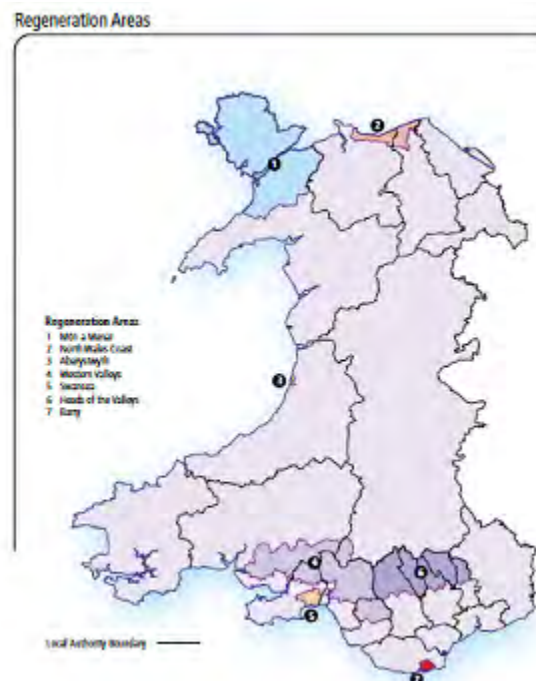
Figure 13.3: Regeneration Areas (p.72)

Figure 13.4: Local Health Boards & Hospitals (p.85)

The main criticism of both documents is the lack of definitive infrastructure investment that is enabling the Welsh Government to achieve their stated aims of sustainability and spatial connectivity. These however have been identified in a more recent document; the Wales Infrastructure Investment Plan (Welsh Government, 2012[3]) and this is discussed below.

Document 2: Wales Infrastructure Investment Plan: For Growth and Jobs

The Wales Infrastructure Investment Plan: for Growth and Jobs (WIIP), 2012 is one of the few economic documents incorporates maps and identifies some specific spatial implications of policy decisions through maps and tabulated data detailing infrastructure projects. The plan is supposedly a step on from individual Transport, Freight and Energy strategies and combines all the significant infrastructure investments within the one document. The main document has various base maps showing existing infrastructure, such as the transport network, locations of hospitals, regeneration areas, flood defences and locations of schools that have received investment. Approved future investments, such as investments to parts of the road or rail network or hospitals are provided in tables however none of this is represented visually in maps. It is worth noting that many of the investments are not location specific and is as much about funding levels for potential future projects as any actual projects. The other spatial criticism of the document is that the document does not overlay different developments. It acknowledges the spatial aspect and that there are cross-sector implications of delivery of investment infrastructure (Welsh Government, 2012[3]. p.24 and p.108), but there is no evidence this connection is made in the policy decisions. Figure 13 is four maps from the WIIP document showing how infrastructure development is mapped in isolation between sectors.

Figure 14 and Figure 15 are maps produced by the Map for Wales team from information within the WIIP document. Figure 14 overlays two existing maps within the document – the regeneration areas and the location of the 21st Century Schools to demonstrate the uncoordinated regeneration efforts of the Welsh Government. "The Welsh Government has contributed to regeneration, in its widest sense, through a wide range of programmes, for example…21st Century Schools," (Welsh Government, 2012[3] p. 73) however as the map clearly shows very few of the 21st Century Schools have been built in the regeneration areas.

Figure 15 has mapped the detail contained within the November annexe of preferred locations of Food Waste treatment plants by the different Regional consortium. The map

shows that food waste is set to travel further than is necessary and that the two consortia covering North Wales have two sites very close to each other on the A55.

The creation of Figure 15 raises a number of spatial questions, such as; why are the consortia grouped as they are and could the locations identified possibly be used by more than one consortia area? The inclusion of simple maps, such as Map 3, within the WIIP document may help local authorities to understand wider policy implementation and so create more logical spatial collaborations.

The creation of the maps reinforces the overall criticism of the document that although it considers sectors spatially, policy approach regards them in isolation. A step on would be to analyse spatial implications cross-sectorally. This would bring more meaningful spatial assessment to the policy aims and objectives and may help to resolve policy contradictions that could develop at the local level during implementation.

There are two further items of note in the WIIP. The document maps energy supply (see Figure 13.2) including existing and approved wind farm developments and the TAN 8 SSA areas (Welsh Government, 2012[3] p. 57 and Figure 13.3). A number of the developments are outside the SSA areas and some are not the large wind farm developments the SSAs were allocated for. As a consequence the map is not clear and understanding of TAN 8 is necessary to be able to 'read' the map clearly.

A second interesting map is that of the newly allocated Welsh Government Enterprise Zones (Welsh Government, 2012[3] p.23). The document considers them in terms of required potential future infrastructure investment, "We [Welsh Government] are working with our partners to ensure that the infrastructure needs identified for the Enterprise Zones are met. Where specific transport requirements are identified, we will direct appropriate funding is to deliver necessary road enhancements for the zones." (Welsh Government, 2012[3] p.26). The Enterprise Zones have not been mapped onto the transport infrastructure map, which would aid the identification of infrastructure requirements and the extent of them.

In spatial terms the language and content of the WIIP is possibly a step backwards from the Wales Freight Strategy and the Wales Transport Strategy in that the spatial implications of policy development is not assessed so extensively. It is, on the other hand a step forward in collaborative planning terms in that it acknowledges the positive benefits of co-ordinating cross-sector investment by considering it in one document. However, without cross-sector mapping it is very difficult to identify the predictive nature of the developments.
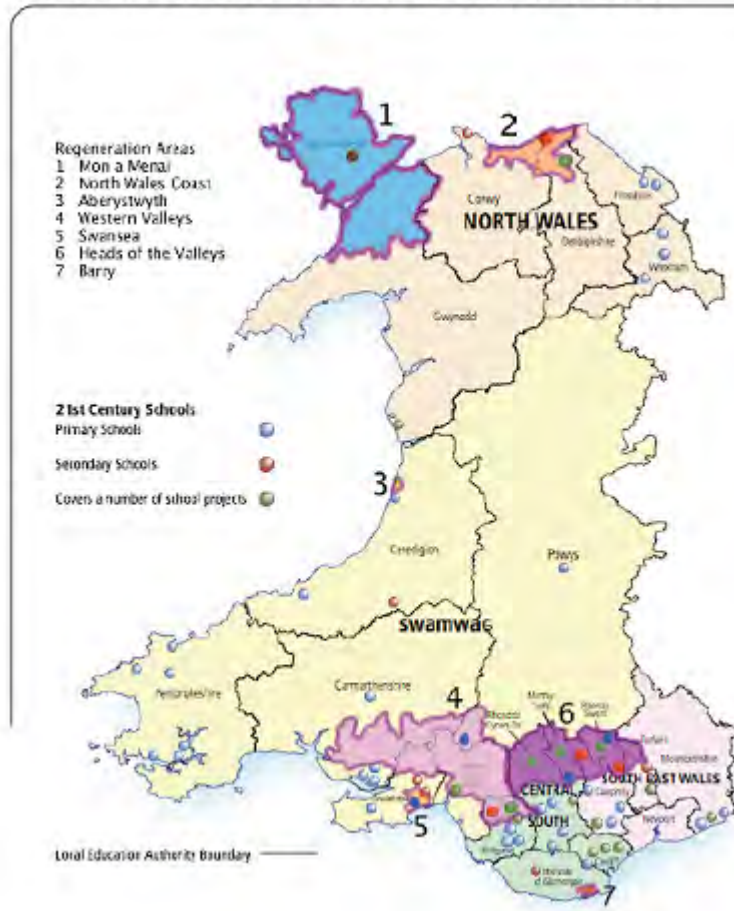
Figure 14: Regeneration Areas & 21st Century Schools

(Source: Welsh Government, 2012. *Wales Infrastructure Investment Plan: for Growth and Jobs* pp.72 & 80)
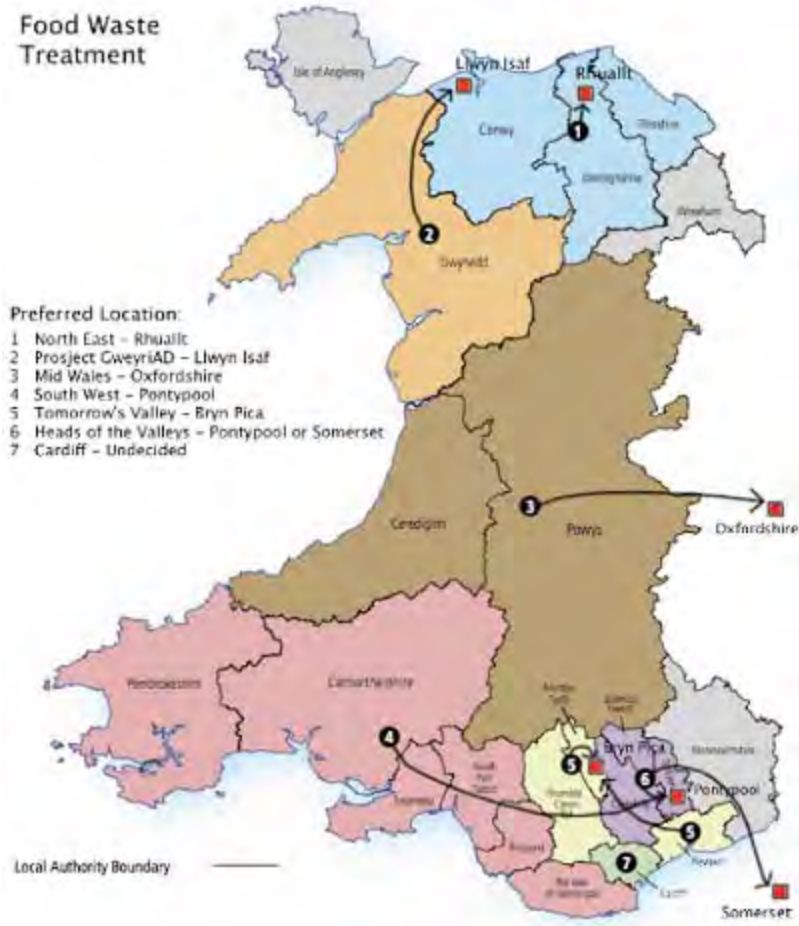
Figure 15: Food Waste Consortia Areas and Preferred Locations for Food Waste Treatment

(Source: Welsh Government, 2012. *Wales Infrastructure Investment Plan: for Growth and Jobs* p.46 and November 2012 Annexe Table pp.9-11)

Document 3: Sectors Delivery Plan

One aspect of Welsh Government economic policy is to promote different sectors through the Sectors Delivery Plan (Welsh Government, 2013[2]). The government has identified nine sectors including Life Sciences, Tourism, Creative Industries, Agriculture and Food (Welsh Government, 2013[2]) that they consider need further support and investment to benefit the wider Welsh economy. The policy appears to be in an early stage, there are no complete sector specific documents although some sectors have drafts produced by the 'sector delivery panel' (a group of people from the relevant sector) outlining the aim of the policy. The intention seems to be to consider each sector in isolation rather than acknowledge an overlap in either context; economic or spatial.

The Sectors Delivery Plan document has short, medium and long term aims for each of the nine sectors identified for development. Although the document is generally aspatial there

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are some objectives that have spatial aims. For example Section 10: Tourism states that Wales needs a, "viable and market competitive airport," (Welsh Government, 2013[2] p. 20) however it does not recommend a location or include this as a long-term aim for the sector. In the Section 9: Life Sciences the document acknowledges that there are "clusters of genuine excellence" (Welsh Government, 2013[2] p. 18) and that a central hub with an ecosystem approach will be created. However no spatial location of either the pre-existing spatial clusters or the proposed hub is identified. One aim of the document is to "undertake a comprehensive mapping study of the creative industries in Wales" (Welsh Government, 2013[2] p. 8), the existence of such hubs was acknowledged previously in the 2004 document Creative success – a strategy for the creative industries in Wales (Welsh Government, 2004[2]). It would appear nothing has progressed in terms of collating spatial data for this project between the writing of the two documents.

Mapping the locations of the individual sectors would embrace the philosophy of both the WSP and the ESDP in terms of potentially identifying spatial clusters of industries and focus infrastructure investment for the development of these clusters. It is not possible to create a map at present as the data is not readily available however it would be an interesting project in the context of the WSP and spatial planning theory.

This Sectors Delivery Plan is a prime example of how the language of Welsh Government is fairly consistent in its spatial planning and collaborative planning aims and theories. However the document is very short on any spatial specifics and much like the regeneration consultation document discussed earlier it identifies mapping that is required but has failed to undertake any. Why this should be is unclear. The documents acknowledgment of spatial implications is evidence that it is being considered so potentially limitations such as resources or the lack of baseline data are more probable reasons for the lack of mapping. It may be that mapping is not prioritised as spatial planning does not appear to be considered equally across all sectors. While some of the sectors clearly talk about clusters and hubs, others such as the Tourism and Food sectors do not consider this and yet these sectors are generally location specific. The final nature of the document(s) is unclear but for a more co-ordinated approach nationally maps could certainly help local authorities collaborate more effectively.

Social Policy

Overview

The policies reviewed for the social category considered a diverse number of topics from housing and education to health and refugee inclusion. Throughout all policies in the category the specific spatial information was very limited and there were very few maps, in total only four maps were recorded Welsh Government (see Policy Atlas pages 62-63) and only limited baseline data in tabular form. A number of the documents recognised the WSP and the need to adjust policy implementation due to locational implications however overall the spatial detail was very vague.

Some documents reference research on spatial planning to achieve a particular policy, for example the Refugee Inclusion Strategy acknowledges research by, " Anie et al (2005) [who]…found a significant association between characteristics related to greater levels of deprivation within receiving communities and an increased likelihood of poor relations with asylum seekers," (Welsh Government, 2008[4] p. 3). Within the Welsh documents it is not clear whether this type of spatial data is available but there are examples implying the availability and prior analysis of spatial data such as the Refugee Inclusion Strategy which goes on to state, "a number of communities in Wales, in which asylum seekers are dispersed or in which refugees choose to live are…designated Communities First areas (Welsh Government, 2008[4] p. 29). The probable reason for the overall lack of spatial data is that there is an emphasis on local authorities to decide on locations to meet needs for education and housing; local health boards determine the locations of hospitals and healthcare service provision and so it is likely that more mapped policies may be found in documents at these levels of governance. The lack of spatial data within social policy documents is possibly not unique to Wales. It is worth noting that Map for England contains very little analysis of documents the Map for Wales team have considered as 'social'.

Some social policies identify the need for collaborative planning and reference the WSPs role in achieving this. The Refugee Inclusion Strategy refers to the WSP as a mainstream planning document and calls for refugee inclusion to be considered as part of this (Welsh Government, 2008[4] p.17). The Rural Health Plan cites the WSP as one of the key strategy documents used as context to underpin its development (Welsh Government, 2009[5] p. 18). However the language and vocabulary used is very different to that in the economic and

environmental policies and the focus does not reflect spatial planning to such an extent. The environmental and economic policies use issues of sustainability as the reasons for co-ordinating policy across sectors, resulting in a consistent use of spatial language amongst the documents. Social policy does not have this emphasis and so the justification of cross-sector co-ordination is different. These reasons include greater communication (between police, health care professionals and social workers) and acknowledgment of multi-agency involvement in the care of different groups (such as the elderly, refugees, vulnerable children or adults). Some documents acknowledge the need for multi-agency co-operation for example the Refugee Inclusion strategy identifies the correlation between improvements in use of the healthcare system when specialist nurses are provided in areas of high levels of asylum seekers (Welsh Government, 2008[4]).

The following analysis considers three examples as discussed in the environment and economic categories.

The small number of documents referenced is not representative of less policies being analysed or that there were limited documents available to analyse, rather it is proof of the lack of spatial focus in social policy. Of 78 documents analysed only 6 were considered to have any spatial implications, this ratio is significantly lower than either the environmental or economic categories.

Document 1: The Rural Health Plan

The Rural Health Plan identifies the implications of location and as such the spatial consequences on policy (Welsh Government, 2009[5]). The document recognises the need to alter health provision for rural areas due to the spatial distribution of the population. The focus of the document is generally from an economic perspective but it serves to emphasise the differences between urban and rural living and the spatial implications of this. These acknowledgments are made in a number of ways, from identifying that rural dwellers are generally healthier than those living in urban areas, to frequently acknowledging different social and cultural living conditions between rural and urban areas, to highlighting that economies of scale mean the extent of health provision in urban areas cannot be replicated in individual rural settlements. The document states that, "understanding health and social dynamics of different communities is critical to determining need therefore differential provision will be an inevitable consequence of bespoke design," (Welsh Government, 2009[5] p.17).

The document has three maps within it (Figure 16). The first identifies the locations of rural and urban populations and the second identifies driving times from all areas of Wales to the nearest community hospital, including cross-border provision (Welsh Government, 2009[5]. p. 12). These maps were used to identify the extent to which Wales is classed as rural and the implications of this on healthcare provision. The third map identifies the percentage of the population aged three years or over that are able to speak Welsh (Welsh Government, 2009[5] p.14.), used in the context to consider possible language barriers and identify where Welsh language needs would be the strongest.

The Rural Health Plan references the need for collaborative planning and recognises the cross-sector implications of healthcare provision, "health cannot be regarded in isolation from the backcloth of social, economic, housing, transport (both private and public) and social care matters" (Welsh Government, 2009[5] p.6.). It begins to suggest possible changes in spatial provision of healthcare through the use of mobile dialysis units to more integrated ICT systems for home care monitoring equipment. One example is the greater use of broadband and e-communications. The document considers the implications in terms of digital infrastructure for broadband provision and the work that is underway to improve digital access to rural locations, "Rural areas, especially are disadvantaged when it comes to broadband although the Welsh Assembly Government is working to address this issue" (Welsh Government, 2009[5] p.33). What neither the Rural Health Plan nor the Digital Wales document specifically address is the location of the digitally included over 65's. The prevalence of broadband and internet use within the older rural population is unclear.

Another aim of the plan is to establish campuses of community hospitals, retirement homes, sheltered housing and pharmaceutical services all in one location. This has numerous spatial implications not just in terms of the location of the campuses but also whether people will need to move to be able to receive a broad range of healthcare.

The implementation of the Plan is to be undertaken by the seven Local Health Boards so their strategies are likely to have more explicit spatial data. By analysing the proposals for delivering the Plan the spatial implications should become very clear however this data is at a lower level than this report is considering.

Figure 16: Maps from the Rural Health Plan document
(Source: Welsh Government. 2009[5]. *Rural Health Plan: Improving Integrated Service Delivery across Wales* p. 12 & p.14)

Figure 16.1: Rural-Urban Population distribution   **Figure 16.2:** Drive time analysis
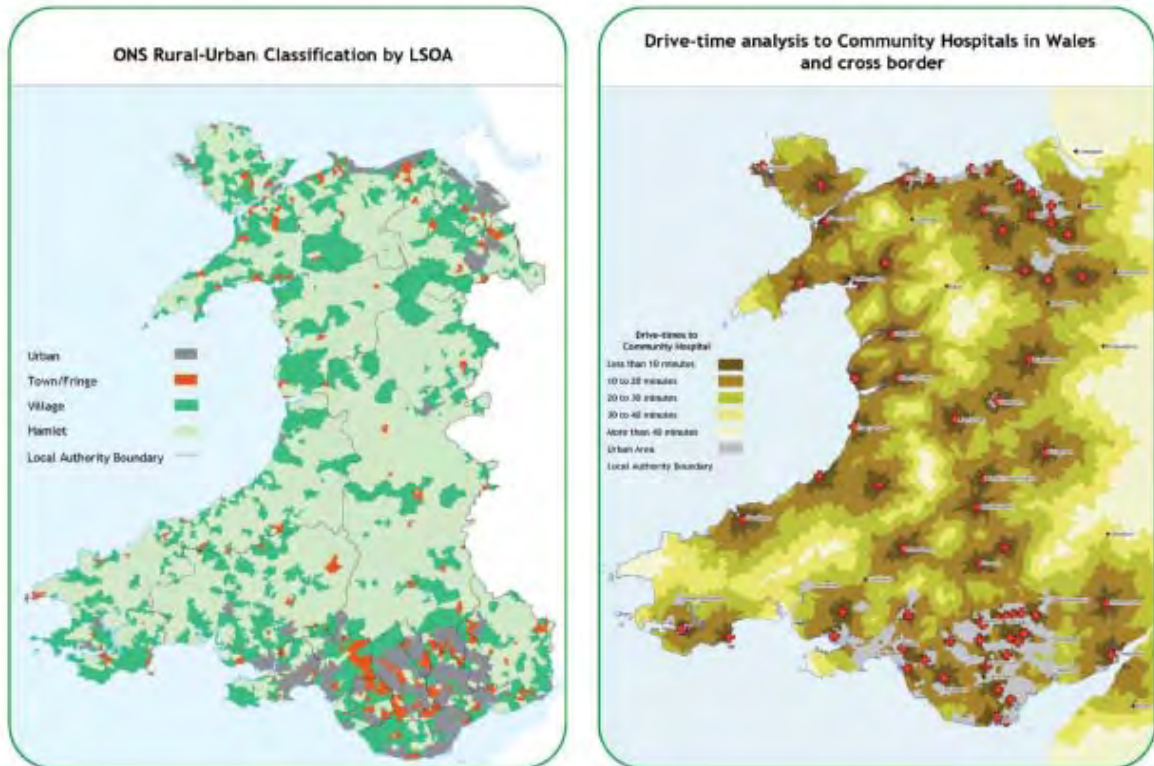
Figure 16.3: Location of Welsh speakers age 3 and over
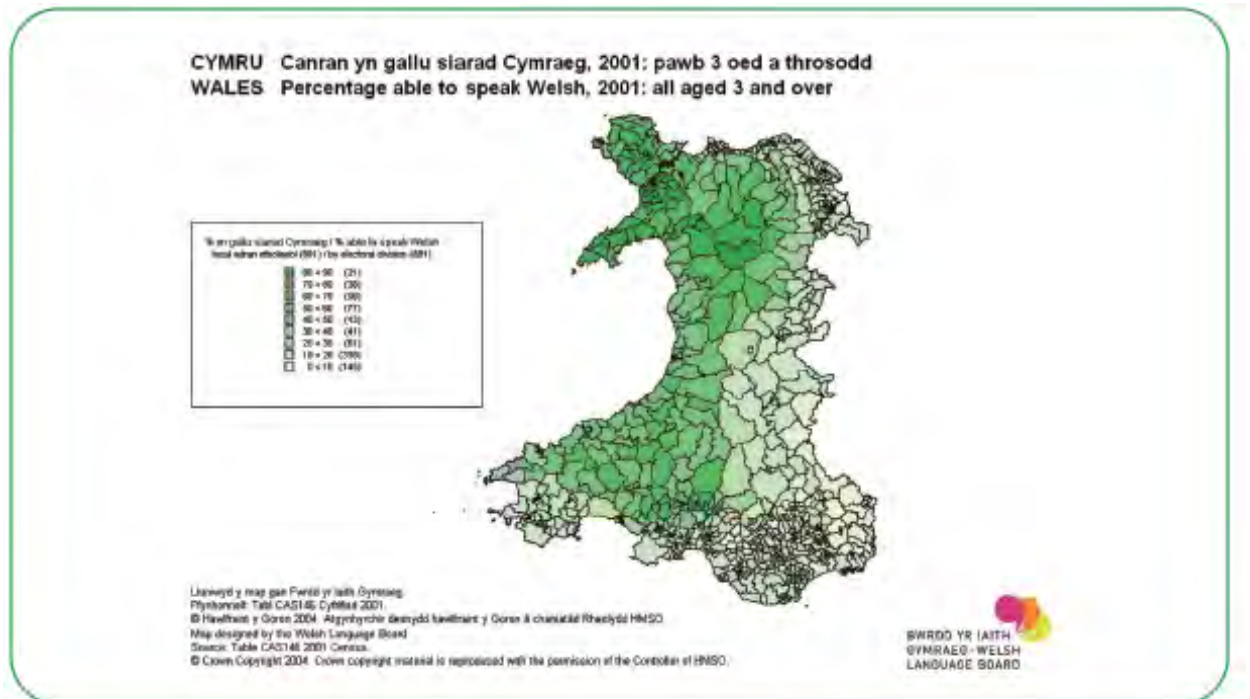
Document 2: Refugee Inclusion Strategy

The Refugee Inclusion Strategy (Welsh Government, 2008[4]) is an example of a document that had a strong spatial element but no maps and very little explicit spatial expression. The Strategy is aimed at improving integration of refugees into Welsh society, but not at the expense of the refugees' own cultural and religious identities. The document is a good example of why collaborative planning is required and frequently talks about the need for multi-agency decisions in terms of healthcare, education, housing and policing. The spatial data within the report is limited. It identifies the four dispersal areas within Wales and the percentage of asylum seekers sent to these locations as a proportion of all entering the country. The document did not state why these centres were used but did state that a high proportion of these asylum seekers, once granted refugee status chose to remain within these areas. The Strategy states, "…a relatively high number of those given leave to remain choose to settle here [Wales]. Most refugees have settled in Cardiff, Newport, Swansea and Wrexham," (Welsh Government, 2008[4] p.2).

