



Horizon Scanning:

Future trends and the skills needed to deliver the planning system in Wales

A project for Welsh Government's Planning Division
by Cardiff School of Planning and Geography

April 2015





Horizon Scanning:

Future trends and the skills needed to deliver the planning system in Wales

Table of Contents

Introduction to the project	2
Society	3
Economy	6
Environment	9
Government, regulation and finance	12
Appendix: The project's activities	16

Introduction to the project

The aim of the project

The Welsh Government's Planning Division has commissioned this report to inform future training and development needs for those engaged in the delivery of the planning system in Wales. The aim of the project is to:

“Identify future trends that may significantly affect land use and its management. The information will need to ... identify future skills and knowledge requirements for planners and stakeholders.”

Welsh Government has requested that the project include future trends in the areas of technology, social structure, government and finance. These are addressed in sections of the report on:

- Society
- Economy
- Environment
- Governance, regulation and finance

The project team has been requested for each significant trend identified to provide:

- a summary of the predicted future trend;
- the effects on land use;
- and the significance and likelihood of the trend occurring.

These are identified in each section of the report.

The project team has assumed a 20-30 year time horizon for its work. Some futures studies adopt a longer-term horizon of 50 years¹. Some trends are very difficult to predict or extrapolate beyond a short timescale of more than 5 years. It is also important to underline the fact that many trends are subject to political decisions and the determination of priorities. Trends can be influenced through various mechanisms and may be modified or reversed by such actions. The trends outlined in this report should not be interpreted as inevitable futures.

The project's activities

The project involved:

- a desk-based study;
- a stakeholder seminar; and
- consultation with representatives of local planning authorities

Additional detail on each of these stages is outlined in annex A.

¹ See Foresight (2010) Land Use Futures, London: Government Office for Science as an example.

Society

Introduction

This section of the report outlines the significant societal changes that will impact on land use planning. These include demographic changes as well as changes in societal preferences and expectations.

Population and demographic change

The population in Wales is projected to increase gradually in the next 20-30 years. It is highly unlikely that the total population will decline. A high proportion of any population increase is derived from in-migration². It is likely that the ethnic and religious profile of communities in Wales will become more diverse as a consequence of in-migration.

The expected population increase will be distributed unevenly across the country. The most significant increases in population are expected in the urban centres of Wales, and particularly in the south east of Wales. Planned investments in infrastructure will extend the influence of south-east England on these parts of Wales. Population and other changes are expected to result in increased socio-spatial divisions³. These divisions will include aspects of transport poverty, which can make it difficult to access employment opportunities in parts of Wales, as well as variations in accessing healthy food, decent public services and a range of other facilities.

Increasing numbers of older people

The proportion of the population that will be elderly is increasing and this trend will continue⁴. This will have several implications for planning communities. Many more people will face reduced mobility as a consequence of an aging society, resulting in the need for localised services in locations easily accessible by public transport. The convenience and quality of services will also be increasingly important considerations for this growing section of society. This is particularly the case for provision of health services.

There will also be increased demand for residential accommodation of various forms that are suitable for an aging population. This will contribute to the established and continuing trend of an increasing proportion of single person households, as well as a general reduction in average household size. Social isolation is an increasing risk as a consequence of single-person or smaller households, particularly for elderly persons.

2 Pratt, A.C. 2009. Social and economic drivers of land use change in the British space economy. *Land Use Policy*, 26S, pp. 109-114.

3 Pratt, A.C. 2009. Social and economic drivers of land use change in the British space economy. *Land Use Policy*, 26S, pp. 109-114.

4 Royal Town Planning Institute. 2014. *Planning Horizons*. Future Proofing Society. London: RTPI.

Health and well-being

Government studies have identified significant concerns about aspects of health and well-being. Trends and forecasting identify risks that a significant section of the population will become obese, and that by 2050 Britain may be mainly an obese society⁵. Changing the environment we live in is part of the solution to tackling this issue. Environmental context is also an important part in addressing future challenges around mental health and well-being that are expected to impact on various sections of society⁶. Climate change is also expected to lead to various health effects, particularly through impacting on respiratory problems, water-borne disease, air pollution and UV exposure⁷.

Societal preferences and expectations

Increasing diversity of population will also result in societal preferences and attitudes becoming more varied. This will in some cases lead to potential conflicts between different parts of communities. This will require mediation between conflicting interests in some cases, and a greater appreciation within the planning system of equality and diversity issues. The expected increase in societal diversity will also make it increasingly difficult to gauge citizens' expectations and determine society's needs.

Language

Policies for promoting the Welsh language have gradually been making a difference in public life in Wales. Urban centres have shown an increase in the proportion of people speaking Welsh. There has also been an increase in the number of different languages spoken in urban areas as a consequence of immigration. This has resulted in greater linguistic diversity and presents challenges for delivery of planning services. These trends of increasing numbers of Welsh speakers in urban centres and increasing linguistic diversity are likely to continue.