Another consideration of the Strategy is that to improve relations between the asylum community and the existing receiving community (the communities into which asylum seekers are placed), the dispersal area should not be in an area of multiple deprivation as this is more likely to increase tensions within the receiving community. The document referred to research by Boswell, 2001; Amin, 2002; Casey et al, 2004; Robinson and Reeve, 2006. (cited in Welsh Government, 2008[4] p.29) which concluded that, "the socio-economic conditions are important factors in determining relations between asylum seekers and refugees and receiving communities. The arrival of asylum seekers and refugees into deprived communities can increase competition for scarce resources and fuel animosity among existing residents" (Welsh Government, 2008[4] p.29.). The document does acknowledge that these tensions between the dispersal populations and receiving communities are not prevalent within Wales, possibly due to media coverage and attitudes (Welsh Government, 2008[4]) but it would still be useful to know the specific dispersal areas to be able to maintain this status quo of positive relationships.

The document also states that the percentage of those in the multiple deprivation centres is much less than in England but it does not clarify whether this is as a result of policy decisions (Welsh Government, 2008[4]). A map of multiple deprivation areas would have been a useful inclusion along with more specific detail of where asylum seekers and refugees are located. Figure 17 has been created to show the location of the dispersal centres overlaid on areas of multiple deprivation. The cities chosen as dispersal areas have areas with levels of

deprivation higher than many other areas of Wales. The document does not provide data on the location of asylum seekers and refugees so the spatial implications are unknown.

The basis of the document is that service provision needs to be targeted and adapted to asylum seekers and refugees so more spatial data is essential for the successful implementation of the Strategies objectives. In the context of service provision for children arriving in Wales the Strategy states, "data on the precise numbers of children and young people are incomplete…there is no systematic or structured data collection mechanism in place in Wales that could be used to inform policy and to direct resources" (Welsh Government, 2008[4] p. 29-30).

The document declares that since having appointed specialist nurses in the dispersal areas it has helped to improve healthcare provision (Welsh Government, 2008[4]). Specialist intervention in healthcare provision is identified as necessary to achieve more successful outcomes however the strategy acknowledges a number of times that there is very little baseline data on asylum seekers to help with this (Welsh Government, 2008[4] p.2 & p.65.). To be able to plan and deliver healthcare effectively some knowledge of where refugees are living and where they have come from is required and although this is acknowledged within the document "Asylum seekers living in Wales originate from over 60 countries and speak over 40 different languages. Refugee movement is dependent on world events. The countries of origin of asylum seekers change over time. In April 2006, the top ten nations of origin of refugees in Wales were: Pakistan, Somalia, Iran, Turkey, Iraq, Congo (Democratic Republic) Afghanistan, Sudan, Zimbabwe, and Algeria (Welsh Consortium for Refugees and Asylum Seekers, 2007)" (Welsh Government, 2008[4]. p. 2.) no further detail is provided.

Figure 17 has been created to express the dispersal of asylum seekers in Wales and the cities they have been dispersed to. The map is limited due to the lack of data within the Refugee Inclusion Strategy. The document does not quantify numbers from different countries nor does it identify specific areas within cities that asylum seekers and refugees are housed. The map implies all asylum seekers come from England, but only because the allocation is from UK Central Government. The map demonstrates that guidance referenced in the policy is not being followed as asylum seekers are being dispersed into areas of deprivation within Wales' larger cities. A quick glance identifies a number of details that are lacking, such as countries of origin and specific locations of where the asylum seekers are being housed. Such details would be useful for the service delivery of policy objectives.
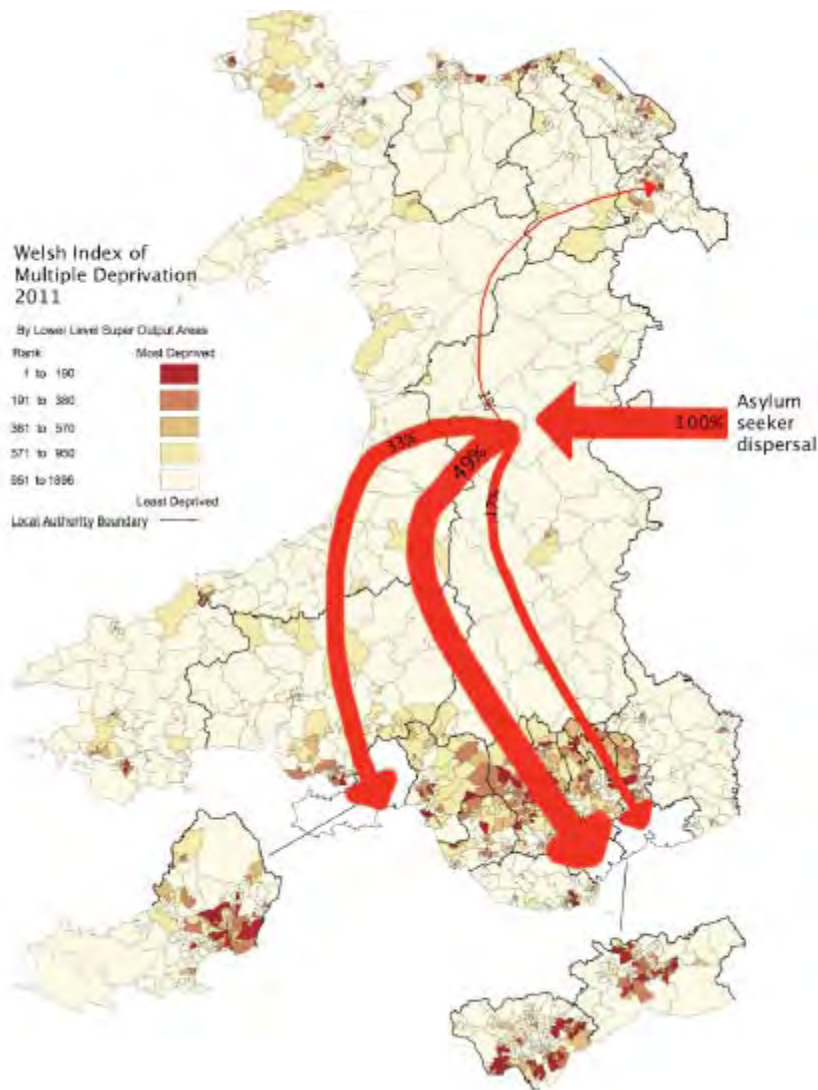
Figure 17: Dispersal locations and proportions of Asylum Seekers located in the context of Welsh Index of Multiple Deprivation.

(Source: Base map from Welsh Government, 2011[2]. *Welsh Index of Multiple Deprivation 2011: publication (first release)* p.8 arrow details from Refugee Inclusion Strategy, 2008)

Document 3: The Welsh-Medium Education Strategy

The Welsh Medium Education strategy aims to increase Welsh language education provision from pre-school through to Further Education Institutions. The document inadequately acknowledges the spatial implications of policy direction and has very little data to evidence statements made. Much of the document is about provision and that local authorities should be aiming to attain the Welsh Government targets for Welsh speaking and Welsh-Medium education.

The spatial implications of policy are acknowledged through the acceptance that provision will need to be slightly different depending on the area. An example of this was how the success of the educational structure, to achieve fluency in two languages, would be determined by external factors in terms of a child's family and community support for the Welsh language. The document stated "…where learners' linguistic skills in Welsh are not reinforced by family or community, they are unlikely to achieve full fluency…it is important that all policy developments are planned on the basis of a detailed understanding of the wide variety of outcomes…" (Welsh Government, 2010[6] p. 9). However there are no maps within the document to show, for example, the location of Welsh speakers as a percentage of the population, which would aid in directing the location of resources.

The document refers to some local authorities being proactive in terms of Welsh-Medium education provision with demand led planning. There is nothing in the document to identify which local authorities have done this and therefore where the demand is and such details could help other local authorities identify trends. However the document accepts that this demand led approach has been piecemeal between authorities and that it "tends to give rise to a number of inconsistencies" (Welsh Government, 2010[6] p.5). Potentially through sharing this spatial data it may lead to greater coordination and a more positive outcome.

The strategy states that there are 438 Welsh-Medium primary schools but only 55 secondary schools (Welsh Government, 2010[6] p.4) resulting in a drop in Welsh speaking in the post-14 (years of age) stage and also causing many children to have to travel greater distances to Welsh-Medium secondary schools. The strategy makes numerous points about the need for greater joined up thinking; specifically for the post-14 stage and the document states, "for Welsh-Medium provision it also entails the creation of wider networks than those based on local authority boundaries," (Welsh Government, 2010[6] p. 14). Such discussions could be further emphasised with maps highlighting the locations of Welsh-Medium school provision and local authority boundaries. Interestingly, when contacted the Welsh Government was able to supply maps of Welsh-Medium primary and secondary school locations (Figures 18 & 19) yet these maps do not appear to have been put into any of the education documents.
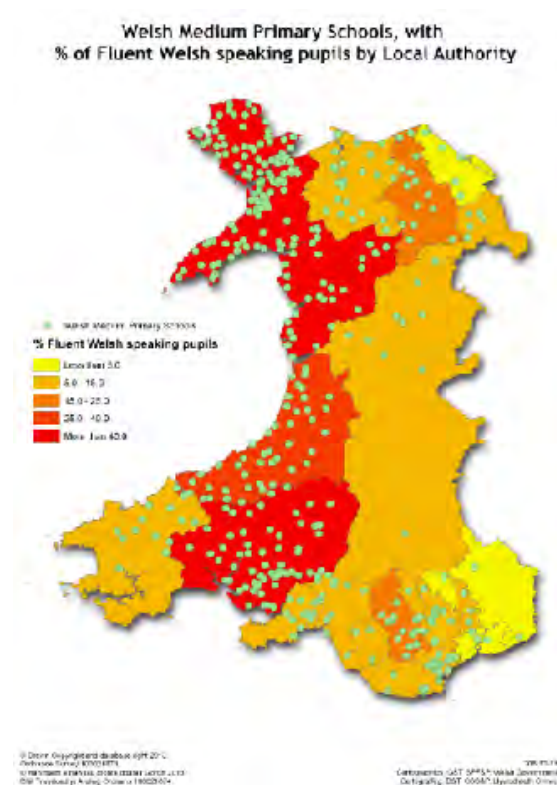
Figure 18: Location of Welsh Medium Primary Schools
(Source: Hopkins, 2013)
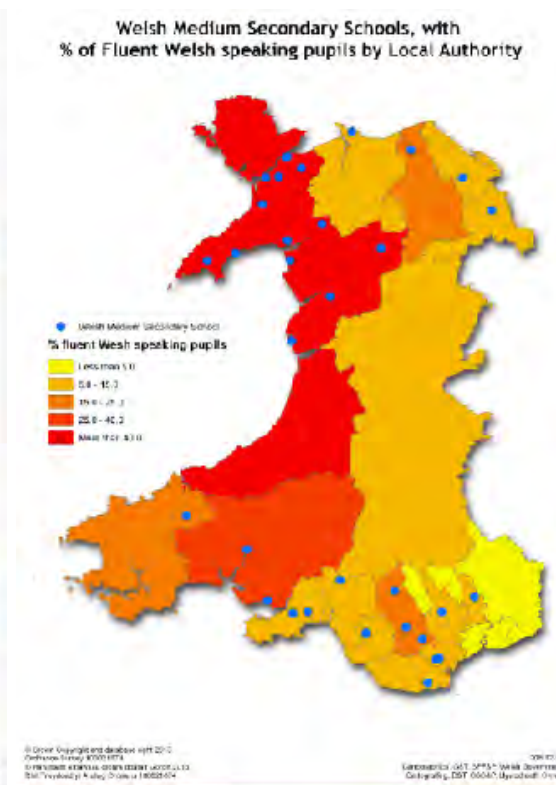
Figure 19: Location of Welsh Medium Secondary Schools
(Source: Hopkins, 2013)

The locations of the Welsh-medium primary and secondary schools were interesting; some areas that had a large number of Welsh-Medium primary schools then had no Welsh-Medium Secondary schools. Figure 20 was created as a result to highlight the location of Welsh-Medium Secondary schools in comparison to the Welsh speaking percentage of the population. Here there appears to be no pattern with some areas with a high percentage of Welsh speakers having lots of Welsh-Medium secondary schools, while other areas did not and area of low numbers of Welsh speakers having more Welsh-Medium secondary schools while others did not. The reasons for the spatial variations is unknown to the project but the maps simply and effectively show the variations in different locations and areas to target further resources to bridge the gap between education and Welsh speakers.

Percentage of Welsh Speakers and
Welsh Medium Secondary Schools

Legend
Welsh Speakers
- 51.65% - 87.99%
- 18.21% - 51.64%
- 12.07% - 18.20%
- 9.93% - 12.06%
- 6.36% - 9.92%
- ○ Welsh Medium Secondary Schools
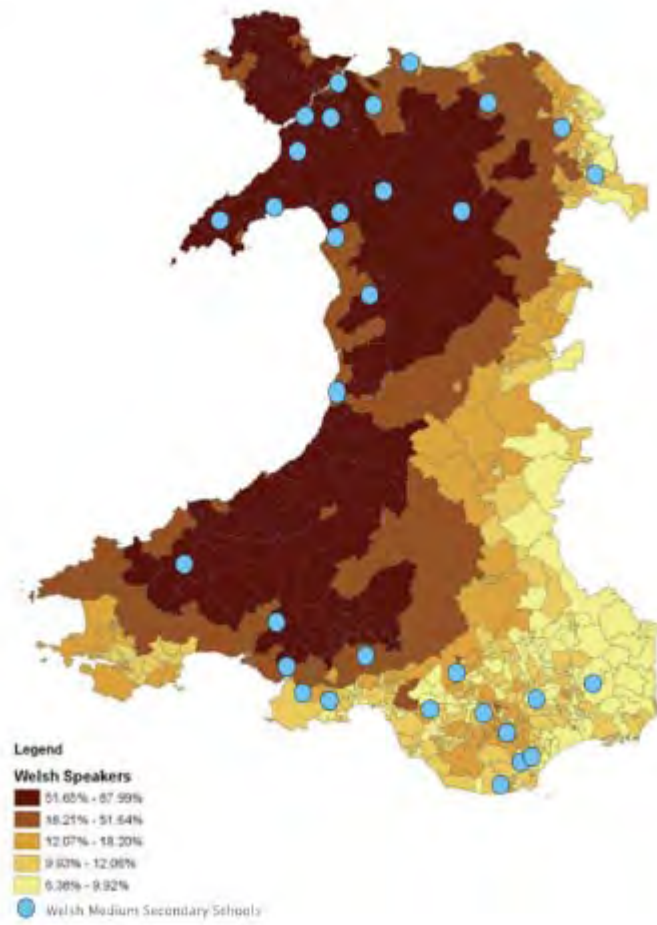
Figure 20: Map to show the Percentage of Welsh Speakers as a proportion of the population and the location of Welsh-Medium Secondary Schools

(Source: Base map: Office of National Statsitics. Welsh Medium Secondary Schools: supplied directly by Welsh Government)

CONCLUSIONS

Appraisal of Policy

The appraisal and analysis of Welsh Government documents has identified a number of conclusions but the predominant observation is the limited application of spatial planning in policy documents. Of over 150 documents appraised only 37% contained maps. A higher percentage of documents did have spatial consideration at 48%. To some extent the lack of explicit spatial data can be explained by the fact that policies are the strategic aims and objectives of a government. The wider inclusion of simple evidence maps to act as a guide for decision-makers is one possible solution. There are two probable reasons for the lack of inclusion of even these maps. One is the time-lag taken to collect, input and then map the data often making them historical before they are published. The second is that even despite this time lag maps may well be updated before a policy.

Broken down into topic areas there are variations in the findings. Only 5% of social documents that were appraised referenced spatial aspects which is significantly lower than the environmental and economic categories of which 50% and 75%, respectively, acknowledged spatial policy implications. To some extent the environmental documents acknowledgement of spatial considerations is demonstrated through the inclusion of substantial amounts of baseline data, some of which was mapped. However the only example of this evolving to aid the development of strategic aims and outcomes was in the Climate Change Strategy for Wales and Planning Policy Wales Technical Advice Note 8: Renewable Energy (TAN 8). These documents took baseline data and mapped it to illustrate policy approach, which in turn provided clearer guidance to the reader.

The economic documents acknowledged spatial implications, predominantly through the use of language and vocabulary and to a lesser degree through mapping. This was done to a greater extent than both the environmental and social categories. For example the freight transport document identified the physical peripheral location of Wales within the European Union and the subsequent need to develop transport infrastructure that fully integrated into the EU. These improved links would over-ride the physical isolation. What the document did not discuss in detail was how it would achieve this. It identified theoretical possibilities but very little specific spatial locations.

The final category, social, was considered to have implicit spatial implications but these were inadequately acknowledged and ambiguous in their distinction. Very few maps were incorporated into social documents and very little baseline data published. The Welsh-Medium schools strategy highlighted this lack of spatial consideration. The document addressed ways of achieving a greater take-up of Welsh-language within the population through education. The document acknowledged spatial implications that determined a strategy's effectiveness, such as the extent of the existing population that spoke Welsh. It did not once consider the spatial implication of school locations in influencing the strategy's effectiveness.

The significant difference between categories is noteworthy; one explanation is the underpinning concept behind the policies. Both environmental and economic policies built upon sustainability and the sustainable development of the respective sectors, this enhanced cross-sector workings, which is fundamental to introducing spatial planning (Healey, P. 1997b). However much of the cross-sector consideration within the social documents, tended to be in relation to service delivery and provision This should be an opportunity to really address spatial consideration in policy making. Instead it focuses mainly on issues of communication and financial constraints.

The vocabulary and use of language also varied between the documents, this may be as a result of underpinning concepts or possibly the differing backgrounds and cultures of the policy makers.

Much of the policy implementation is expected to come at a local level. In the context of this project this creates two issues; one for the project itself and; one more generally. With regard to the project the spatial implications of policies are seen more at the implementation stage and so this has not been analysed to a great extent. Of the policies that do have implementation data available there have been contradictions (Figures 14 & 15). However, this is only a limited number of polices and so it would be inaccurate to say this is representative of all policies.

The second, more general problem, regarding implementation is the fact that spatial issues often do not have defined boundaries and yet delivery authorities such as local authorities, local health boards, and police forces do. Various documents acknowledge this blurring of boundaries (WSP, Local Govt (Wales) Measure 2009, PPW5) but there is no legal requirement for cross-border working. Furthermore local authorities are in competition with each other to attract inward business investment and tax paying residents so this

competition may prevent successful collaboration. The number of local authorities within Wales may serve to further exaggerate this problem. Interestingly the Scottish government have recently created one police force for the whole of Scotland, the progress of which will be monitored by the Welsh Government. (Cook, 2013)

Another conclusion was the Welsh Government had more maps that it published. The team was provided with two maps that showed locations of Welsh medium Primary and Secondary schools by the Welsh Government, yet these remain out of the public domain in terms of being published in any documents or on the Welsh Government's website. Some of the policy documents, such as the Refugee Inclusion Strategy also referred to spatial baseline data that does not appear to be mapped in the public domain. Why some of these maps are not published is unclear; it may be that the data is politically sensitive or simply that consideration has not been given to publishing it.

A number of the policy documents did identify potential mapping projects to be undertaken. These varied from creating roadmaps of red meat and dairy products to mapping all Communities First cluster areas. Only time will tell whether these will be seen as priorities; a mapping exercise to identify creative industries clusters was suggested in the 2004 document Creative success – a strategy for the creative industries in Wales, and the new Sectors Plan document published 9 years later makes the same suggestion.

Not only were most of the maps baseline data the style of mapping was consistent. Maps were predominantly traditional in terms of acknowledging defined boundaries. The 'fuzzy boundary' maps of the WSP were not replicated. The lack of policy implementation strategies and specific plans creates an opportunity to map more imaginatively showing aims and preferred outcomes. The fact that such maps have not been used can be acknowledged in a number of ways. The first simply being that it is not in the national culture to communicate policy through mapping. Duhr (2007) identifies this poor mapping culture and the policy analysis reinforces this to a large extent. Another consideration is that the consideration of space is not as high up the policy agenda as some of the documents suggest. Much of the spatial acknowledgment in the documents is as a consequence of other priorities, such as sustainability in transport documents or economic restrictions guiding Rural Healthcare provision. This means the spatial implications are not the first consideration, rather the result of others. If this is the case the perceived requirement for policy mapping is not a priority. If it is not a priority then more imaginative spatial maps are far less likely to be created.

Spatial Planning

The findings of the Map for Wales report recognises the important role spatial planning and spatial considerations have in policy making. The benefits of spatial planning are acknowledged in the policy documents but in most cases not always applied.

In some cases adopting a spatial approach encourages greater cross-sector co-ordination of policies by encouraging policy makers to think in a broader sense, not in isolation. When considered cross-sectorally the chance of achieving a successful outcome is greater as spatial synergies can be identified and acted upon. Instead when considered in isolation policies can have unintended consequences. If these consequences are negative polices result in creating or reinforcing an areas spatial isolation. Figure 13 identified such a possibility where approximately 70% of new schools infrastructure was located outside of the identified regeneration areas, the opposite of the Wales Infrastructure Investment Plan's (WIIP) stated aims.

Regional collaboration can also be developed through spatial planning, and by sharing information vertically and horizontally previously overlooked opportunities may arise. One such example is illustrated in Figure 15 showing the locations for food waste recycling. Greater co-ordination between consortia areas at a national level may have improved the spatial coherence of the strategy and potentially saved money by lowering travel costs.

Applying a greater spatial awareness may also help target resources because of a clearer understanding of policy concerns. For example, the Refugee Strategy targeted medical provision based on cultural needs. By spatially focusing policy implementation measures, resources can be targeted for a more cost-effective service provision.

There are also potential opportunities for knowledge sharing to aid problem solving through the consideration of spatial implications. For example the WSP found geographically dispersed areas to experience similar problems and concerns. By mapping this authorities may be able to work together or share experiences in how they dealt with similar issues, develop best practice and encourage dialogue between stakeholders. Working together to identify solutions would reduce time and the duplication of resources across several Local Authorities if all the similarly affected areas collaborated as demonstrated by the cross borders implications of climate change, Figure 7.

Map for England: Map for Wales

Map for England's analysis considered the coalition government documents for England (National Infrastructure Plan (NIP), National Planning Policy Framework (NPPF) & Urban Growth Cities (UGC)) and their spatial influence. The Map for England's findings concluded that the NPPF is 'aspatial' in that it has very little explicit spatial data. Even where it does acknowledge spatial implications, such as policies on AONB or Conservation Areas there are no maps to identify locations and the policies are generic (Wong et al. 2012 p.16). The NIP is criticised for its lack of cross-sectoral co-ordination and although the documents acknowledge spatial implications of economic growth and infrastructure investment it does not map or link any of the sectoral analysis together (Wong et al. 2012 p.11).

As a result the Map for England found tensions within coalition government policies that contradict each other, for example, estimated population growth areas are found in National Parks and areas of water supply shortage. Other policies had unintended consequences, such as HS2; by making London 'nearer' it actually serves to reinforce its dominance as a location for economic investment. It also further isolates the North East of England because travel times are further extended relative to North West England travel times to London (Wong et al. 2012 p.32-34).

The criticisms of the NPPF and the NIP are, to some degree levelled at the equivalent Welsh documents; PPW5 & WIIP. Actions by the Welsh Government may help to alleviate some of the criticisms of the WIIP, for example the electrification of the South Wales railway mainline to London. The UK central government had originally only planned to electrify the railway from London to Cardiff. Extensive lobbying from Wales for the extension through to Swansea was successful (Keates, 2013). Undoubtedly there were numerous reasons for this lobbying but certainly one would have been that without it Swansea would have been marginalised in time/space relations with London.

However where PPW5 differs from the NPPF is in its acknowledgement within the document of other Welsh Government Policies. Each PPW5 section identifies other Welsh Government documents, some statutory, others policy documents, that underpin the PPW policies. This helps the reader to appreciate the wider implications of each policy paragraph and serves to reinforce the emphasis of wider issues and spatial considerations.

Ultimately Wales, unlike England, has its own spatial plan. The WSP acts as a baseline document to which all other government policy documents should relate. The WSP is often acknowledged within documents in terms of considering the main aims and objectives of the

Plan. The problem for Wales is that the WSP is rapidly becoming a historical document. It was last updated in 2008 and so written before the current challenges to the economy. As it becomes more obsolete the recognition of cross-sector collaboration and the need to think spatially may become lost. For all its criticisms the WSP does appear to serve as an anchor for Welsh Government policy and so enable and encourage cross-sector consideration and the spatial implication of policy aims and objectives.

The lack of coordination at the implementation stage is a key consideration for the Welsh Government. The WSP was created to act as a framework document for policy development. To a degree it achieves this and is referenced within policy documents; the spatial contradictions come not at the policy level, rather the implementation level.

Recent considerations of the legal status of TAN 8 may only result in less specific advice given by the Welsh Government. Planning magazine reported that, "a QC has predicted a 'Pandora's box' of legal challenges to the Welsh government's policy on renewable energy," (Cook, 2012 p. 14) because of the lack of a Strategic Environmental Assessment (SEA) undertaken during its creation. The EU directive requiring SEAs to be carried out was not enforced when the document was written; however using this document in Local Development Plans creates legal problems (Cook, 2012) reports. Such complexities are likely to result in a further shying away of specific spatial policy guidance.

 As mentioned before much of the policy implementation is expected at a lower level, and generally through local authorities. The rise of City Regions up the political agenda recently is not insignificant. As the literature review identified the Localism 2011 Act removed regional spatial planning from the English planning system, yet it was never a requirement of the 2004 Planning Act in Wales. For the city regions approach to be successful it will need to be included in the Welsh Planning system. The Map for Wales project has identified a lack of spatial coordination at implementation stage and so the city regions and regional planning would provide an ideal opportunity.

Limitations

The findings of the Map for Wales project have developed throughout the project. However, physical distance between team members and their respective external responsibilities have resulted in a lack of shared working time. This in turn has limited face-to-face debate and decision-making. Whilst extensive use was made of email, this has proved to be a somewhat poor substitute for co-location of a project team. As a result, there is scope to further develop the conclusions, particularly in respect of cross-sectoral analysis.

The potential for personal interpretation was also considered but the development of the proforma was deemed sufficient to limit the impact on the findings. The Map for England team advised that key words were not sufficient as the language of policy documents differed they counter-balanced this with regular meetings to discuss the current raft of documents that had been analysed. (Personal Communication, 2012) The physical dissipation of the members of the team that worked on the analysis meant we were not able to factor this discussion time into the project. It was hoped the proforma would mitigate this lack of verbal communication. Although the proforma helped it was not a complete replacement.

AGENDA FOR FUTURE RESEARCH

The opportunities to develop aspects and findings from the Map for Wales project are numerous however only key questions raised are being suggested for future work.

- Do local authority policies have a stronger spatial element than WG documents? Is this as a result of WG inference at national level or because authorities see spatial planning as a suitable approach to local policy? How does this compare with England's local authority approach?

- How coherent is WIIP mapping? Do the contradictions examined in the Map for Wales project reflect the document as a whole?

- Do creative clusters identify with the WSP spatial ideas and locations?

- How does spatial planning correspond with an ecosystem approach as proposed in Sustaining a Living Wales, Wales' new approach to natural resources management?

- Analysis of spatial planning from the perspective of a developer to establish if the benefits, as identified in the Map for Wales literature review, are improving the success of implementing major projects?

- Compare the findings of the Map for Wales in other contexts such as the European Spatial Development Perspective or Scottish Policy?

- Do the number of internal borders affect policy implementation and create spatial synergies or conflicts as a result?

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APPENDIX 1

Sample of Proforma

Policy Name		Policy Area	Author	Published Date

Spatial Implications			
Cross border implications			
Would policy benefit from spatial element? If so in what form?			

Maps Y / N	Pages	Tabulated spatial data Y / N	Pages	Spatial Data in Text Y / N	Pages

APPENDIX 2

Table of Policies Appraised

APPENDIX 2- Table of Policies Appraised

Environment Policies with Spatial Implications

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Farming and Countryside	WG	Rural Development Plan for Wales 2007- 2013	Y	Y	N	N
Farming and Countryside	WG / LA	Common Land Village Green Register (8.4% of Wales = CL)	Y	Y	N	N
Farming and Countryside	WG	Farming, Food and Countryside: Building a secure future – A new strategy for farming	Y	Y	Y	N
Farming and Countryside	Food and Fisheries WG	Wales Fisheries Strategy	Y	Y	Y	N
Farming and Countryside	Food and Fisheries WG	Wales Fisheries Strategy – Implementation Plan	Y	Y	Y	N
Farming and Countryside	Food and Fisheries WG	Strategic Action Plan for the Welsh Dairy Industry	Y	Y	Y	N
Farming and Countryside	Food and Fisheries WG	Strategic Action Plan for the Welsh Red Meat Industry	Y	Y	N	N
Climate change	WG	Climate change strategy for Wales	Y	Y	Y	N

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Climate change	Energy WG	TAN 8: renewable energy (2005)	Y	Y	Y	N
Climate change	Energy WG	Fuel poverty strategy	Y	Y	N	N
Climate change	Renewable Energy WG	Marine Renewable Energy Strategic Framework	Y	Y	Y	Y
Climate change	Renewable Energy WG	Severn tidal power	Y	Y	N	N
Env Protection and Countryside	Air Quality WG	Air Quality Strategy for England, Scotland, Wales and Northern Ireland: DEFRA	Y	Y	Y	Y
Env Protection and Countryside	Air Quality WG	Local Air Quality Management Policy	Y	Y	Y	N
Env Protection and Countryside	Air Quality WG	South Wales Zone Air Quality Action plan	Y	Y	N	N
Env Protection and Countryside	WG	Environment Strategy for Wales	Y	Y	N	N
Env Protection and Countryside	Noise WG	Environmental Noise Action Planning (Wales) Agglomerations, Roads and Railways	Y Y	Y	N	N
Env Protection and Countryside	Noise WG	Cardiff and Vale of Glamorgan Agglomeration Action Plan	Y	Y	Y	N

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Env Protection and Countryside	Noise WG	Railway Action Plan for Wales	Y	Y	Y	N
Env Protection and Countryside	Noise WG	Roads Action Plan for Wales	Y	Y	Y	N
Env Protection and Countryside	Noise WG	Swansea/Neath Port Talbot Agglomeration Action Plan	Y	Y	Y	N
Env Protection and Countryside	Waste WG	Towards Zero Waste	Y	Y	N	N
Env Protection and Countryside	Waste WG	Municipal Sector Plan (Waste)	Y	Y	N	N
Env Protection and Countryside	Flooding WG	National Strategy for Flood and Coastal Erosion Risk Management	Y	Y	N	N
Env Protection and Countryside	Flooding WG	Future Flooding in Wales: Flood defences (2010)	Y	Y	N	N
Env Protection and Countryside	Flooding WG	Flooding in Wales: A National assessment of Flood Risk (2009)	Y	Y	Y	N
Env Conservation & Management	WG	TAN 5 – Nature Conservation and Planning	Y	Y	N	N
Env Conservation & Management	Natural Landscapes	Policy Statement for the National Parks and National Park Authorities in Wales	Y	Y	N	N
Env Conservation & Management	Marine WG	UK Marine Policy Statement (consultation doc)	Y	Y	N	N
Env Conservation	Marine WG	Making the most of Wales' Coast – the	Y	Y	Y	N

Topic	Source	Policy	Proforma	Spatial	Maps	Table
& Management		Integrated Coastal Zone Management Strategy for Wales				
Env Conservation & Management	Marine WG	Marine Conservation Zones – Potential Site Options for Welsh Waters	Y	Y	Y	N
Env Conservation & Management	Marine WG	Site Selection guidance for Highly Protected Marine Conservation Zones	Y	Y	Y	N
Env Conservation & Management	Woodland WG	The Woodland for Wales Action Plan	Y	Y	Y	N
Sustainable Development	WG	Masterplans	y	Y	N	N
Tourism	WG	Coastal Tourism Strategy	Y	Y	N	N

Environment Policies with No Spatial Implications

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Farming and Countryside	WG	Rural Development Plan for Wales 2014 – 2020 (in development)	Y	N	N	N
Farming and Countryside	EC	Common Agriculture Policy	N	-	-	-
Farming and Countryside	Food and Fisheries WG	Scallop Fishery (Wales) (No.2) Order	N	-	-	-

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Farming and Countryside	Food and Fisheries WG	Netting Areas – North for Byelaw 24 & 25, South for Byelaws 29 & 30 (Salmonids)	N	-	-	-
Farming and Countryside	Food and Fisheries WG	Tir Gofal (Glas Tir)	N	-	-	-
Farming and Countryside	Food and Fisheries WG	Welsh Drinks Industry Action Plan	Y	N	N	N
Farming and Countryside	Food and Fisheries WG	Second Organic Action plan for Wales	Y	N	N	N
Farming and Countryside	Food and Fisheries WG	Food Tourism Action Plan: Food and Drink for Wales	Y	N	N	N
Climate change	WG	Climate change strategy for Wales: Delivery Plan for emission reduction	Y	N	N	N
Climate change	WG	Adaptation Delivery Plan: Climate change strategy for Wales	Y	N	N	N
Climate change	WG	Climate change: its impact for Wales (2009)	N	-	-	-
Climate change	WG	Policy statement: preparing for a changing climate	N	-	-	-
Climate change	Energy WG	Energy Wales: a low carbon transition	Y	N	N	N
Climate change	Energy WG	Arbed: strategic energy performance investment	N	-	-	-

Topic	Source	Policy	Proforma	Spatial	Maps	Table
		programme				
Climate change	Energy WG	Fuel poverty strategy evidence plan	Y	N	N	N
Climate change	Energy WG	Local fuel poverty maps for Wales	N	-	-	-
Climate change	Renewable Energy WG	Our Energy Policy Statement, A Low Carbon Revolution	N	-	-	-
Climate change	Renewable Energy WG	Renewable Energy Route Map	Y	N	N	N
Climate change	Renewable Energy WG	Bio energy Action plan for Wales	Y	N	N	N
Climate change	Renewable Energy WG	National Energy Efficiency and Savings Plan	Y	N	N	N
Climate change	Renewable Energy WG	Green Jobs Strategy	Y	N	N	N
Climate change	Renewable Energy WG	Ministerial Advisory Group on Economy and Transport's report "The Energy Sector"	N	-	-	-
Climate change	Renewable Energy WG	Ministerial Policy statement on marine energy in Wales	N	-	-	-
Climate change	Renewable Energy WG	Turbine SSSA	N	-	-	-
Env Protection and Countryside	Contaminated Land WG	The Contaminated Land Statutory Guidance For Wales 2012	Y	N	N	N

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Env Protection and Countryside	WG	Environment Strategy Action Plan 2008-2011	Y	N	N	N
Env Protection and Countryside	WG	Environmental Strategy for Wales: First Action Plan Policy Map	Y	N	N	N
Env Protection and Countryside	Noise WG	Noise mapping and Action Planning: Role in reducing transport noise in Wales	Y	N	N	N
Env Protection and Countryside	Waste WG	Regional Waste Plans	N	-	-	-
Env Protection and Countryside	Flooding WG	Flood maps	N	-	-	-
Env Protection and Countryside	WG	Nitrate Vulnerable Zones	N	-	-	-
Env Protection and Countryside	WG	Strategic Policy Position Statement on Water	N	-	-	-
Env Protection and Countryside	EU	Water Framework Directive	N	-	-	-
Env Conservation & Management	WG	Natural Environment Framework – Living Wales – Sustaining a Living Wales & NRW – lead into Environment Bill & Planning Bill (consultation doc)	Y	N	N	N
Env Conservation & Management	WG	Sustaining a living Wales (Consultation doc)	Y	N	N	N
Env Conservation	Access to the	A walking and Cycling Action Plan for Wales 2009	N	-	-	-

Topic	Source	Policy	Proforma	Spatial	Maps	Table
& Management	coast					
Env Conservation & Management	Woodland WG	Better woodland for Wales	N	-	-	-
Sustainable Development	WG	One Wales: One Planet, a new Sustainable Development Scheme for Wales	Y	N	N	N
Tourism	WG	Sustainable Tourism Framework	Y	N	N	N
Tourism	WG	Achieving our potential: National Tourism Strategy	Y	N	N	N
Tourism	WG	Cultural Tourism Action Plan 2012-2015	Y	N	N	N

Economic Documents with Spatial Implications

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Transport	WG	One Wales: Connecting the Nation – The Transport Strategy WAG 2008	Y	Y	Y	Y
Transport	WG	One Wales: Connecting the Nation – The Freight Strategy WAG 2008	Y	Y	Y	Y
Transport & Infrastructure	WG	Wales Infrastructure Investment Plan: for Growth and Jobs (2012)	Y	Y	Y	Y

Economic - Digital	WG	Delivering a Digital Wales (2011)	Y	Y	N	N
Economic - Digital	WG	Delivering a Digital Wales – Evidence Pack (2011)	Y	Y	Y	N
Economic – Digital	Ian Hargreaves	The Heart of Digital Wales: a review of creative industries for the WAG (2009)	Y	Y	N	N
Economic Renewal	WG	Economic Renewal: a New Direction (2010)	Y	Y	N	N
Economic – Sectors	WG	Creative Success: a Strategy for the Creative Industries in Wales (2004)	Y	Y	N	N
Economic – Sectors	WG	Department for Business, Enterprise, Technology & Science: Sectors Delivery Plan (2013)	Y	Y	N	N
Regeneration	WG	Vibrant & Viable Places: New Regeneration Framework (2012) – CONSULTATION DOCT.	Y	Y	N	N
Climate Change - Sustainability	WG	One Wales: One Planet – The Sustainability Development Scheme of the WAG (2009)	Y	Y	N	N
Climate change – Energy	WG	Energy Wales: A Low Carbon Transition (2012)	Y	Y	N	N
Climate change - Energy	WG	Fuel poverty strategy (2010)	Y	Y	N	N
Statutory	WG	Local Government (Wales)	Y	Y	N	N

Legislation		Measure 2009 WG – Part 2: Community Strategies & Planning Collaborative Community Planning				
Business and Economy	WG	Welsh Rural Development Plan	Y	Y	Y	N
Business and Economy	WG	Planning Policy Wales	Y	Y	N	Y
Business and Economy	WG	Wales Infrastructure Investment Plan	Y	Y	Y	Y
Business and Economy	WG	Delivering a Digital Wales	Y	Y	Y	N
Business and Economy	WG	One Planet Development TAN 6 - Planning for Sustainable Rural Communities	Y	Y	N	Y
Business and Economy	WG	Economic Renewal - A New Direction	Y	Y	N	N
Business and Economy	WG	The Wales Spatial Plan	Y	Y	Y	Y
Business and Economy	WG	Strategic Action Plan for the Welsh Dairy Industry	Y	Y	Y	Y

Economic Documents with No Spatial Implications

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Economic – Regeneration	WG	People Plans & Partnerships – A National Evaluation of Community Strategies (2006)	Y	N	N	N
Business and Economy	WG	Enterprise zones	Y	N	N	N
Business and Economy	WG	Social Enterprise Action Plan 2009	Y	N	N	N
Business and Economy	WG	Renewable Energy 2005 TAN 8	Y	N	Y	Y
Business and Economy	WG	Practice Guidance: Planning Implications of Renewable and Low Carbon Energy Development	Y	N	N	N
Business and Economy	WG	One Wales: One Planet, a new Sustainable Development Scheme for Wales 22nd May 2009	Y	N	N	N
Business and Economy	WG	Strategic Action Plan for the Horticultural Industry 2010		N	N	N

Topic	Source	Policy	Proforma	Spatial	Maps	Table
			Y			
Business and Economy	WG	Strategic Action Plan for the Welsh Red Meat Industry	Y	N	N	Y

Social Documents with Spatial Implications

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Children and young people	WG	Flying Start	Y	Y	N	N
Children and young people	WG	Integrated Family Support Services- Phased Implementations	Y	Y	N	N
Health of homeless and specific vulnerable	WG	Refugee inclusion Strategy	Y	Y	N	Y
Housing and Community	WG	National Housing strategy	Y	Y	N	N
Housing and Community	WG	The Housing (Wales) Measure 2011	Y	Y	N	Y

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Housing and Community	WG	Financial Inclusion Strategy for Wales (2009)	Y	Y	N	N

Social Documents with No Spatial Implications

Topic	Source	Policy	Proforma	Spatial	Maps	Table
Children and young people	WG	The Children's Rights Scheme	Y	N	N	N
Children and young people	WG	National Minimum Standards for Regulated Child Care	Y	N	N	N
Children and young people	WG	2011 children and young peoples wellbeing monitor	Y	N	N	N
Children and young people	WG	Genesis Wales 2	Y	N	N	N
Children and young people	WG	Family Justice Review	Y	N	N	N
Children and young people	WG	Integrated Family Support Services (regulations 2012)	Y	N	N	N

Health and social Care	WG	Service Improvement Plan 2008-2011	Y	N	N	N
Health and social Care	WG	Rural Health Plan	Y	N	Y	N
Health and social Care	WG	Free Prescriptions	Y	N	N	N
Health and social Care	WG	Supporting people programme grant (SPPG)	Y	N	N	N
Health and social Care	WG	Tackling Domestic Abuse- The All Wales National Strategy	Y	N	N	N
Health and social Care	WG	Change 4 life	Y	N	N	N
Health and social Care	WG	The physical Activity action plan 'creating an active Wales'	Y	N	N	N
Housing and Community	WG	The right to be safe	Y	N	N	N
Housing and Community	WG	The violence against women and domestic abuse- implementation plan 2010-13	Y	N	N	N
Housing and Community	WG	Essex review	Y		N	N	N

Housing and Community	WG	Independent Living Grant (ILG)	Y	N	N	Y
Housing and Community	WG	Getting on together- a community cohesion strategy for Wales	Y	N	N	N
Housing and Community	WG	Travelling to a better Future	Y	N	Y	N
Housing and Community	WG	Voluntary Sector Scheme	Y	N	N	N
Older People	WG	The Strategy for older people in Wales: Annual Report 2008-13	Y	N	N	N
Older People	WG	Carers Strategy for Wales: Action Plan 2007	Y	N	N	N
Older People	WG	National Service Framework for Older People in Wales	Y	N	N	N
	CCSSIW	Care and Social Services Inspectorate Wales		N	N	N

Older People			Y			
Housing	WG	Supporting people programme grant (SPPG) (cross over of policy view Health and Social Care	Y	N	N	N
Transport	WG	Walking and Cycling Action Plan for Wales 2009-2013	Y	N	N	N
Culture and Sport	WG	A museums Strategy for Wales 2010-2015	Y	N	N	N
Culture and Sport	WG	Libraries Inspire- The strategic development framework for Welsh Libraries 2012-16	Y	N	N	N
Arts	WG	Wales Arts Review: A dual Key approach to the		N	N	N

		strategic development of the arts in Wales	Y			
Historic Environment	WG	Planning for the future of historic environment Services in Wales	Y	N	N	N
Sport and Active Recreation	WG	Climbing Higher and next steps	Y	N	N	N
Sport and Active Recreation	Change4life	Change 4 life (cross over as above)	Y	N	N	N
Sport and Active Recreation	sports Wales	Free Swimming	Y	N	N	N
Sport and Active Recreation	sports Wales	5x60 programme	Y	N	N	N

Social Justice	WG	Working for Equality in Wales- Single Equality Scheme	Y	N	N	N
Social Justice	WG	The Equality Act 2010	Y	N	N	N
Social Justice	WG	The Social Model of Disability	Y	N	N	N
Education and Skills	WG	Tackling Poverty Action Plan	Y	N	N	N
Schools	WG	Child Poverty Strategy	Y	N	N	N
Schools	WG	Foundation Phase Statutory Assessment and Reporting Arrangements	Y	N	N	N
	WG			N	N	N

		Financial Education for 7-19 year olds in Wales				
Schools			Y			
Schools	WG`	Careers and the world of work	Y	N	N	N
Schools	WG	Framework for Children's Learning for 3-7 year olds	Y	N	N	N
Schools	WG	National Curriculum, Keys stages 2,3,4	Y	N	N	N
Schools	WG	Personal and Social Framework for 7-19 year olds	Y	N	N	N
Schools	WG	National Literacy and Numeracy Framework	Y	N	N	N
Schools	WG	School banding	Y	N	N	N
	WG			N	N	N

Schools		Learning Wales	Y			
Schools	WG	Towards a digital future	Y	N	N	N
Schools	WG	National Reading and Numeracy Tests	Y	N	N	N
Schools	WG	School Effectiveness Framework	Y	N	N	N
Schools	WG	School Standards Unit	Y	N	N	N
Schools	WG	ICT Self Review Framework and ICT Mark	Y	N	N	N
Schools	WG	Raising Standards and Tackling Workload	Y	N	N	N
	WG	Raising Attainment and Individual Standards in Education (RAISE)		N	N	N

Schools			Y			
Schools	WG	Denbighshire Independent Educations Recovery Board (DIERB)	Y	N	N	N
Schools	WG	Lead and Emergency Practitioner Schools	Y	N	N	N
Schools	WG	Masters in Educational Practice programme	Y	N	N	N
Schools	WG	National Education Conference- Raising School Standards	Y	N	N	N
Schools	WG	The Estyn Remit	Y	N	N	N
Schools	WG	21st Century Schools Information Document	Y Y	N	N	N

Wellbeing	WG	Behaviour and Attendance Action Plan for 2011-2013	Y	N	N	N
Wellbeing	WG	Appetite for Life	Y	N	N	N
Wellbeing	WG	Pupil/ Participation/voice	Y	N	N	N
Wellbeing	WG	Respecting Others: Anti-bullying	Y	N	N	N
Learning Pathways	WG	School-based Counselling Services	Y	N	N	N
Learning Pathways	WG	Update on the vetting and Barring scheme	Y	N	N	N
Learning Pathways	WG	Learning and Skills (Wales) Measure 2009: Learner Support Services and Learning Pathway Doc Guidance.	Y	N	N	N
Post 16	WG	Learning and Skills (Wales) Measure 2009: Local Curriculum for Students aged 16 to 18		N	N	N

			Y			
Post 16	WG	Learning and Skills (Wales) Measure 2009: Local Curriculum for pupils in Key Stage 4	Y	N	N	N
All Sector policies	WG	Welsh-medium education strategy	Y	N	N	N
All Sector policies	WG	Iath Pawb	Y	N	N	N
All Sector policies	WG	Wales Spatial Plan	Y	Y	Y	Y

APPENDIX 3

Original Project Brief

Project no. 1213_2

Title – Data A Map for Wales

Client - RTPI Cymru

Contact – Neil Harris, RTPI Cymru, HarrisNR@cf.ac.uk

Supervisor(s) – (CPLAN will allocate this)

Location – Cardiff

Timeframe – Standard Timeframe (see Module Outline)

Approximate costs involved: minimal as most documents needed can be found on-line or be sent on request

Brief

The RTPI in England recently commissioned research work to the University of Manchester called 'A Map for England', the final report and compendium of maps can be found here: http://www.rtpi.org.uk/knowledge/core-issues/map-for-england/

Findings say amongst other that

'In about one third of these documents the implications for different places are made explicit but in fully two thirds they are not.

By overlaying a number of these maps and diagrams together, the researchers demonstrated that some policies and programmes, when considered against each other in relation to different parts of the country, may have unintended consequences.

For example, the study revealed that there is considerable overlap between broad areas where housing growth is projected in the future and where there are the greatest environmental and

policy constraints to growth. These constraints include the risk of flooding and expected future household water shortages' (RTPI, 2012)

This work does however not cover Wales and Scotland and it would be interesting to know whether findings for England apply also in these other countries. This brief applies to Wales and aims at examining and critically discuss government policy (ie produced by the Welsh Government only – not local authorities or other public body - on any policy area) that has strong spatial implications, using a similar methodology to that used in the Map for England study. The production of one or more map will be discussed and maybe integrated as part of the final report according to the skills present in the group choosing this brief.

A Map for Wales

Part Two:

Welsh Government Policy Atlas

Clare Beaney   Lara Lawrie
Owen Rees   Gemma Bufton   Karen Bolton

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3: Social

4: Strategic

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Map 1: Soil Carbon
Density per 1km in
Wales

Source:
Welsh Government.
May 2009. *Farming,
Food and Countryside:
Building a secure future
A new strategy for
farming - Annexe 1:
Industry
Challenges.* Cardiff:
Welsh Government
p.10
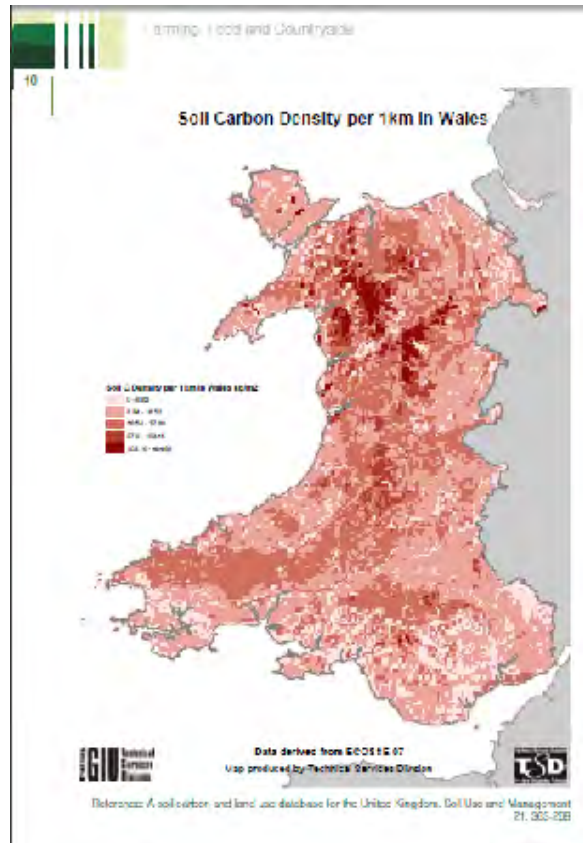
Map 2: Marine Special
Areas of Conservation
and Special Protection
Areas in Wales

Source:
Welsh Government.
2008. *Wales Fisheries
Strategy.* Cardiff: Welsh
Government p. 66
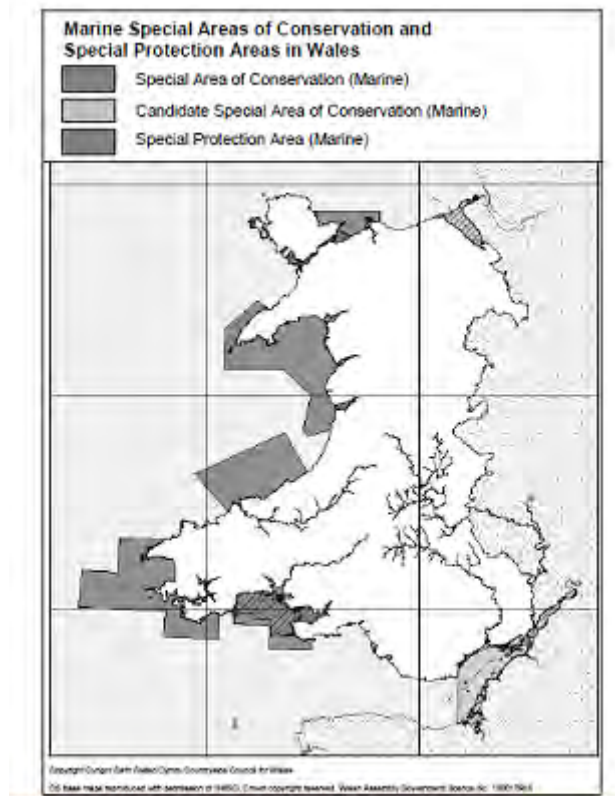
Map 3: Number of
Dairy Holdings 1993 by
Small Area

Source: Welsh
Government. 2007.
*Strategic Action Plan
for the Welsh Dairy
Industry.* Cardiff: Welsh
Government p. 15

Number of Dairy Holdings 1993 by Small Area
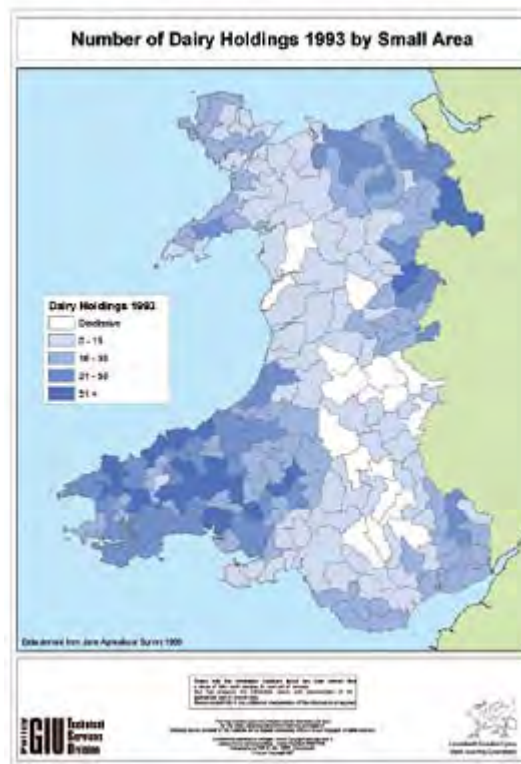
Map 4: Registered
Dairy Holdings

Source: Welsh
Government. 2007.
*Strategic Action Plan
for the Welsh Dairy
Industry.* Cardiff: Welsh
Government p. 19

Registered Dairy Holdings*
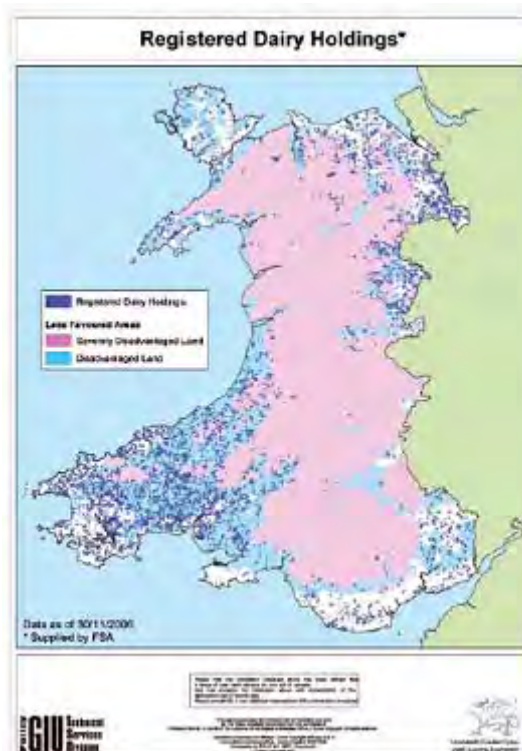
Map 5: UK Climate Projections 2009

Source: Welsh Government. 2010. *Climate Change Strategy for Wales*[online]
Available at: http://wales.gov.uk/docs/desh/publications/101006ccstratfinalen.pdf
[accessed 16 February 2013]p.83

2020   2050   2080
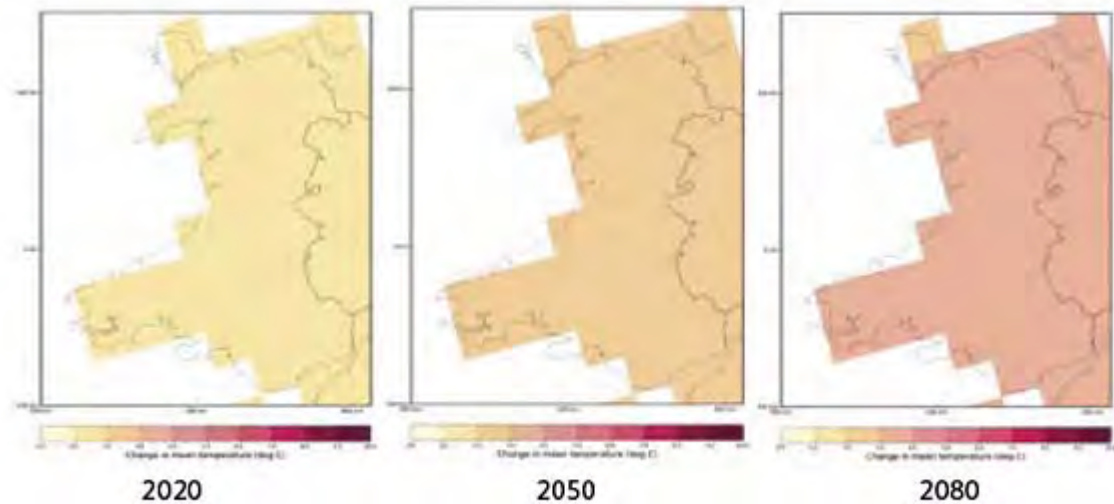
© UK Climate Projections 2009
Funded by DEFRA and the devolved Administrations

Map 6: Change in
Precipitation (%)
Summer

Source: Welsh
Government. 2010.
*Climate Change
Strategy for
Wales*[online] Available
at:http://wales.gov.uk/
docs/desh/publication
s/101006ccstratfinalen
.pdf [accessed 16
February 2013]p.84

Change in precipitation (%)
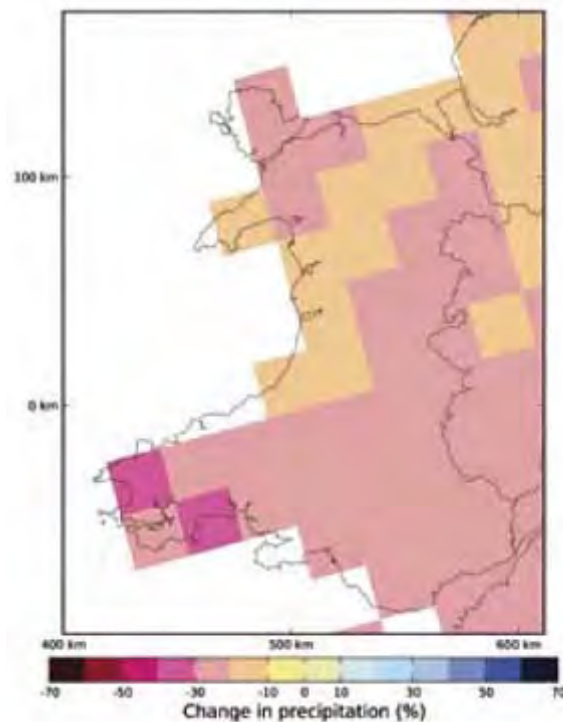
Map 7: Change in Precipitation (%) Winter

Source: Welsh Government. 2010. *Climate Change Strategy for Wales* [online] Available at: http://wales.gov.uk/docs/desh/publications/101006ccstratfinalen.pdf [accessed 16 February 2013]p.85
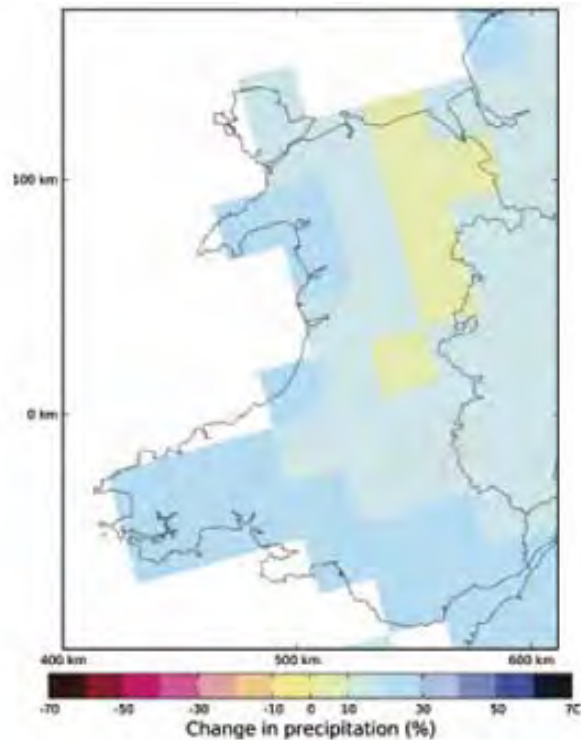
Map 8: Planning for Renewable Energy Wales, July 2005

Source: Welsh Government. 2005 Planning Policy Wales *Technical Advice Note (TAN) 8: Renewable Energy* [online] Available at: http://wales.gov.uk/desh/publications/planning/technicaladvicenotes/tan8/tan8main1e.pdf?lang=en [accessed 16 February 2013] p. 15

Map 9: Strategic Search Areas, Area A. Clocaenog Forest

Source: Welsh Government. 2005 Planning Policy Wales *Technical Advice Note (TAN) 8: Renewable Energy* [online] Available at: http://wales.gov.uk/desh/publications/planning/technicaladvicenotes/tan8/tan8main1e.pdf?lang=en [accessed 16 February 2013] p. 16
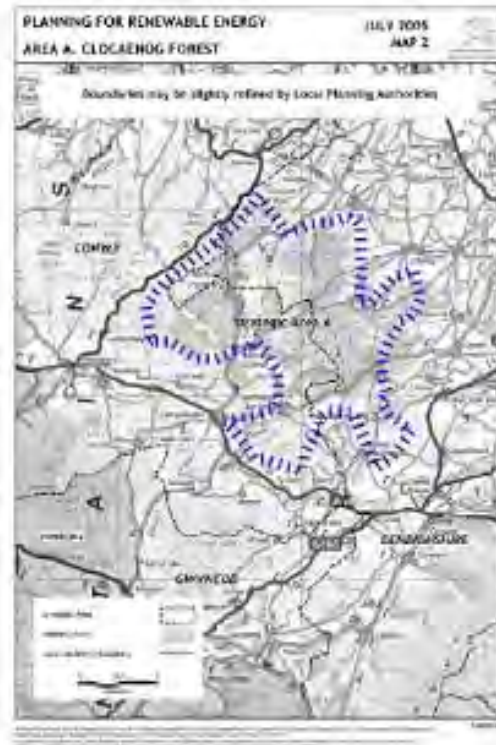
Map 10: Strategic Search Areas, Area B. Carno North

Source: Welsh Government. 2005 Planning Policy Wales *Technical Advice Note (TAN) 8: Renewable Energy* [online] Available at: http://wales.gov.uk/desh/publications/planning/technicaladvicenotes/tan8/tan8main1e.pdf?lang=en [accessed 16 February 2013] p. 17

Map 11: Strategic
Search Areas, Area C.
Newtown South

Source: Welsh
Government.
2005 Planning Policy
Wales *Technical Advice
Note (TAN) 8:
Renewable Energy*
[online] Available at:
http://wales.gov.uk/de
sh/publications/planni
ng/technicaladvicenote
s/tan8/tan8main1e.pdf
?lang=en [accessed 16
February 2013] p. 18

Map 12: Strategic
Search Areas, Area D.
Nant-Y-Moch

Source: Welsh
Government.
2005 Planning Policy
Wales *Technical Advice
Note (TAN) 8:
Renewable Energy*
[online] Available at:
http://wales.gov.uk/de
sh/publications/planni
ng/technicaladvicenote
s/tan8/tan8main1e.pdf
?lang=en [accessed 16
February 2013] p. 19

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Map 13: Strategic
Search Areas, Area E.
Pontardawe

Source: Welsh
Government.
2005 Planning Policy
Wales *Technical Advice
Note (TAN) 8:
Renewable Energy*
[online] Available at:
http://wales.gov.uk/de
sh/publications/planni
ng/technicaladvicenote
s/tan8/tan8main1e.pdf
?lang=en [accessed 16
February 2013] p. 20

Map 14: Strategic
Search Areas, Area F.
Coed Morgannwg

Source: Welsh
Government.
2005 Planning Policy
Wales *Technical Advice
Note (TAN) 8:
Renewable Energy*
[online] Available at:
http://wales.gov.uk/de
sh/publications/planni
ng/technicaladvicenote
s/tan8/tan8main1e.pdf
?lang=en [accessed 16
February 2013] p. 21
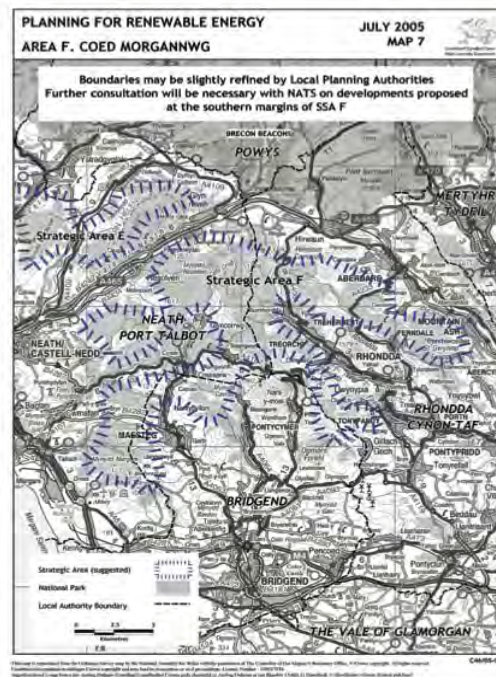
Map 15: Strategic Search Areas, Area G. Brechfa Forest

Source: Welsh Government. 2005 Planning Policy Wales *Technical Advice Note (TAN) 8: Renewable Energy* [online] Available at: http://wales.gov.uk/desh/publications/planning/technicaladvicenotes/tan8/tan8main1e.pdf?lang=en [accessed 16 February 2013] p. 22
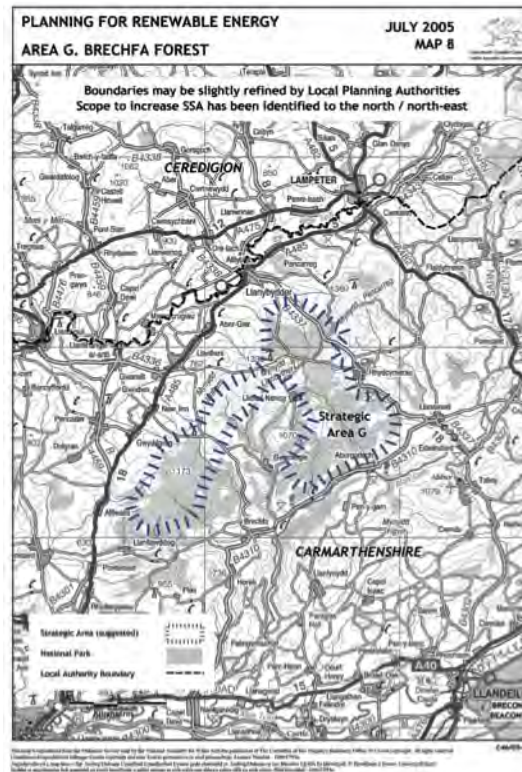
Map 16: Annual mean background concentration – Urban Major Roads

Source: Department of the Environment, Food and Rural Affairs in Partnership with the Scottish Executive, Welsh Government and Department of the Environment Northern Ireland. 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Vol.2).* Norwich: HMSO p. 27-28
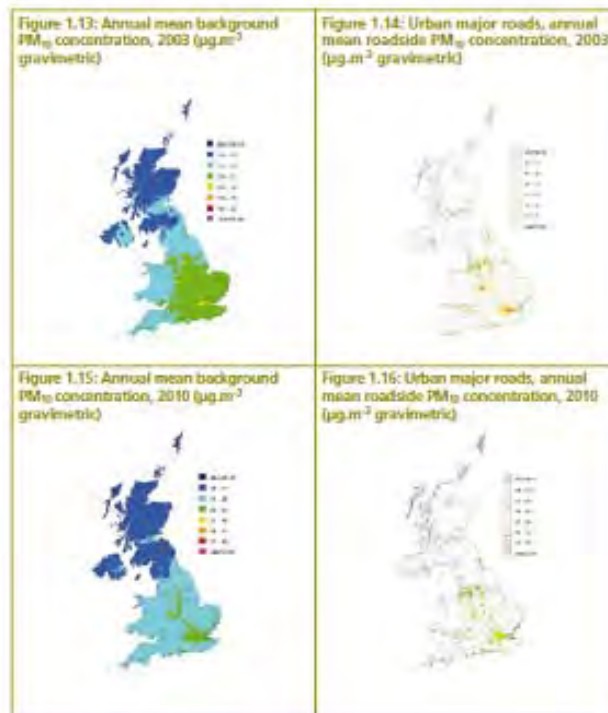
Map 17: Annual mean background concentration – Urban Major Roads

Source: Department of the Environment, Food and Rural Affairs in Partnership with the Scottish Executive, Welsh Government and Department of the Environment Northern Ireland. 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Vol.2).* Norwich: HMSO p. 27-28, 37-38

Figure 1.17: Annual mean background PM₁₀ concentration, 2020 (µg.m⁻³ gravimetric)

Figure 1.18: Urban major roads, annual mean roadside PM₁₀ concentration, 2020 (µg.m⁻³ gravimetric)

Figure 1.23: Annual mean background PM₂.₅ concentration, 2003 (µg.m⁻³, gravimetric)

Figure 1.24: Urban major roads, annual mean roadside PM₂.₅ concentration, 2003 (µg.m⁻³, gravimetric)

Figure 1.25: Annual mean background PM₂.₅ concentration, 2010 (µg.m⁻³, gravimetric)

Figure 1.26: Urban major roads, annual mean roadside PM₂.₅ concentration, 2010 (µg.m⁻³, gravimetric)

Figure 1.27: Annual mean background PM₂.₅ concentration, 2020 (µg.m⁻³, gravimetric)

Figure 1.28: Urban major roads, annual mean roadside PM₂.₅ concentration, 2020 (µg.m⁻³, gravimetric)

Map 18: Annual mean background concentration – Urban Major Roads

Source: Department of the Environment, Food and Rural Affairs in Partnership with the Scottish Executive, Welsh Government and Department of the Environment Northern Ireland. 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Vol.2).* Norwich: HMSO p. 50-51

Figure 1.33: Annual mean background nitrogen dioxide concentration 2003 (µg.m⁻³)

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Figure 1.35: Annual mean background nitrogen dioxide concentration 2010 (µg.m⁻³)

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Map 19: Annual mean background concentration – Urban Major Roads

Source: Department of the Environment, Food and Rural Affairs in Partnership with the Scottish Executive, Welsh Government and Department of the Environment Northern Ireland. 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Vol.2).* Norwich: HMSO p. 91
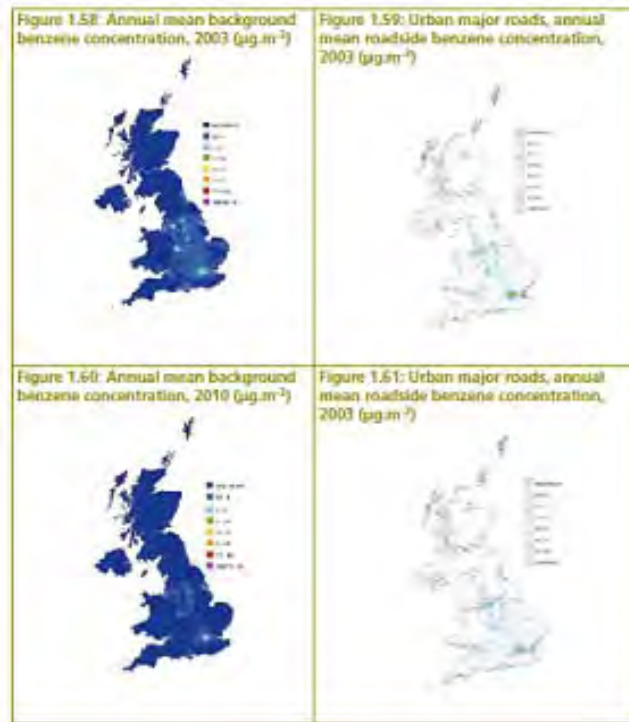
Figure 1.58: Annual mean background benzene concentration, 2003 (µg.m⁻³)

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Figure 1.60: Annual mean background benzene concentration, 2010 (µg.m⁻³)

Figure 1.61: Urban major roads, annual mean roadside benzene concentration, 2003 (µg.m⁻³)

Map 20: Annual mean background concentration – Urban Major Roads

Source: Department of the Environment, Food and Rural Affairs in Partnership with the Scottish Executive, Welsh Government and Department of the Environment Northern Ireland. 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Vol.2).* Norwich: HMSO p. 95

Figure 1.63: Annual mean background 1,3-butadiene concentration, 2003 (µg.m⁻³)

Figure 1.64: Urban major roads, annual mean roadside 1,3-butadiene concentration, 2003 (µg.m⁻³)

Map 21: Exceedence of critical loads for acid & nitrogen deposition

Source: Department of the Environment, Food and Rural Affairs in Partnership with the Scottish Executive, Welsh Government and Department of the Environment Northern Ireland. 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Vol.2).* Norwich: HMSO p. 109

Map 22: Roads for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Source: Welsh Government. 2009 *Cardiff and the Vale of Glamorgan Agglomeration Action Plan* [online] Available at: http://wales.gov.uk/docs/desh/policy/090114noisecardiffplan1en.pdf [Accessed 16 February 2013] p. 33

Figure B1 Roads for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Map 23: Railways for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Source: Welsh Government. 2009 *Cardiff and the Vale of Glamorgan Agglomeration Action Plan* [online] Available at: http://wales.gov.uk/docs/desh/policy/090114noisecardiffplan1en.pdf [Accessed 16 February 2013] p. 34

Figure C1 Railways for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Map 24: Industrial sites for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Source: Welsh Government. 2009 *Cardiff and the Vale of Glamorgan Agglomeration Action Plan* [online] Available at: http://wales.gov.uk/docs/desh/policy/090114noisecardiffplan1en.pdf [Accessed 16 February 2013] p. 35

Figure D1 Industrial sites for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Map 25: First round
major railways

Source: Welsh
Government. 2008.
*Railway Action Plan for
Wales* [online].
Available at:
http://wales.gov.uk/do
cs/desh/policy/09011
4noiserailwayplan1en.
pdf [Accessed 16
February 2013] p. 28

Figure B1 First Round Major Railways

Map 26: B2 Railways
for the first round
Agglomeration of
Cardiff and the Vale of
Glamorgan
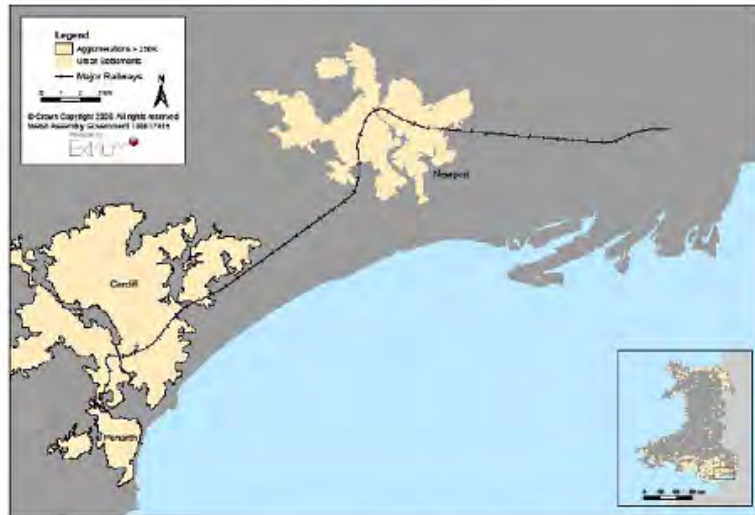
Source: Welsh
Government. 2008.
*Railway Action Plan for
Wales* [online].
Available at:
http://wales.gov.uk/do
cs/desh/policy/09011
4noiserailwayplan1en.
pdf [Accessed 16
February 2013] p. 29
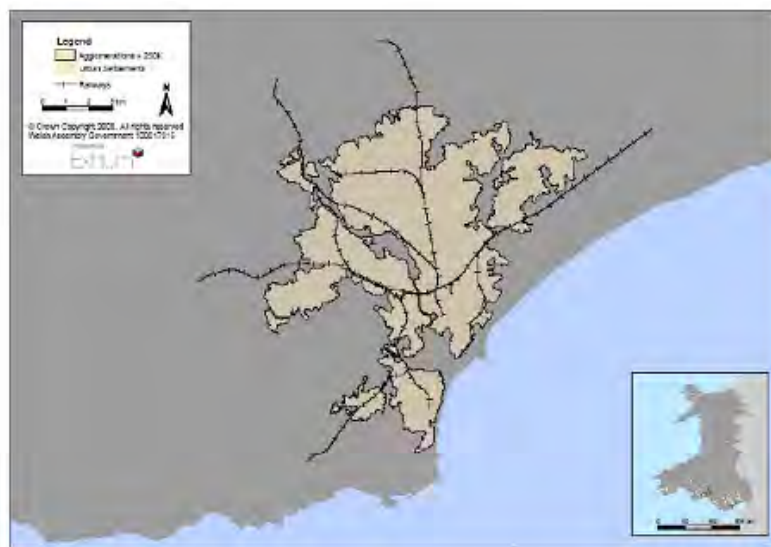
Figure B2 Railways for the first round Agglomeration of Cardiff and the Vale of Glamorgan

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Map 27: Railways of the first round Agglomeration of Swansea/Neath Port Talbot

Source: Welsh Government. 2008. *Railway Action Plan for Wales* [online]. Available at: http://wales.gov.uk/docs/desh/policy/090114noiserailwayplan1en.pdf [Accessed 16 February 2013] p. 30

Figure B3 Railways for the first round Agglomeration of Swansea/Neath Port Talbot

Map 28: First round major roads in North Wales

Source: Welsh Government. 2008. *Roads Action Plan for Wales* [online]. Available at: http://wales.gov.uk/docs/desh/policy/090114noiseroadsplan1en.pdf [Accessed 16 February 2013] p. 29

Figure B1 First Round Major Roads in North Wales

Map 29: First round major roads in South Wales

Source: Welsh Government. 2008. *Roads Action Plan for Wales* [online]. Available at: http://wales.gov.uk/docs/desh/policy/090114noiseroadsplan1en.pdf [Accessed 16 February 2013] p. 30

Figure B2 First Round Major Roads in South Wales

Map 30: B3 Roads for the first round Agglomeration of Cardiff and the Vale of Glamorgan

Source: Welsh Government. 2008. *Roads Action Plan for Wales* [online]. Available at: http://wales.gov.uk/docs/desh/policy/090114noiseroadsplan1en.pdf [Accessed 16 February 2013] p. 31

Figure B3 Roads for the First Round Agglomeration of Cardiff and the Vale of Glamorgan

Map 31: Roads for the
first round
Agglomeration of
Swansea/Neath Port
Talbot

Source: Welsh
Government. 2008.
*Roads Action Plan for
Wales* [online].
Available at:
http://wales.gov.uk/do
cs/desh/policy/09011
4noiseroadsplan1en.pd
f [Accessed 16
February 2013] p. 32
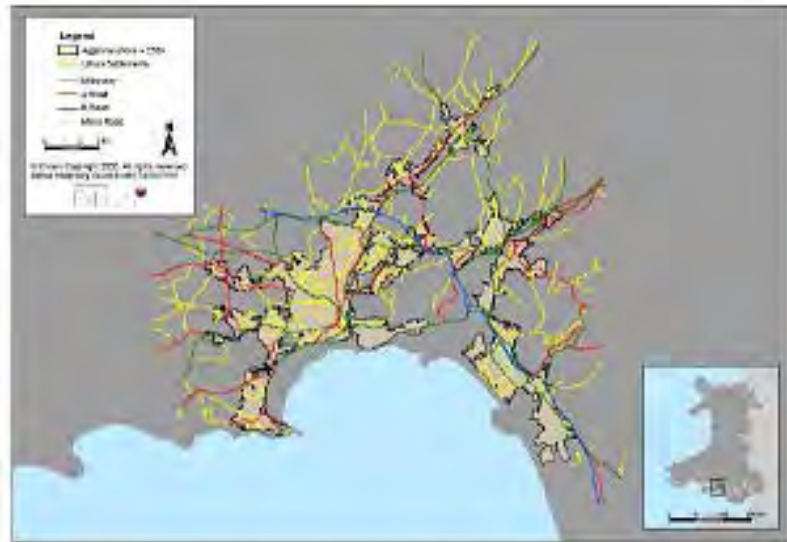
Figure B4 Roads for the First Round Agglomeration of Swansea/Neath Port Talbot

Map 32: B1 Roads for
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Agglomeration of
Swansea/Neath Port
Talbot

Source: Welsh
Government. 2008.
*Swansea/Neath Port
Talbot Agglomeration
Action Plan* [online].
Available at:
http://wales.gov.uk/do
cs/desh/policy/09011
4noiseswanseaplan1en.
pdf [Accessed 16
February 2013] p. 33

Figure B1 Roads for the first round Agglomeration of Swansea/Neath Port Talbot

Map 33: C1 Railways for the first round Agglomeration of Swansea/Neath Port Talbot

Source: Welsh Government. 2008. *Swansea/Neath Port Talbot Agglomeration Action Plan* [online]. Available at: http://wales.gov.uk/docs/desh/policy/090114noiseswanseaplan1en.pdf [Accessed 16 February 2013] p. 34

Figure C1 Railways for the first round Agglomeration of Swansea/Neath Port Talbot

Map 34: Industrial Sites for the first round Agglomeration of Swansea/Neath Port Talbot

Source: Welsh Government. 2008. *Swansea/Neath Port Talbot Agglomeration Action Plan* [online]. Available at: http://wales.gov.uk/docs/desh/policy/090114noiseswanseaplan1en.pdf [Accessed 16 February 2013] p. 35

Figure D1 Industrial sites for the first round Agglomeration of Swansea/Neath Port Talbot

Map 35: Percentage of land within the floodplain in Wales, by Local Authority

Source: Environment Agency Wales. 2009. *Flooding in Wales: A National Assessment of Flood Risk.* Cardiff: EA Wales p. 26

Figure nine: Percentage of land within the floodplain in Wales, by Local Authority

Map 36: Number of properties in areas with significant likelihood of flooding in Wales, by Local Authority

Source: Environment Agency Wales. 2009. *Flooding in Wales: A National Assessment of Flood Risk.* Cardiff: EA Wales p. 27

Figure ten: Number of properties in areas with significant likelihood of flooding in Wales, by Local Authority
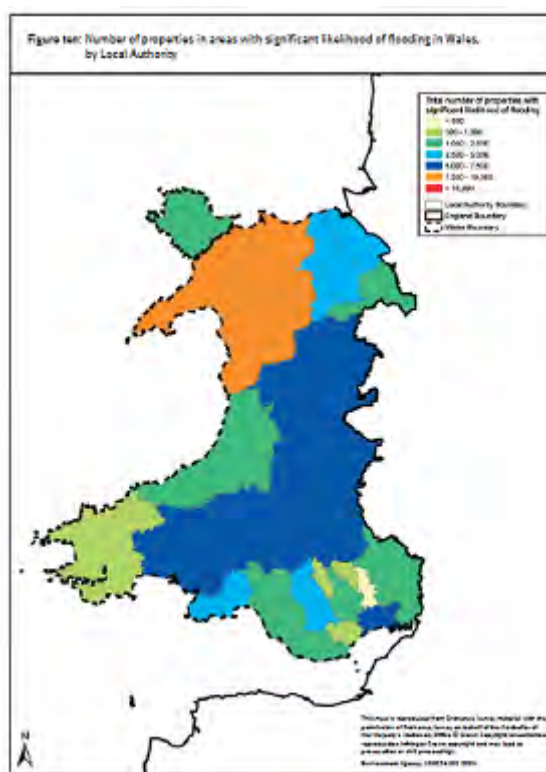
Map 37: Coastal Groups
in Wales

Source: Welsh
Government. 2007.
*Making the Most of
Wales' Coast – the
Integrated Coastal Zone
Management Strategy
for Wales.* Cardiff:
Welsh Government p.
12

Figure 2 Coastal Groups in Wales - illustrative only

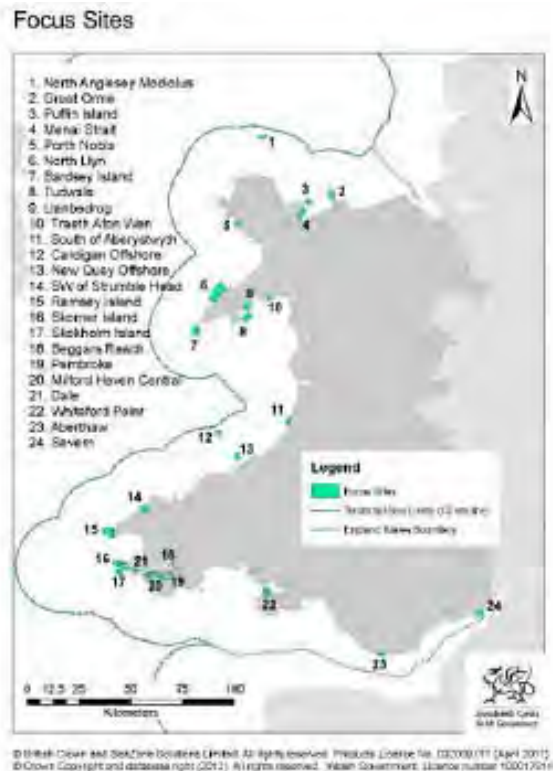Map 38: The 10
Potential Sites (Marine
Conservation Zones)

Source: Welsh
Government. 2012.
*Consultation Document:
Marine Conservation
Zones (MCZ's) –
Potential Site Options
for Welsh Waters.*
Cardiff: Welsh
Government p. 11

Figure 2. The 10 Potential Site Options

Map 39: Puffin Island Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 12

Map 40: North East Menai Strait Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 19
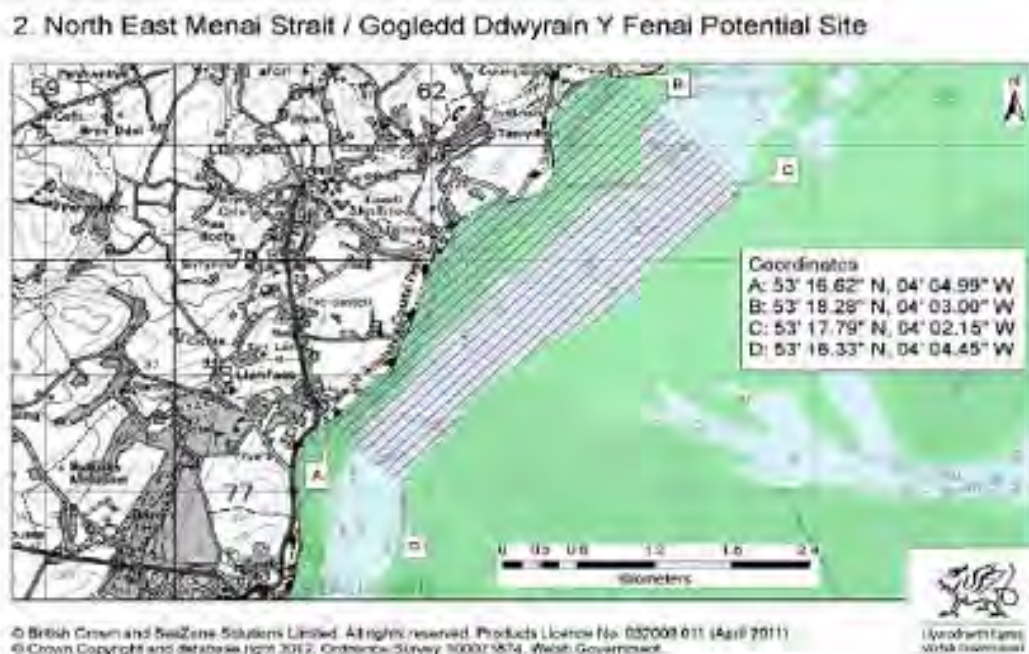
Map 41: North Lleyn Peninsula Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 27

3. North Lleyn Peninsula / Gogledd Pen Llŷn Potential Site

Coordinates
A: 52° 52.55" N, 04° 41.21" W
B: 52° 55.38" N, 04° 41.15" W
C: 52° 57.50" N, 04° 37.96" W
D: 52° 55.55" N, 04° 36.23" W

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Map 42: Bardsey Island Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 35

4. Bardsey Island / Ynys Enlli Potential Site

Coordinates
A: 52° 43.75" N, 04° 48.88" W
B: 52° 46.67" N, 04° 48.02" W
C: 52° 45.71" N, 04° 46.61" W
D: 52° 43.80" N, 04° 47.21" W

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© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

Map 43: St. Tudwals's Island East and Llanbedrog Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 43

Map 44: Mouth of the Dwyfor Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 51

Map 45: New Quay Offshore Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 58
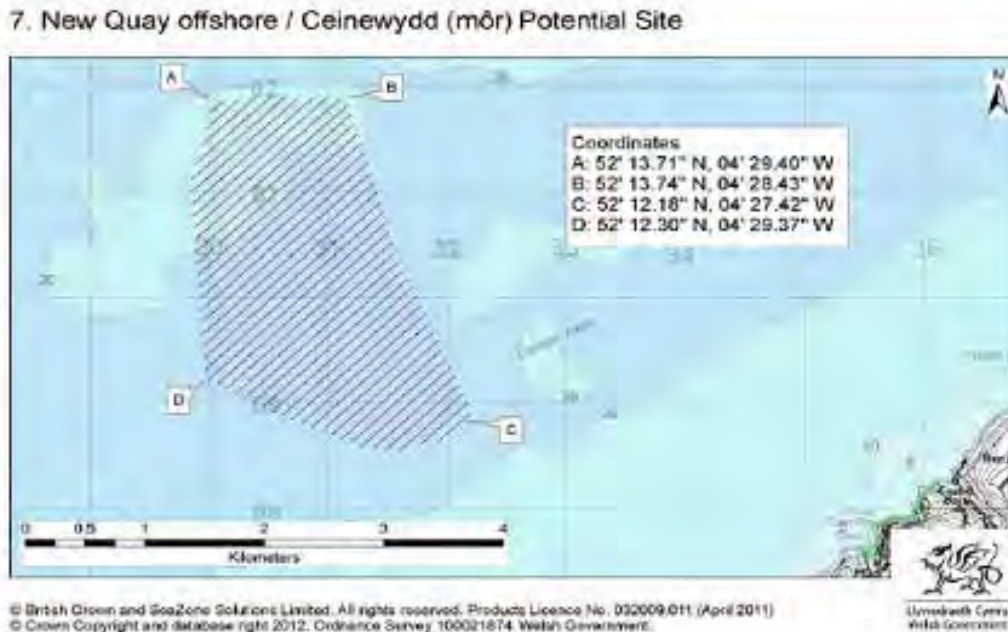
Map 46: South West of Strumble Head Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 64

Map 47: Skomer Potential Site

Source: Welsh Government. 2012. Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters. Cardiff: Welsh Government p. 72

9. Skomer / Sgomer Potential Site

Coordinates
A: 51' 42.88" N, 05' 12.10" W
B: 51' 44.28" N, 05' 19.20" W
C: 51' 44.80" N, 05' 18.10" W
D: 51' 44.41" N, 05' 13.35" W

Map 48: Dale Potential Site

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 80

10. Dale Potential Site

Coordinates
A: 51' 42.78" N, 05' 08.08" W
B: 51' 42.16" N, 05' 08.29" W
C: 51' 42.15" N, 05' 08.97" W
D: 51' 43.08" N, 05' 10.28" W

Map 49: Focus Sites

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 109

Focus Sites

1. North Anglesey Modiolus
2. Great Orme
3. Puffin Island
4. Menai Strait
5. Porth Nobla
6. North Llyn
7. Bardsey Island
8. Tudwals
9. Llanbedrog
10. Traeth Afon Wen
11. South of Aberystwyth
12. Cardigan Offshore
13. New Quay Offshore
14. SW of Strumble Head
15. Ramsey Island
16. Skomer Island
17. Skokholm Island
18. Beggars Reach
19. Pembroke
20. Milford Haven Central
21. Dale
22. Whitsford Point
23. Aberthaw
24. Severn

Legend
- Focus Sites
- Territorial Sea Limits (12 mile)
- England Wales Boundary

0 12.5 25 50 75 100 Kilometers

Map 50: Potential Sites after Ecological Considerations

Source: Welsh Government. 2012. *Consultation Document: Marine Conservation Zones (MCZ's) – Potential Site Options for Welsh Waters.* Cardiff: Welsh Government p. 117

Potential Sites after ecological considerations

Legend
- Potential Sites after ecological considerations (March 2011)
- Territorial Sea Limits (12 nm line)
- England Wales Boundary

0 12.5 25 50 75 100 Kilometers

33

Map 51: Marine
Protected Areas in
Wales

Source: Welsh
Government. 2011.
*Marine Conservation
Zone Project – Wales:
Site Selection Guidance
for Highly Protected
Marine Conservation
Zones* [online].
Available at:
http://wales.gov.uk/do
cs/desh/publications/
110321marinesiteselec
tionen.pdf [Accessed
on: 16 February 2013]
p. 44

Map 52: Welsh
Woodlands

Source: Forestry
Commission Wales.
2009. *Woodlands for
Wales – The Welsh
Assembly Government's
Strategy for Woodlands
and Trees.* Cardiff:
Welsh Government p.
12
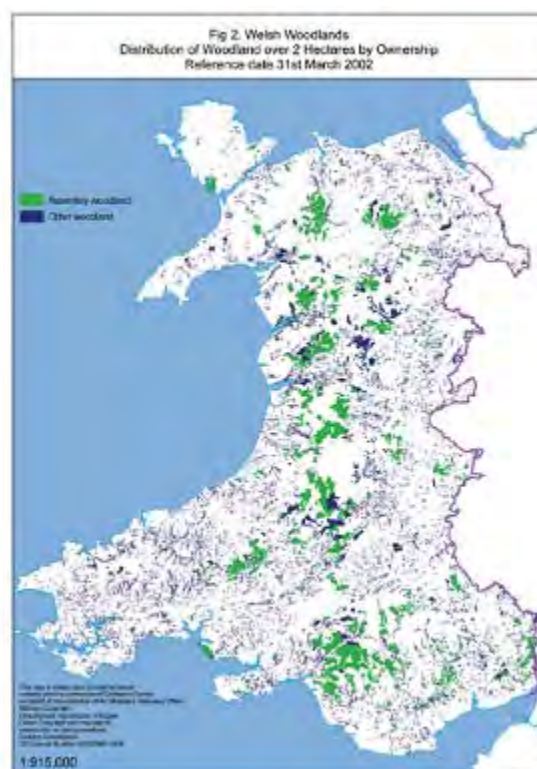
Map 53: Distribution of Ancient Semi-Natural Woodland & Plantations on Ancient Woodland Sites

Source: Forestry Commission Wales. 2009. *Woodlands for Wales – The Welsh Assembly Government's Strategy for Woodlands and Trees.* Cardiff: Welsh Government p. 13

Fig 3. Distribution of Ancient Semi-Natural Woodland & Plantations on Ancient Woodland Sites
Reference date 1st April 2004

1:915,000

2: Economic Policies

Map 54: Settlement type and context for electoral divisions in England and Wales
Map 55: Settlement of over 1,500 persons in Wales and England, 2001 accounting for 90% of the population
Map 56: Drivetimes to settlements of at least 10,000 persons 2001
Map 57: Geographical access to services deprivation domain
Map 58: % Economically active of Working Age Population
Map 59: % Male Working Age Population in Ward – Economically Active
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Map 61: % of Working Age Population with No Qualifications
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Map 72: Post Offices (combined with a shop) in the Welsh Community Councils Surveyed
Map 73: Public Houses (serving meals) in the Welsh Community Councils Surveyed
Map 74: GP Practices in the Welsh Community Councils Surveyed
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Map 85: Power Stations
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Map 88: ADEW Consortia Areas & 21st Century Schools
Map 89: Local Health Boards and Hospitals
Map 90: Communities 2.0: Eligible Areas
Map 91: Percentage of Adults 18+ Digitally Included

Map 54: Settlement type and context for electoral divisions in England and Wales

Source Welsh Government 2012. *The Welsh Rural Development plan* [on- line]. Available at http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 23
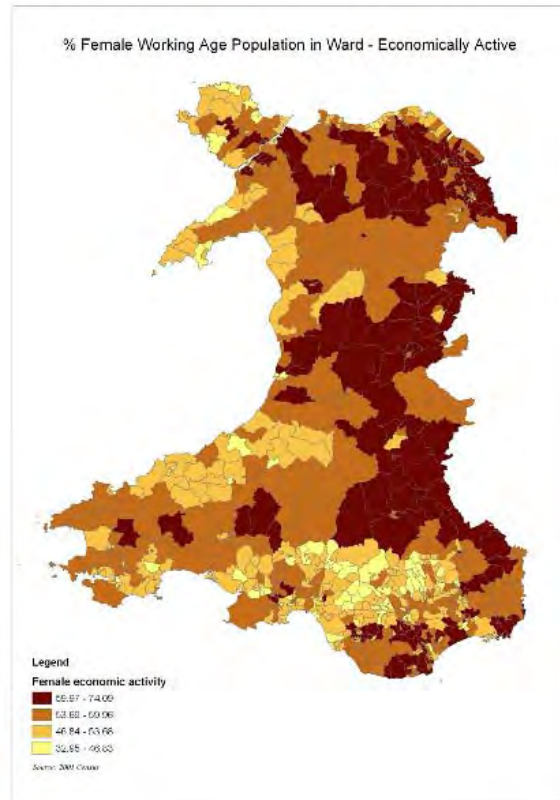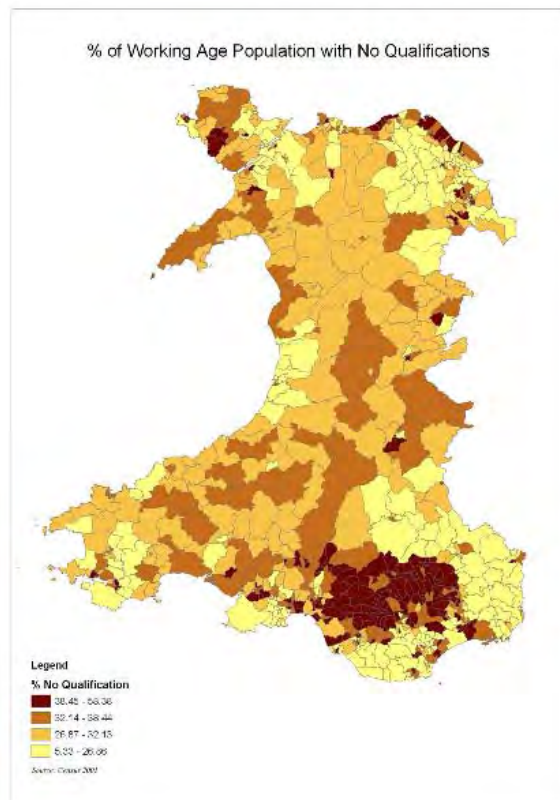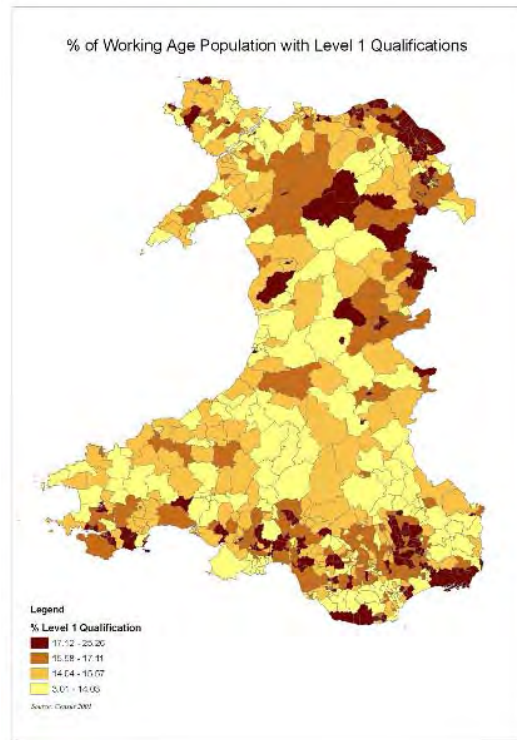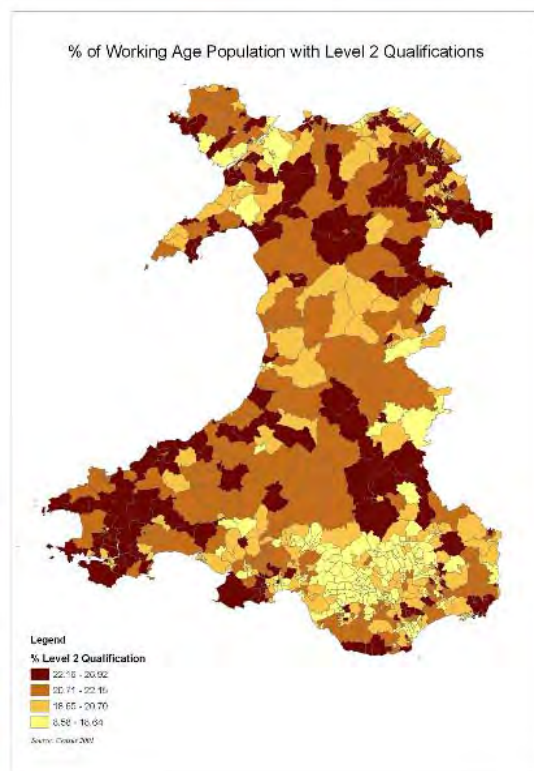

Map 55: Settlement of over 1,500 persons in Wales and England, 2001 accounting for 90% of the population

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 22
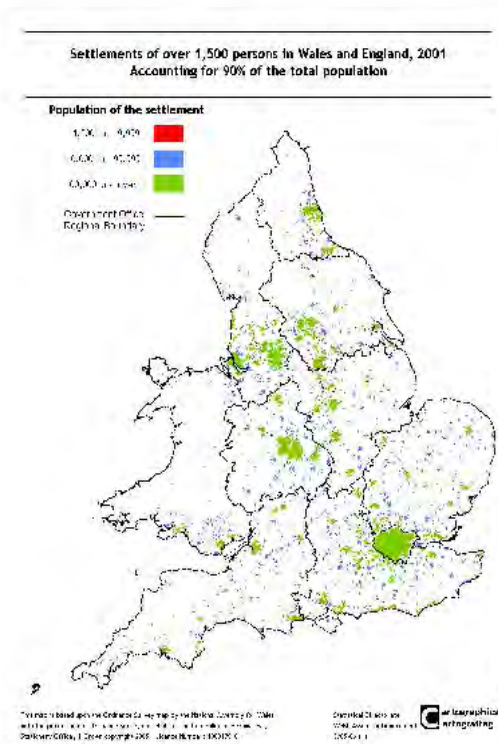
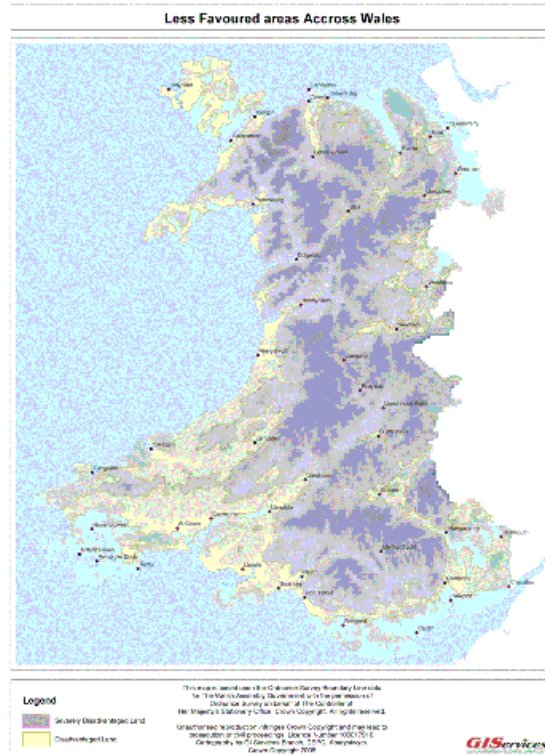Map 56: Drivetimes to settlements of at least 10,000 persons 2001

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 27


Drivetimes to settlements of at least 10,000 persons, 2001
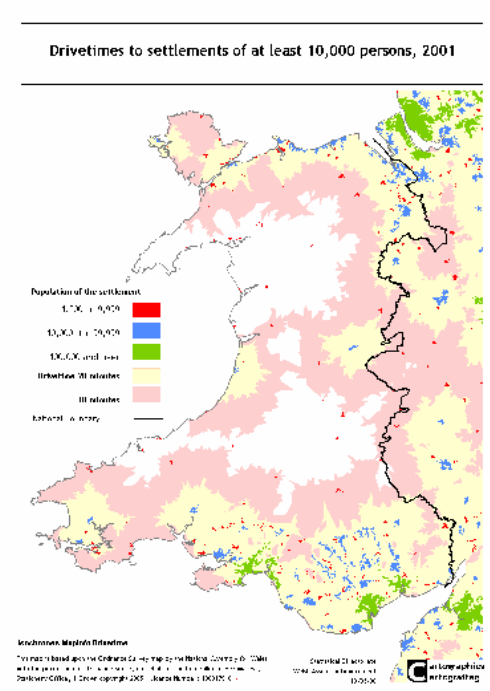
Map 57: Geographical access to services deprivation domain

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 28


Geographical Access to Services Deprivation Domain

Map 58: % Economically active of Working Age Population

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 33


% Economically active of Working Age Population

Legend
Economically active (%)
- 66.10 - 79.53
- 61.75 - 66.09
- 57.08 - 61.74
- 35.90 - 57.08
Source: 2001 Census

Map 59: % Male Working Age Population in Ward – Economically Active

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 34


% Male Working Age Population in Ward - Economically Active

Legend
Male economic activity
- 72.88 - 86.00
- 68.34 - 72.87
- 64.36 - 68.33
- 38.77 - 64.35
Source: 2001 Census

Map 60: % Female Working Age Population in Ward – Economically Active

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 35


% Female Working Age Population in Ward - Economically Active

Legend
Female economic activity
55.97 - 74.09
53.69 - 55.96
46.84 - 53.68
32.95 - 46.83
Source: 2001 Census

Map 61: % of Working Age Population with No Qualifications

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 41

% of Working Age Population with No Qualifications

Legend
% No Qualification
38.45 - 58.36
32.14 - 38.44
26.87 - 32.13
5.33 - 26.86
Source: Census 2001

41

Map 62: % of Working Age Population with Level 1 Qualifications

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 42
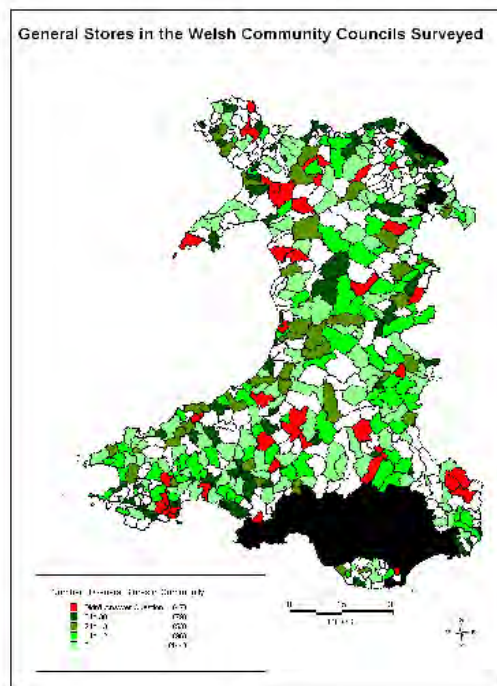

Map 63: % of Working Age Population with Level 2 Qualifications

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 42

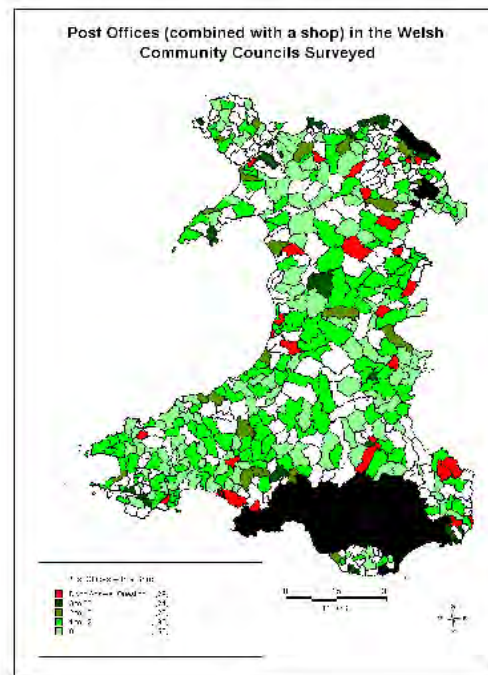Map 64: Less Favoured
Areas Across Wales

Source Welsh
Government 2012. *The
Welsh Rural
Development plan* [on-
line]. Available
at:http://wales.gov.uk/
topics/environmentcou
ntryside/farmingandco
untryside/ruraldevelop
ment/ruraldevelopmen
tplan4wales2007/rdpp
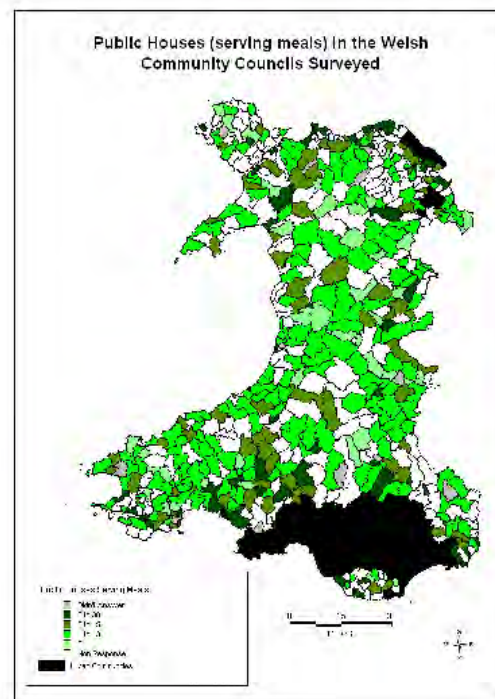art2. [Accessed on 20th
February 2013] pg. 45

Less Favoured areas Accross Wales

Map 65: The Geology of
Wales

Source Welsh
Government 2012. *The
Welsh Rural
Development plan* [on-
line]. Available
at:http://wales.gov.uk/
topics/environmentcou
ntryside/farmingandco
untryside/ruraldevelop
ment/ruraldevelopmen
tplan4wales2007/rdpp
art2. [Accessed on 20th
February 2013] pg. 46

The Geology of Wales
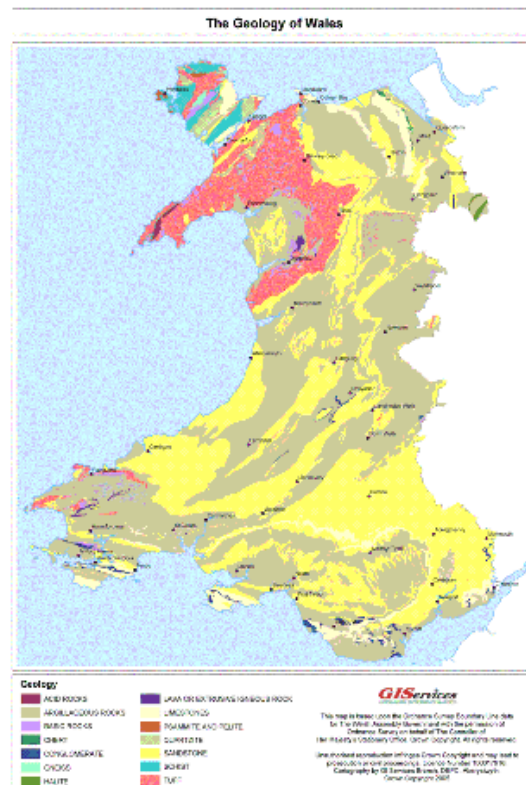
Map 66: Soils in Wales

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 49
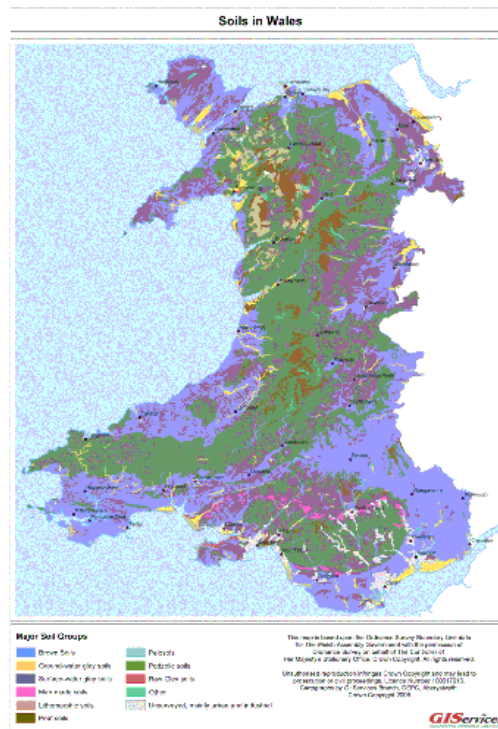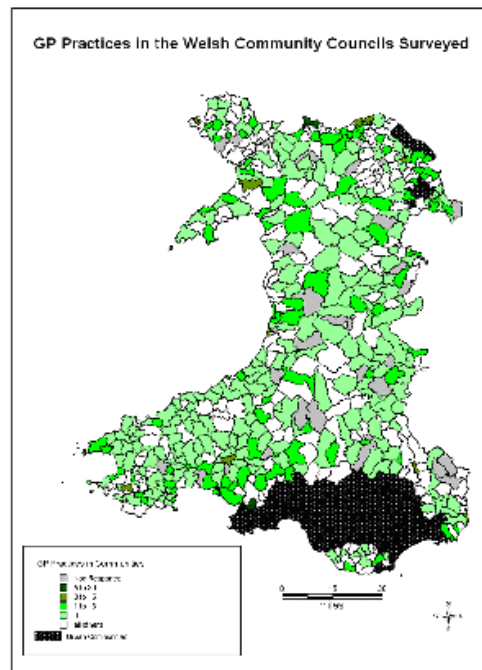

Map 67: Land Use in Wales

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 51
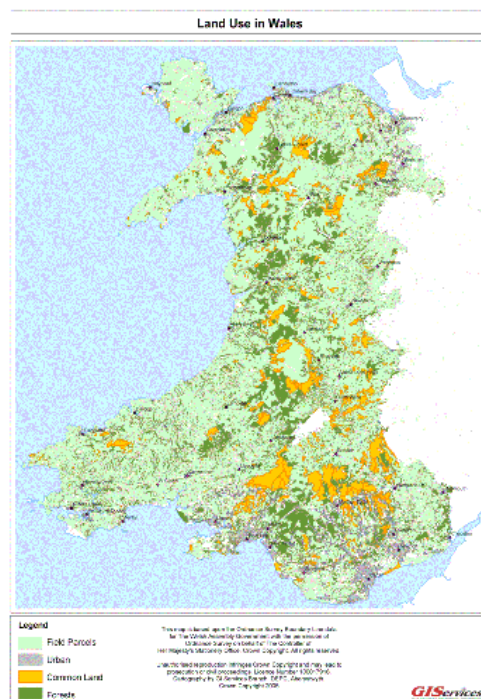
Map 68: SSSIs and Nature Reserves in Wales

Source Welsh Government 2012. *The Welsh Rural Development plan* [online]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 77
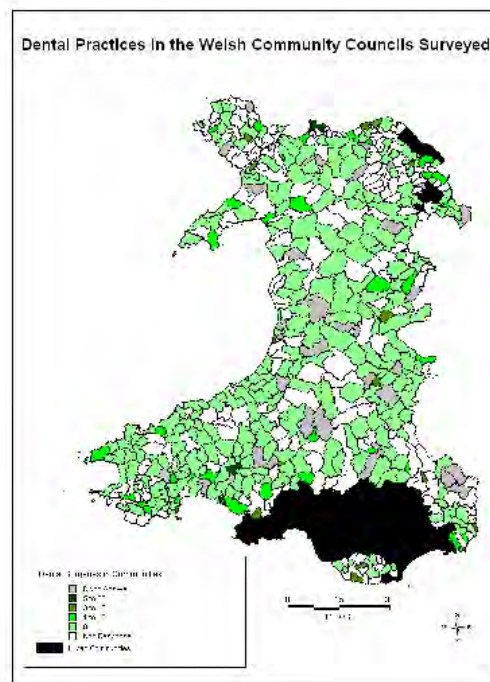

SSSIs and Nature Reserves of Wales

Map 69: Agri-Environment Schemes Across Wales

Source Welsh Government 2012. *The Welsh Rural Development plan* [online]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 82
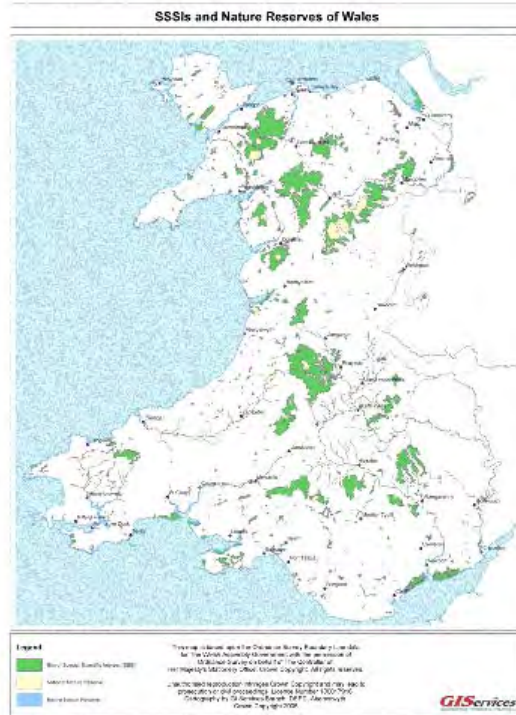
Agri-Environment Schemes across Wales
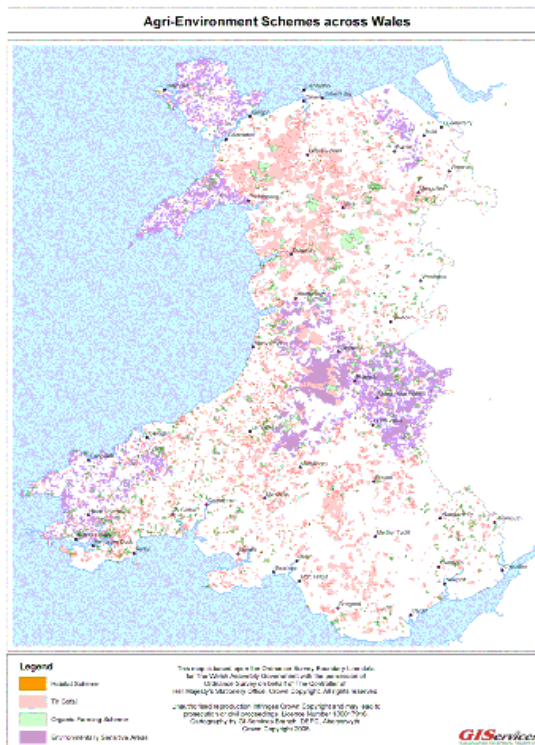
Map 70: Natura 2000
Sites

Source Welsh
Government 2012. *The
Welsh Rural
Development plan* [on-
line]. Available
at:http://wales.gov.uk/
topics/environmentcou
ntryside/farmingandco
untryside/ruraldevelop
ment/ruraldevelopmen
tplan4wales2007/rdpp
art2. [Accessed on 20th
February 2013] pg. 83

Map 71: General Stores
in the Welsh
Community Council's
Surveyed

Source Welsh
Government 2012. *The
Welsh Rural
Development plan* [on-
line]. Available
at:http://wales.gov.uk/
topics/environmentcou
ntryside/farmingandco
untryside/ruraldevelop
ment/ruraldevelopmen
tplan4wales2007/rdpp
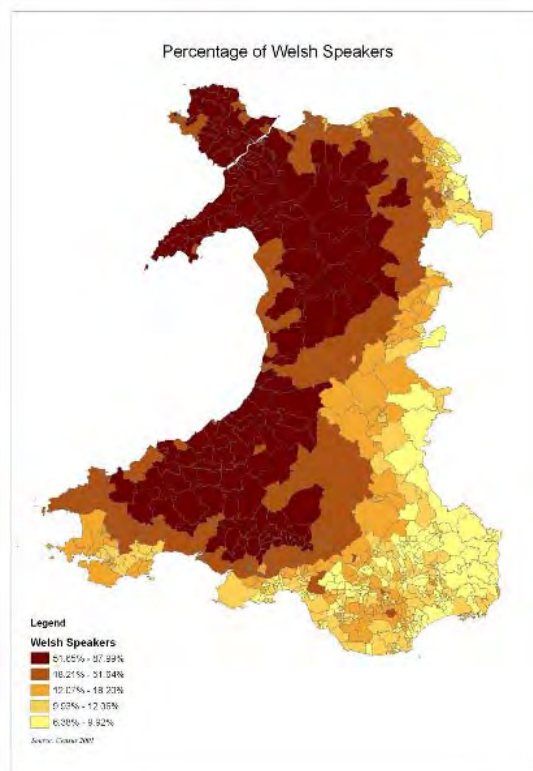art2. [Accessed on 20th
February 2013] pg. 106

Map 72: Post Offices (combined with a shop) in the Welsh Community Councils Surveyed

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 107

Post Offices (combined with a shop) in the Welsh Community Councils Surveyed

Map 73: Public Houses (serving meals) in the Welsh Community Councils Surveyed

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 111


Public Houses (serving meals) in the Welsh Community Councils Surveyed

Map 74: GP Practices in the Welsh Community Councils Surveyed

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 113

GP Practices in the Welsh Community Councils Surveyed

Map 75: Dental Practices in the Welsh Community Councils Surveyed

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 114

Dental Practices in the Welsh Community Councils Surveyed

Map 76: Number of Days a week that Responding Welsh Community Councils have a Bus Service

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 121

Number of Days a week that Responding Welsh Community Councils have a Bus Service
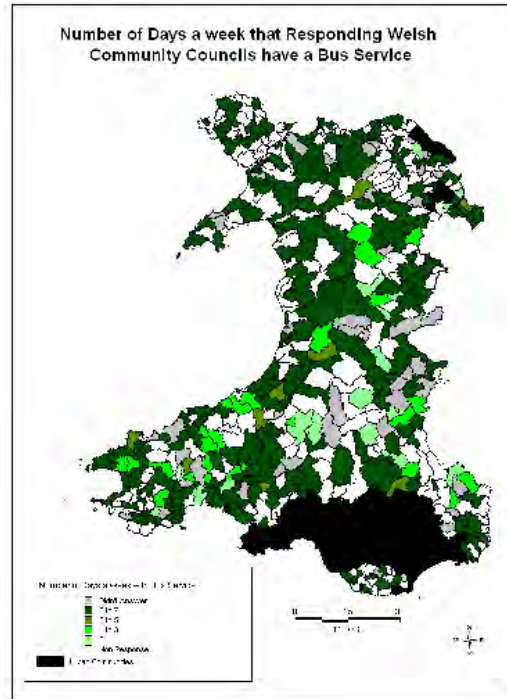
Map 77: Percentage of Welsh Speakers

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 131

Percentage of Welsh Speakers

Map 78: Leader + Local Action Groups

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 131

Map 79: Rural Community Action Partnerships

Source Welsh Government 2012. *The Welsh Rural Development plan* [on-line]. Available at:http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/ruraldevelopment/ruraldevelopmentplan4wales2007/rdppart2. [Accessed on 20th February 2013] pg. 140

Map 80: Mainstream
European Structural
Fund Areas and
Enterprise Zones

Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 23
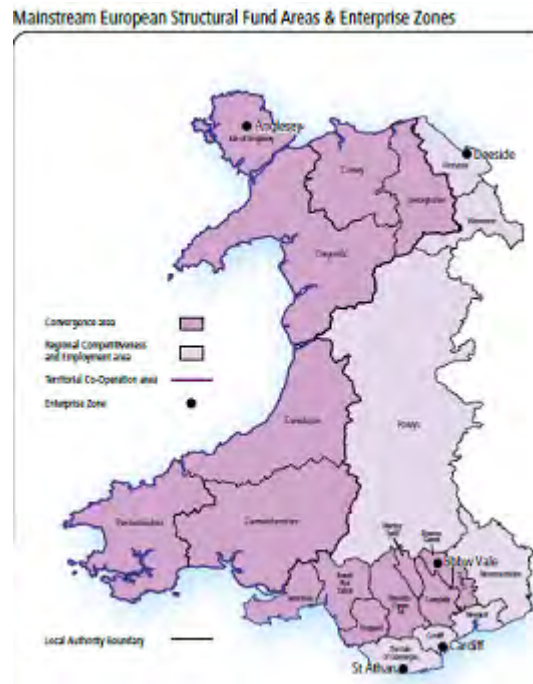
Map 81: Transport
Network
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 31

Map 82: Flood risk and flood and coastal defences

Source Welsh Government 2012. *Wales Infrastructure Investment Plan* [on-line]. Available at: http://wales.gov.uk/funding/wiip2012/?lang=en [Accessed on 29th April 2013] pg. 40
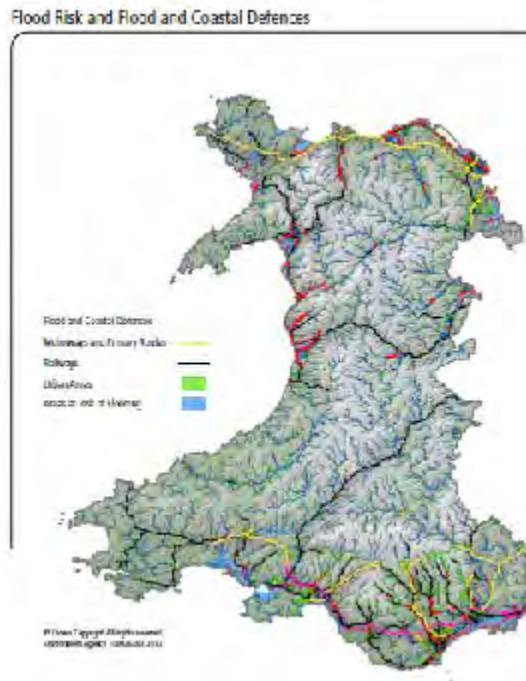
Map 83: Food Waste Treatment
Source Welsh Government 2012. *Wales Infrastructure Investment Plan* [on-line]. Available at: http://wales.gov.uk/funding/wiip2012/?lang=en [Accessed on 29th April 2013] pg. 46
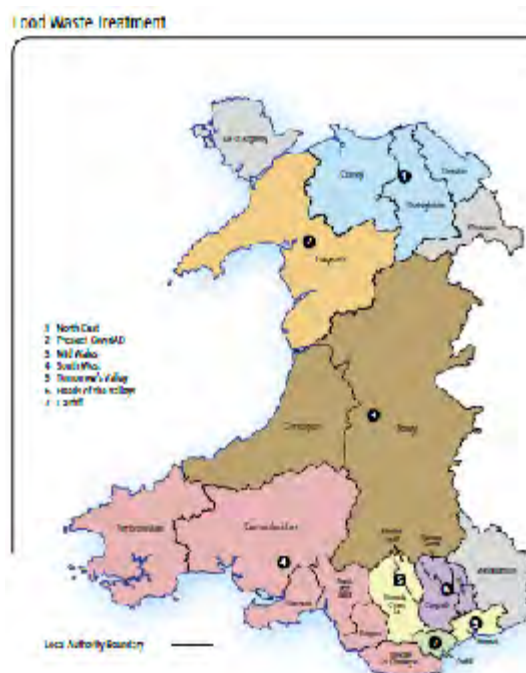
Map 84: Residual
Waste Treatment
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 47

Map 85: Power Stations
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 57

53
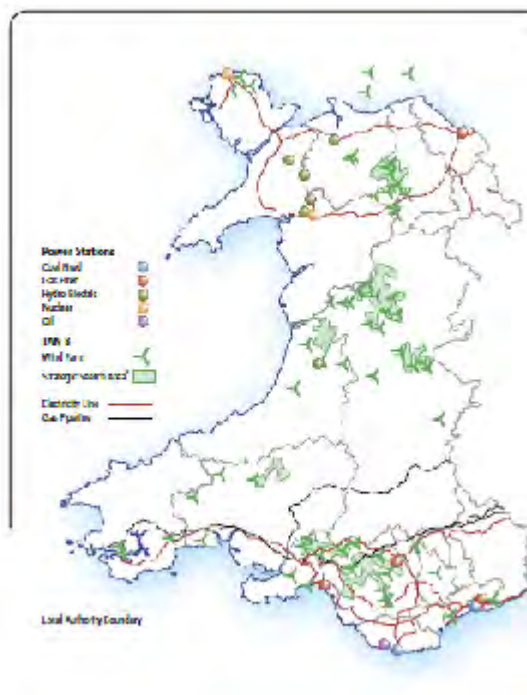
Map 86: Social Housing
Stock
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 66
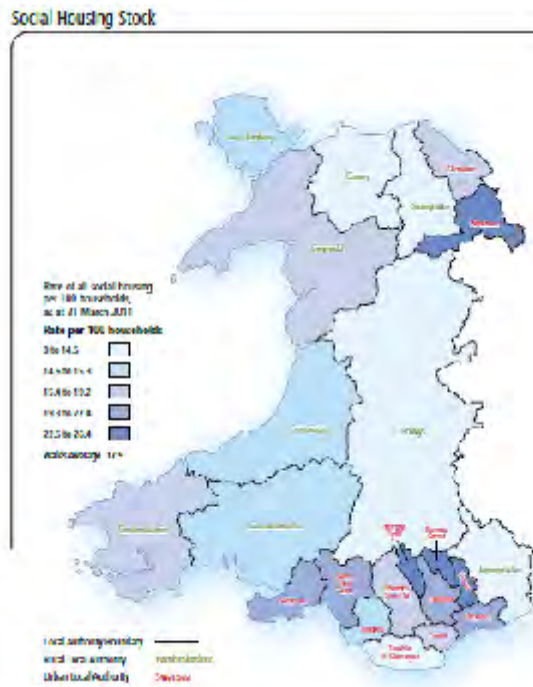
Map 87: Regeneration
Areas
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 72

Map 88: ADEW
Consortia Areas & 21st
Century Schools
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 80
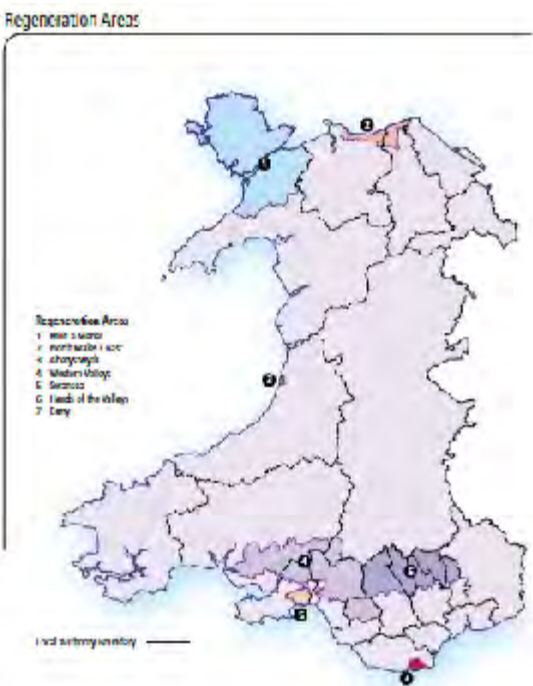
ADEW Consortia Areas & 21st Century Schools

Map 89: Local Health
Boards and Hospitals
Source Welsh
Government 2012.
*Wales Infrastructure
Investment Plan* [on-
line]. Available at:
http://wales.gov.uk/fu
nding/wiip2012/?lang
=en [Accessed on 29th
April 2013] pg. 80

Local Health Boards & Hospitals

Map 90: Communities
2.0: Eligible Areas

Delivering a Digital
Wales – Evidence pack.
Available at
http://wales.gov.uk/do
cs/det/publications/10
1209evidenceen.pdf.
[Accessed on 20th
February 2013] pg. 15
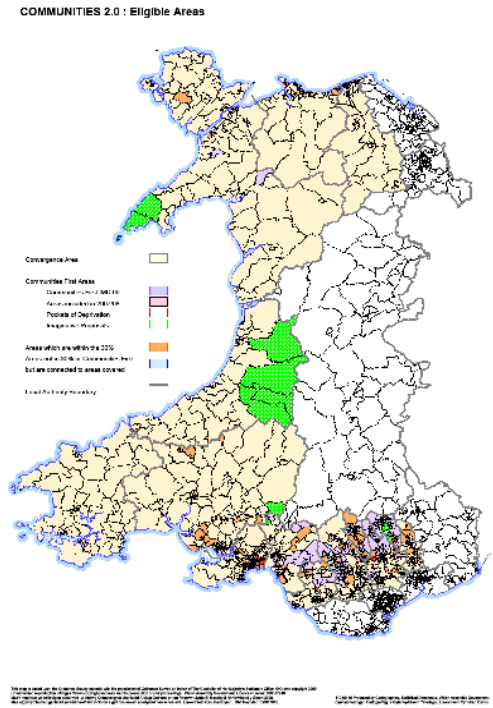
Map 91: Percentage of
Adults 18+ Digitally
Included

Delivering a Digital
Wales – Evidence pack.
Available at
http://wales.gov.uk/do
cs/det/publications/10
1209evidenceen.pdf.
[Accessed on 20th
February 2013] pg. 16
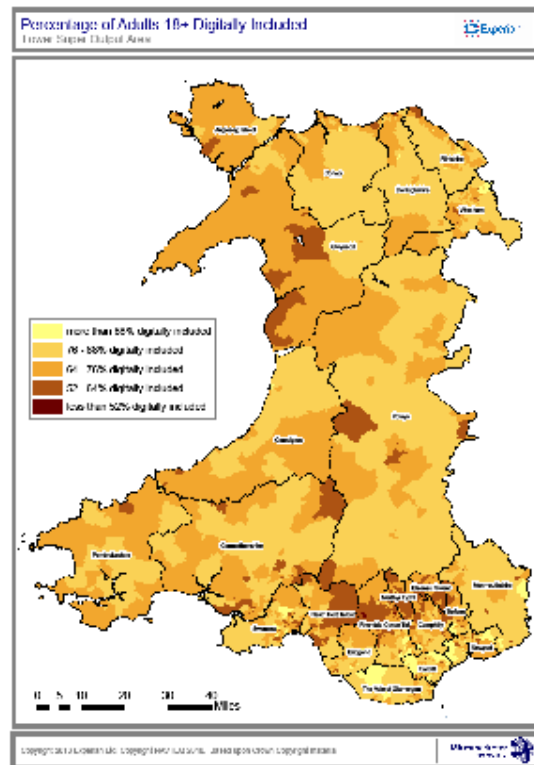
Map 92: WAG
Renewable Energy
Study, National
Landscape and nature
conservation areas in
Wales

Practice Guidance:
Planning implications
of Renewable and Low
Carbon Energy
Development. Available
at
http://wales.gov.uk/to
pics/planning/policy/g
uidanceandleaflets/pla
nningimplications/?lan
g=en. [Accessed on
20th February 2013]
pg. 116
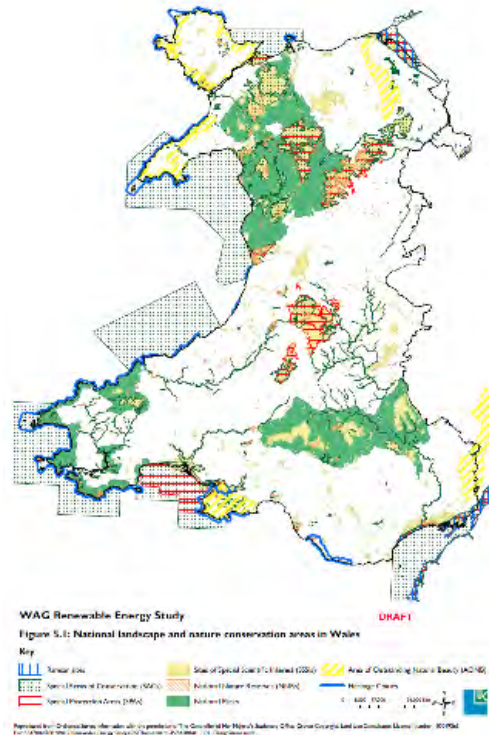
Map 93: Transport
Links

Source: The Welsh
Government 2008. One
Wales: Connecting the
Nation – The Wales
Transport Strategy.
Available at:
http://wales.gov.uk/to
pics/transport/publica
tions/transportstrateg
y/?lang=en. Pg. 12

Map 94: Spatial Plan
Regions and Regional
Transport Consortia

Source: The Welsh
Government 2008. One
Wales: Connecting the
Nation – The Wales
Transport Strategy.
Available at:
http://wales.gov.uk/to
pics/transport/publica
tions/transportstrateg
y/?lang=en. Pg. 56
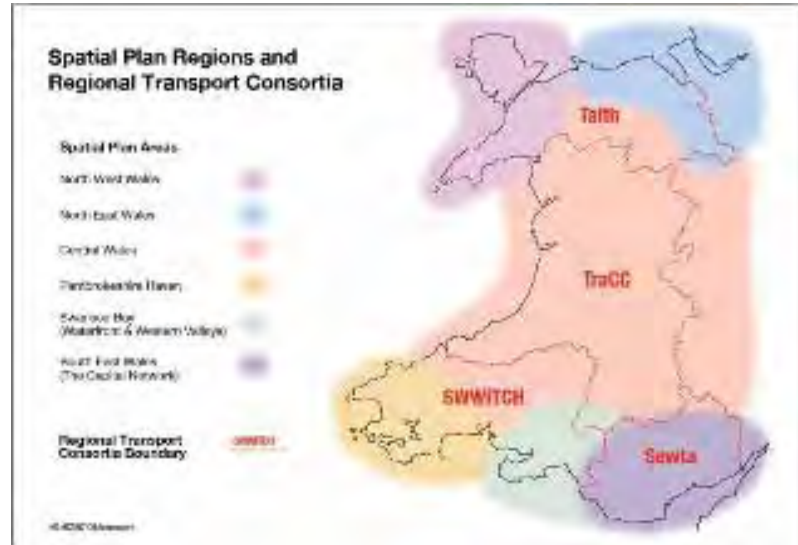
Map 95: EUs Blue
Banana

Source: The Welsh
Government 2008. One
Wales: Connecting the
Nation – The Wales
Freight Strategy.
Available at:
http://new.wales.gov.u
k/topics/transport/pu
blications/wfs/?lang=e
n Pg. 26

Map 96: Population
Density

Source: The Welsh
Government 2008. One
Wales: Connecting the
Nation – The Wales
Freight Strategy.
Available at:
http://new.wales.gov.u
k/topics/transport/pu
blications/wfs/?lang=e
n Pg. 35

Map 97: Road Network

Source: The Welsh
Government 2008. One
Wales: Connecting the
Nation – The Wales
Freight Strategy.
Available at:
http://new.wales.gov.u
k/topics/transport/pu
blications/wfs/?lang=e
n Pg. 36

Map 98: Rail Network

Source: The Welsh
Government 2008. One
Wales: Connecting the
Nation – The Wales
Freight Strategy.
Available at:
http://new.wales.gov.u
k/topics/transport/pu
blications/wfs/?lang=e
n Pg. 37

3: Social Policies

Map 99: ONS Rural
Classification by LSOA

Source Welsh
Government 2009. *The
Rural Health plan* [on-
line]. Available at
http://wales.gov.uk/to
pics/health/publicatio
ns/health/strategies/r
uralhealthplan/?lang=e
n. [Accessed on 2nd
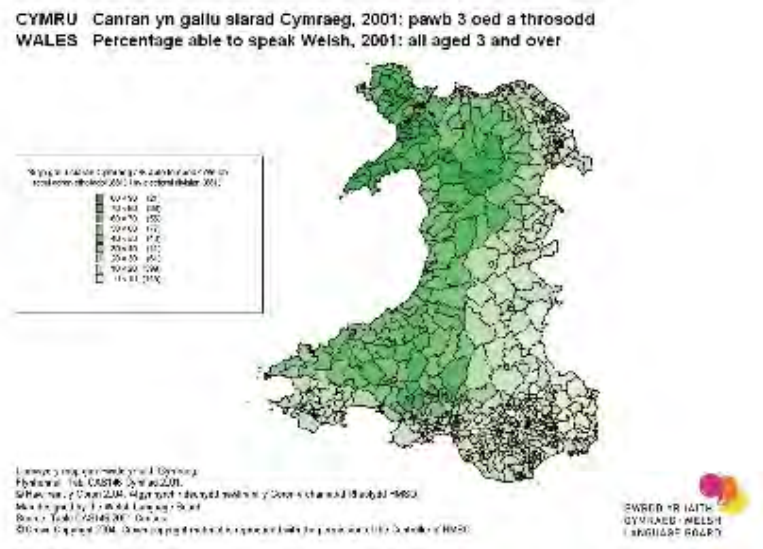March 2013] Pg. 12

ONS Rural-Urban Classification by LSOA
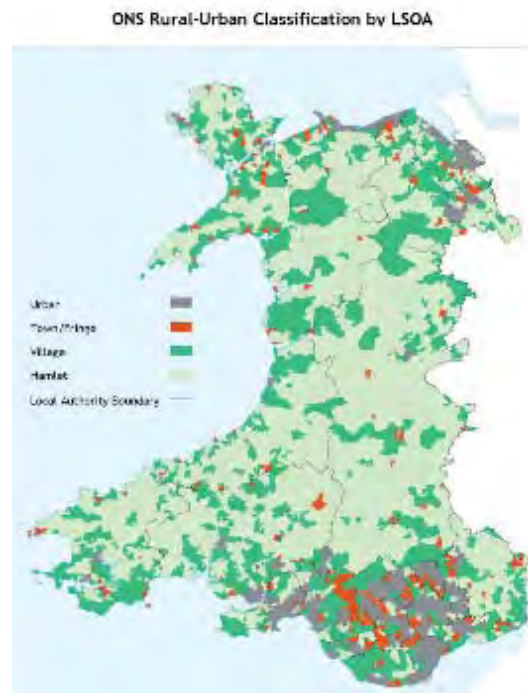
Map 100: Drive Time
Analysis to Community
Hospitals in Wales and
cross border

Source Welsh
Government 2009. *The
Rural Health plan* [on-
line]. Available at
http://wales.gov.uk/to
pics/health/publicatio
ns/health/strategies/r
uralhealthplan/?lang=e
n. [Accessed on 2nd
March 2013] Pg. 12

Drive-time analysis to Community Hospitals in Wales
and cross border
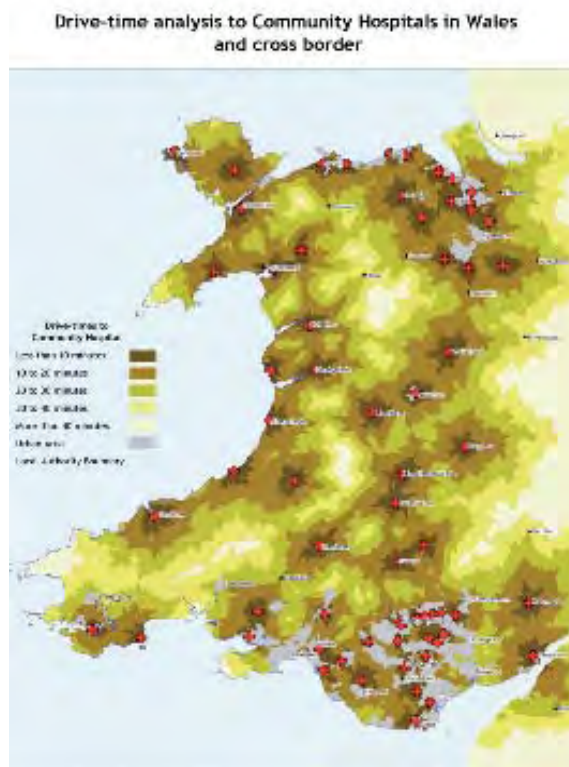
Map 101: Percentage able to speak Welsh 2001: all aged 3 and over

Source Welsh Government 2009. *The Rural Health plan* [on-line]. Available at http://wales.gov.uk/topics/health/publications/health/strategies/ruralhealthplan/?lang=en. [Accessed on 2nd March 2013] Pg. 14

CYMRU   Canran yn gallu siarad Cymraeg, 2001: pawb 3 oed a throsodd
WALES   Percentage able to speak Welsh, 2001: all aged 3 and over

Map 102: Gypsy sites in Wales on 27th January 2011

Source Welsh Government 2012. Travelling to a better Future – Gypsy and Traveller Framework for Action and Delivery Plan. Available at: http://wales.gov.uk/topics/housingandcommunity/communitycohesion/publications/travellingtoabetterfuture/?lang=en. [Accessed 2nd March 2013] pg. 22

4: Strategic Policies

Map 102: Building Sustainable Communities
Map 103: Promoting a Sustainable Economy
Map 104: Ecological Footprint by Local Authority
Map 105: Wales: Change in annual average daily temperature
Map 106: Achieving Sustainable Accessibility
Map 107: Tourism and Heritage
Map 108: Welsh Speakers (2001 Census)
Map 109: Central Wales
Map 110: North East Wales, Border and Coast
Map 111: Pembrokeshire Haven
Map 112: South West Wales Capital Region
Map 113: Swansea Bay, Waterfront and Western Valleys

Map 103: Building
Sustainable
Communities

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
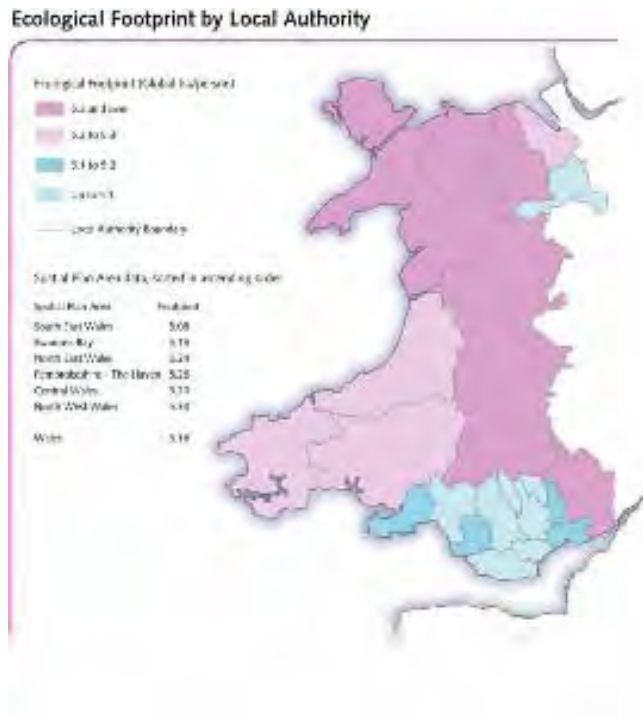s/wsp2008update/?lan
g=en Pg 24
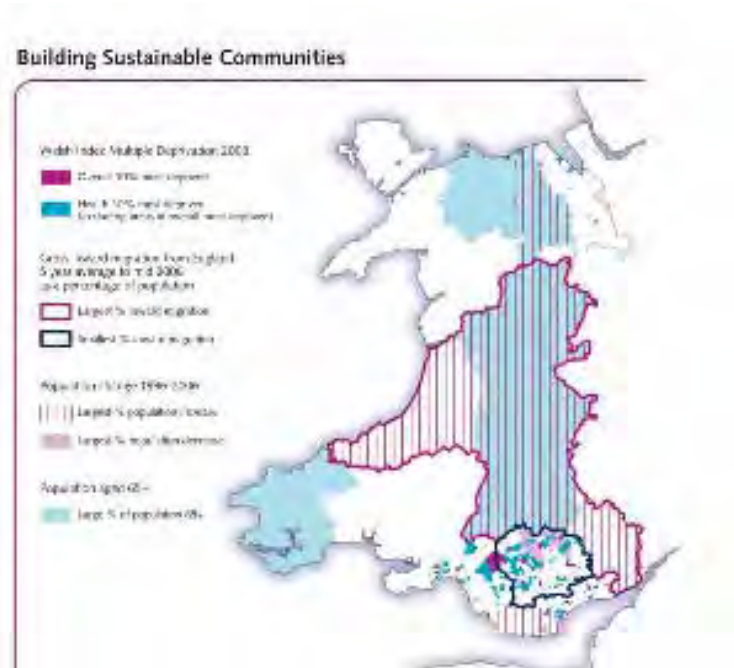
Map 104: Promoting a
Sustainable Economy

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
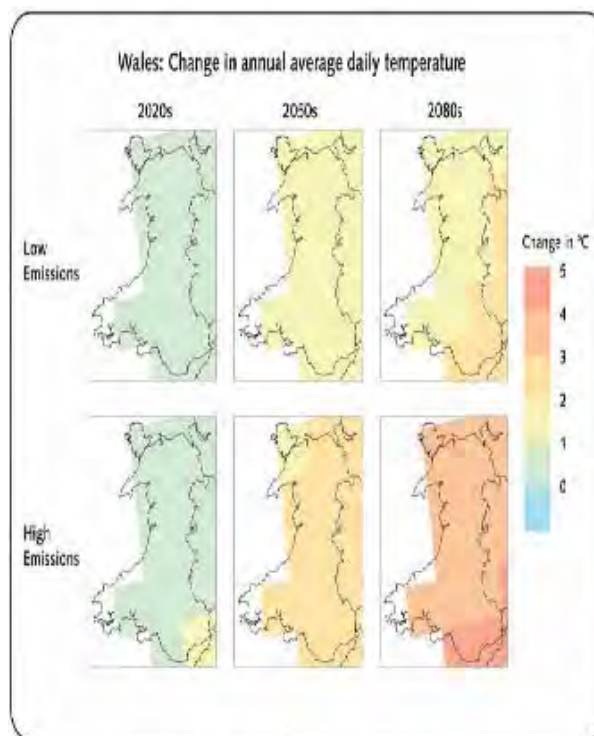/spatialplan/document
s/wsp2008update/?lan
g=en Pg 27
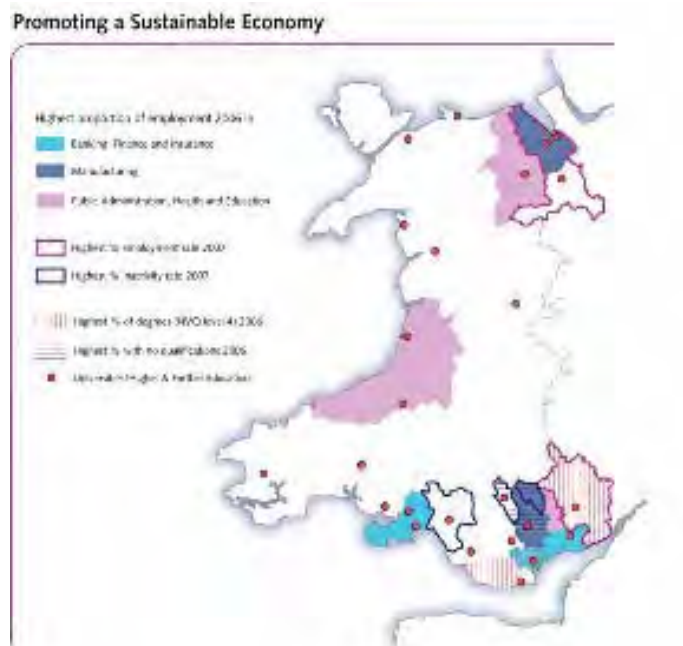
Map 105: Ecological Footprint by Local Authority

Source: The Welsh Government 2008. The Wales Spatial Plan. Available at http://wales.gov.uk/topics/improvingservices/spatialplan/documents/wsp2008update/?lang=en Pg 30

Ecological Footprint by Local Authority

Map 106: Wales: Change in annual average daily temperature

Source: The Welsh Government 2008. The Wales Spatial Plan. Available at http://wales.gov.uk/topics/improvingservices/spatialplan/documents/wsp2008update/?lang=en Pg 31

Wales: Change in annual average daily temperature

Map 107: Achieving
Sustainable
Accessibility

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
s/wsp2008update/?lan
g=en Pg 33

Achieving Sustainable Accessibility

Map 108: Tourism and
Heritage

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
s/wsp2008update/?lan
g=en Pg 36

Tourism and Heritage

Map 109: Welsh
Speakers (2001
Census)

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
s/wsp2008update/?lan
g=en Pg 37

Welsh Speakers (2001 Census)

Map 110: Central Wales

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
s/wsp2008update/?lan
g=en Pg 38

Central Wales

Map 111: North East Wales, Border and Coast

Source: The Welsh Government 2008. The Wales Spatial Plan. Available at http://wales.gov.uk/topics/improvingservices/spatialplan/documents/wsp2008update/?lang=en Pg 52
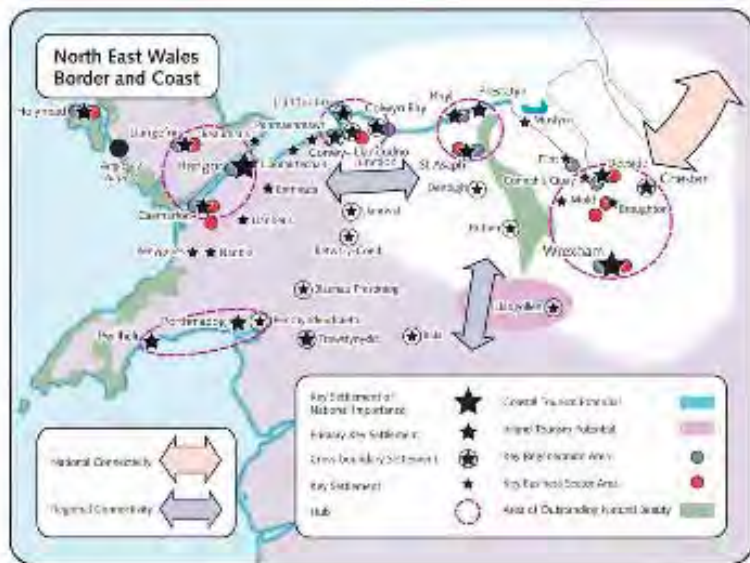
Map 112: Pembrokeshire Haven

Source: The Welsh Government 2008. The Wales Spatial Plan. Available at http://wales.gov.uk/topics/improvingservices/spatialplan/documents/wsp2008update/?lang=en Pg 82
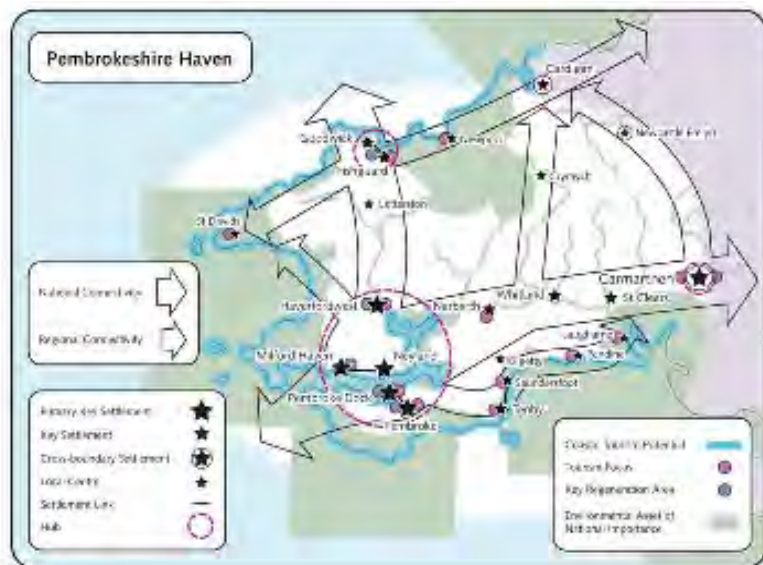
Map 113: South West
Wales Capital Region

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
s/wsp2008update/?lan
g=en Pg 97

Map 114: Swansea Bay,
Waterfront and
Western Valleys

Source: The Welsh
Government 2008. The
Wales Spatial Plan.
Available at
http://wales.gov.uk/to
pics/improvingservices
/spatialplan/document
s/wsp2008update/?lan
g=en Pg 108

5: Map for Wales Mapping

Map 115: Regeneration Areas & ADEW Consortia Areas & 21st Century School

Regeneration Areas & ADEW Consortia Areas & 21st Century Schools

Regeneration Areas
1   Mon a Menai
2   North Wales Coast
3   Aberystwyth
4   Western Valleys
5   Swansea
6   Heads of the Valleys
7   Barry

21st Century Schools
Primary Schools
Secondary Schools
Covers a number of school projects

Local Education Authority Boundary

Map 116: Welsh Government Climate Change Strategy – Mapped Impacts
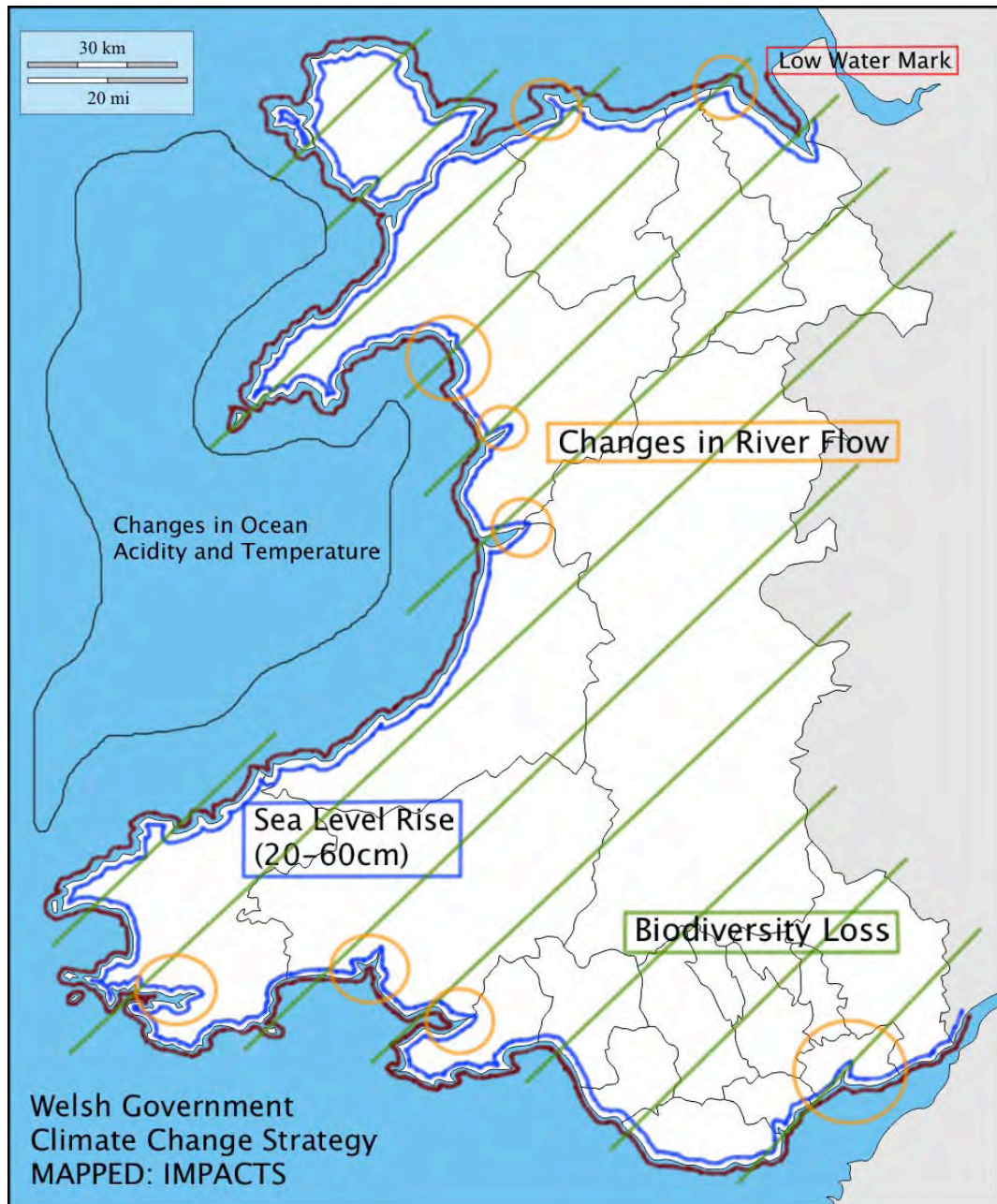
Map 117: Transport and Infrastructure Links through Wales

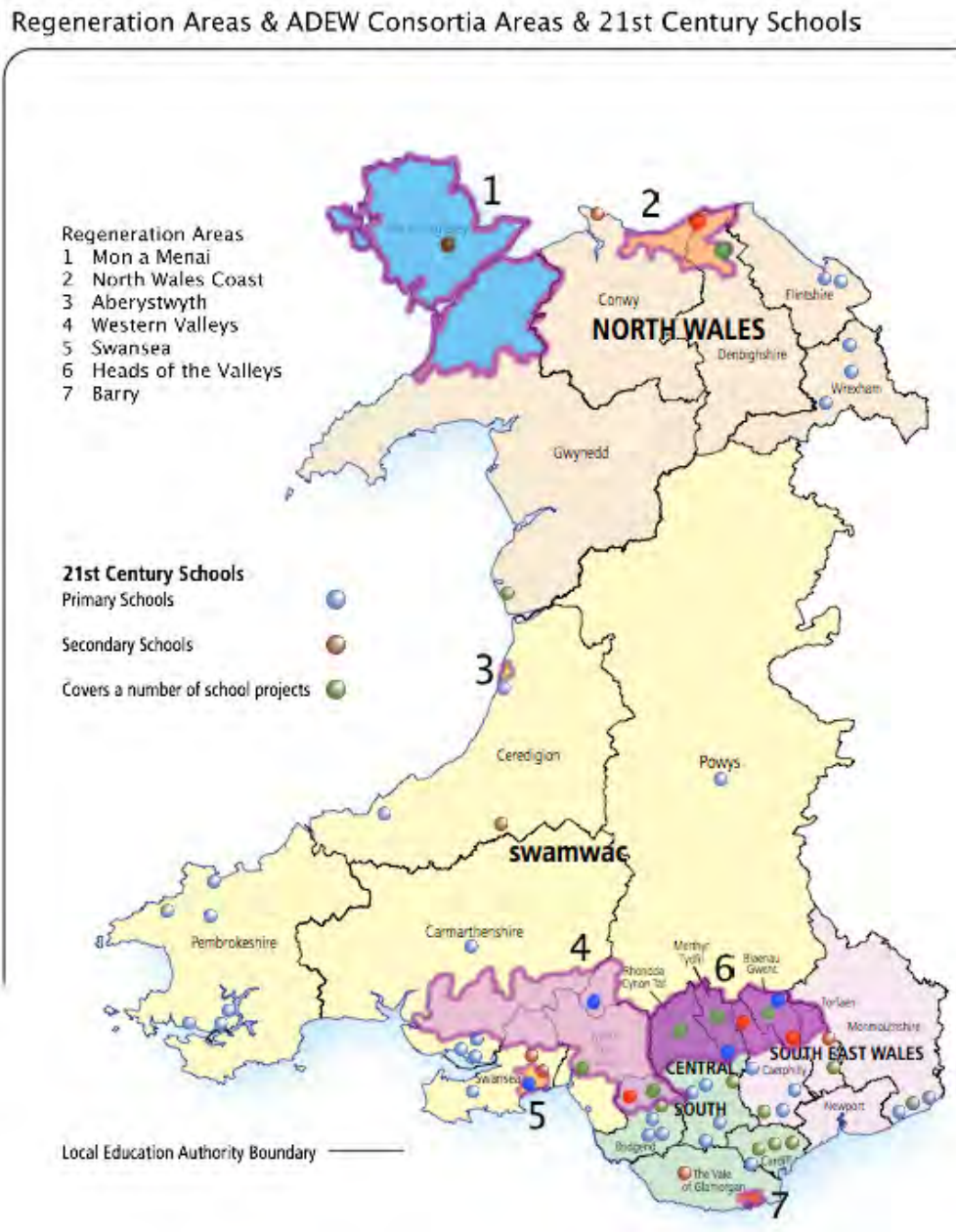Map 118: Food Waste Treatment in Wales

Food Waste Treatment

Preferred Location:
1 North East – Rhuallt
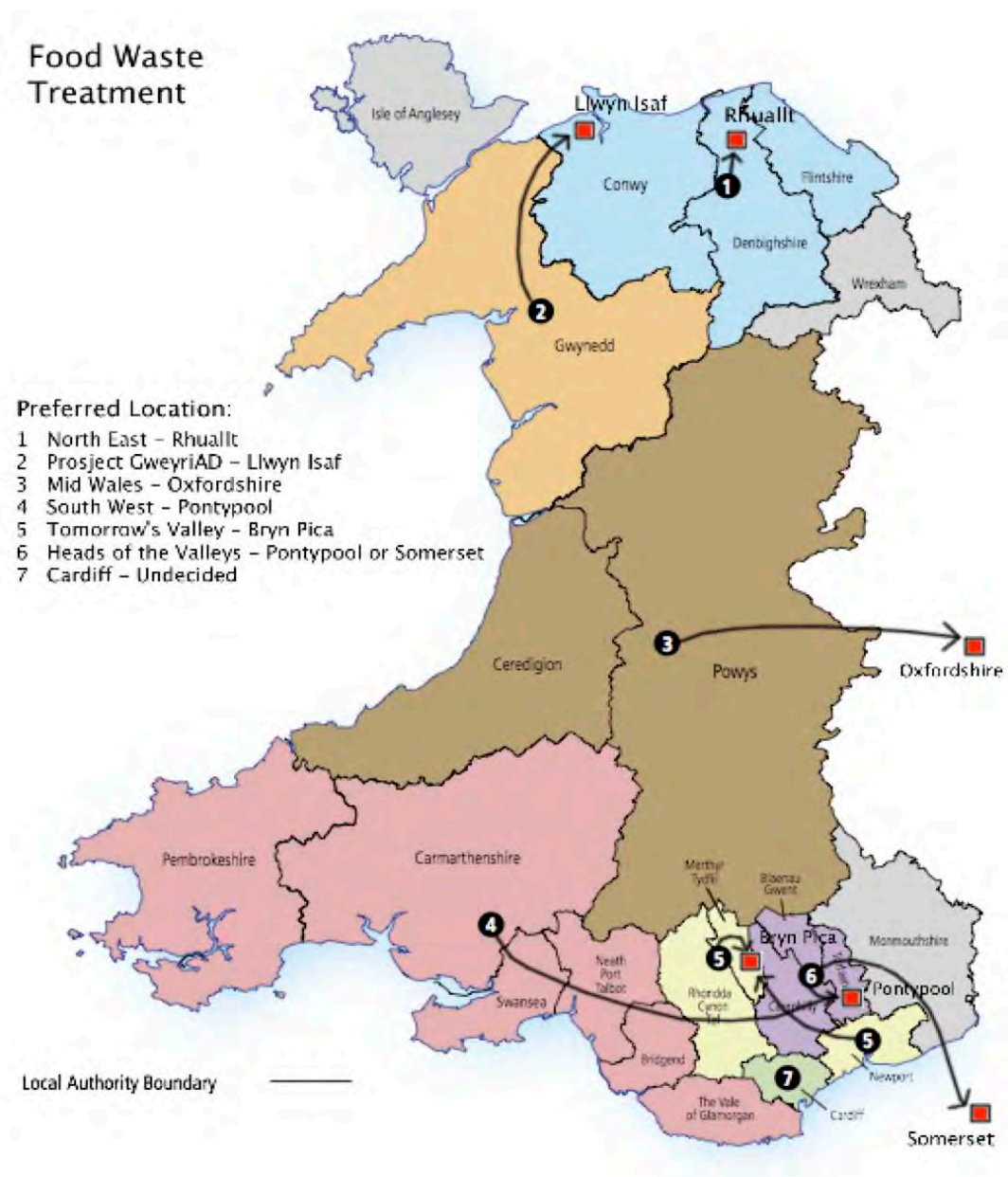2 Prosject GweyriAD – Llwyn Isaf
3 Mid Wales – Oxfordshire
4 South West – Pontypool
5 Tomorrow's Valley – Bryn Pica
6 Heads of the Valleys – Pontypool or Somerset
7 Cardiff – Undecided

Local Authority Boundary

Map 119: Asylum Seeker Dispersal and Areas of Multiple Deprivation within Wales

Welsh Index of
Multiple Deprivation
2011

By Lower Level Super Output Areas

Rank   Most Deprived
  1 to 190
191 to 380
381 to 570
571 to 950
951 to 1896
                        Least Deprived
Local Authority Boundary ———

Asylum
seeker
dispersal

100%

33%   49%   17%   1%
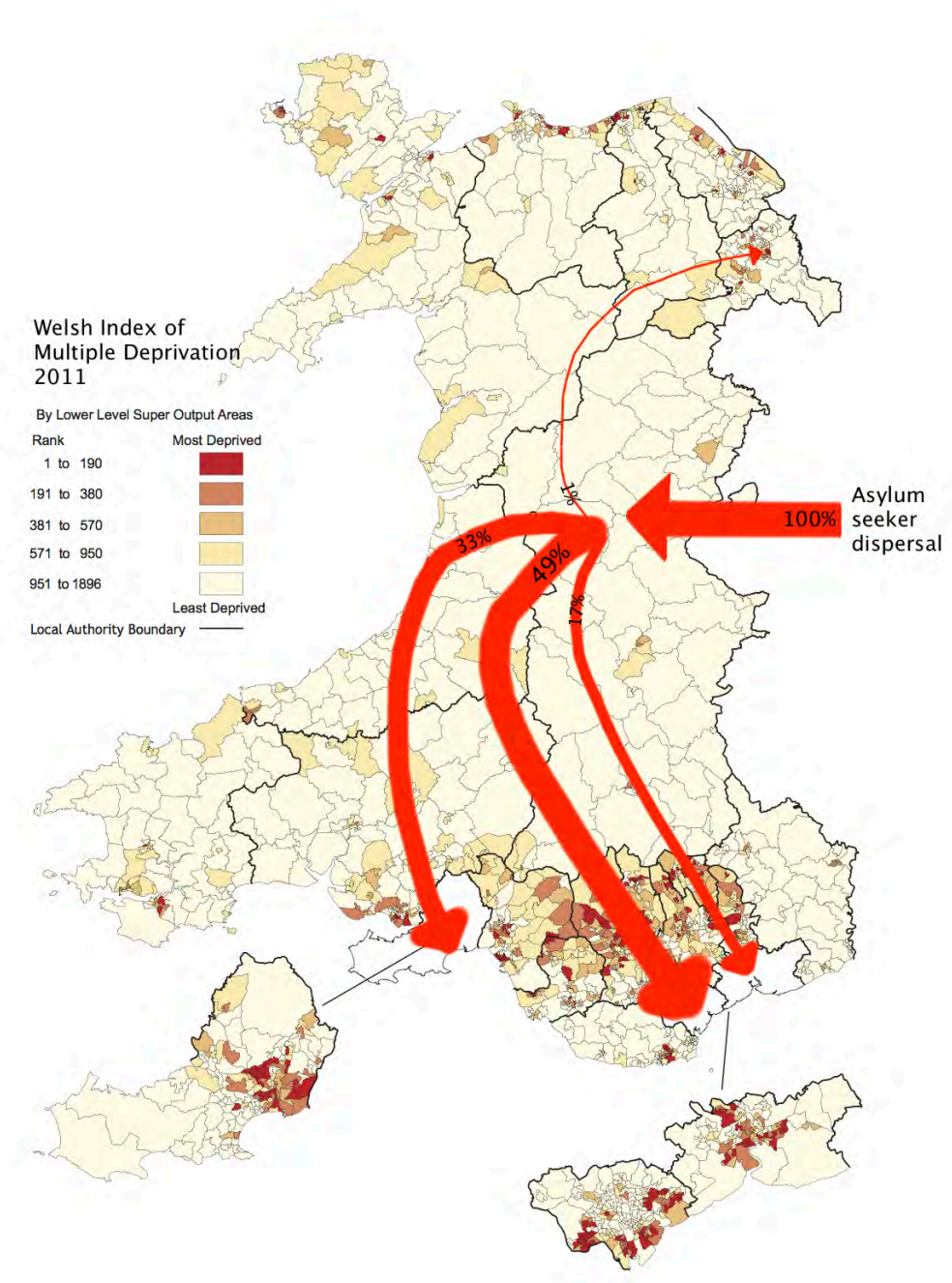
Map 120: Percentage of Welsh Speakers and Welsh Medium Secondary Schools

Percentage of Welsh Speakers and
Welsh Medium Secondary Schools

Legend
Welsh Speakers
- 51.65% - 87.99%
- 18.21% - 51.64%
- 12.07% - 18.20%
- 9.93% - 12.06%
- 6.38% - 9.92%
- ○ Welsh Medium Secondary Schools
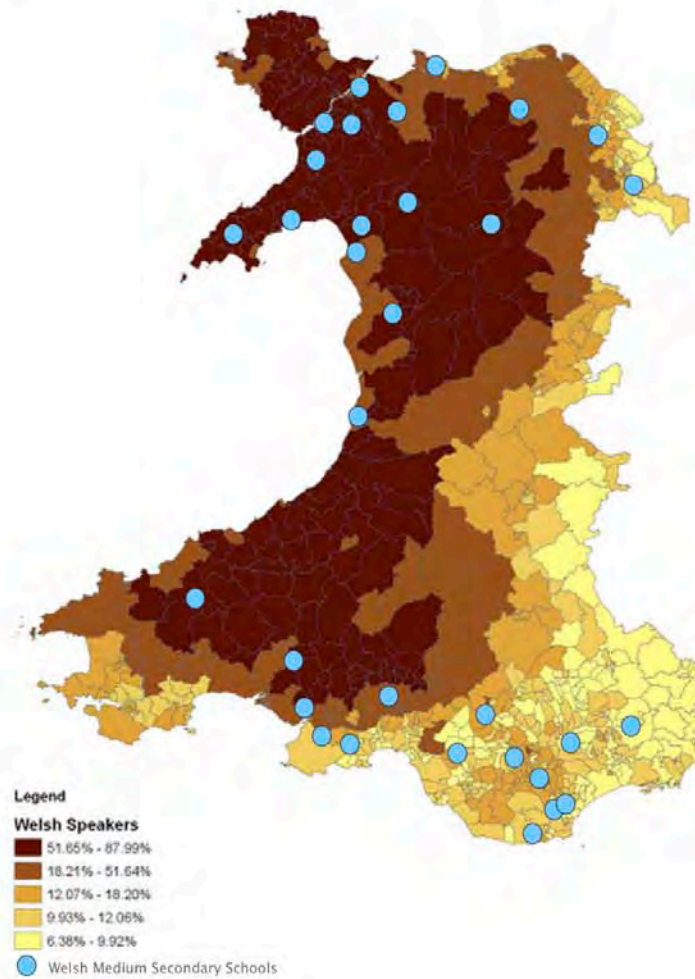
Map 121: Renewable Energy Targets – onshore and offshore wind