Summary

The key societal trends identified in this section are:

- an increasing population;
- an increasingly diverse population;
- a population that has a greater proportion of older people;
- a society in which certain sections of the population face increasing constraints on their mobility;
- reducing average size of households.

The land use implications likely to arise from the issues explored in this section are:

- increased demand for land for housing and increased consumption of

5 Government Office for Science. Tackling Obesities. Future Choices.

6 Government Office for Science. Mental Capacity and Well-being. Making the most of ourselves in the 21st Century.

7 Health Protection Agency. 2008. Health Effects of Climate Change in the UK 2008.

- resources such as food, water and energy;
- increasing variety in the forms of housing that are required, including sheltered accommodation for vulnerable groups, supported living for the elderly and housing with a combination of shared and private space, as well as a need for more flexible forms of housing which will be adaptable to residents' requirements.
 - the requirement to locate services, and especially health services, in highly accessible locations that are served by public transport.
 - facilities to support active travel will increasingly need to be built into existing and new developments
 - the requirement to ensure that there are spaces and opportunities for people to meet and socialise, including in recreational and community spaces

The skills and development needs that may arise are:

- better understanding of the variety of tools, besides land use regulation, that influence the range and types of housing that are delivered;
- skills in engaging people from diverse communities in the planning system, using a variety of methods that are relevant to these diverse communities, and with a special requirement to engage vulnerable groups in society;
- better understanding of and expertise in assessing the impacts of developments on various groups in society;
- better understanding of the impacts of development proposals and planning decisions on health and well-being.

Economy

Introduction

This section outlines the significant economic changes that will impact on land use planning in Wales. Some of these changes arise from factors in the global economy, while others arise from domestic economic considerations. The section also identifies some trends in the patterns of work and employment.

Challenge to economic models

The long-term trend in the United Kingdom has been a shift from Keynesian economic models to neo-liberal models. This has caused patterns of economic and spatial restructuring, which in many cases has resulted in increased income differentials and its associated effects⁸. There is increasing questioning of this approach with its focus on delivering economic growth⁹. There are also alternatives being proposed to traditional financial and economic institutions¹⁰. The adoption, impacts and effects of these alternative models are difficult to predict.

Changes in the global economy

Rapid economic growth in selected countries in Asia and South America is expected to continue and to have significant impacts on the United Kingdom economy¹¹. Positive effects include the development of markets for higher value goods and a potential source of tourists. Negative effects will include increasing competition for foreign direct investment (FDI) which has historically played an important part in economic strategies in Wales. The emergence and strengthening of these economies will in the longer term act to increase commodity and energy prices. Production costs for various goods, including food, may increase as a consequence of this.

One of the specific consequences of a global economic system, identified by seminar participants, was the challenge of accommodating the development demands made on localities by projects investing significant amounts of capital. This was noted as a particularly significant trend in the tourism sector, where large-scale projects were often proposed in sensitive locations.

Production of goods and services

Developments in technology are likely to continue change the way that goods and services are produced. A key trend in manufacturing is anticipated to be increased customisation of goods to meet the needs and expectations of customers¹². This may result in manufacturing activities taking place at various scales and various locations, including greater levels of manufacturing in urban, residential or even

8 Sayer, A. 2015. *Why We Can't Afford the Rich*. Bristol: Policy Press.

9 New Economics Foundation. 2013. *Towards a Welsh Industrial Strategy*. Accessed at http://b.3cdn.net/nefoundation/76fbd0aabdb290c755_gjm6bk2g.pdf, March 12th 2015

10 Nesta. 2014. *Understanding Alternative Finance*. The UK alternative finance report. London: Nesta

11 Foresight. 2010. *Land Use Futures*; Deloitte and Oxford Economic. 2013. *Tourism: jobs and growth*. London: Deloitte.

12 Foresight. 2013. *The future of manufacturing: a new era of opportunity and challenge for the UK*. London: Government Office for Science.

domestic spaces. The trend towards increasing customisation is also expected to impact on the services sector, including in areas such as tourism ¹³.

Retailing remains a dynamic and fast-changing sector. This can make it difficult to identify clear trends and make predictions about future change ¹⁴. There are likely to be significant impacts on high streets, with their future being increasingly dependent on becoming experiential destinations for socialising, leisure and shopping. Emerging trends in food retailing also indicate that there is likely to be a reduced need for retail floor space, with the potential for land in food and non-food retail use to become available for other purposes. Contraction in the use of shops and retail premises will require flexibility in changing between different land uses.

The increasing proportion of older people within society will reinforce the already increasing importance of human health and social work as an employment sector in Wales. This is already the largest single employment sector in Wales and has grown considerably in the past decade ¹⁵. Demographic changes make it likely that it will continue to increase in significance. The trend towards people living longer will also increase the availability of labour and promote more varied patterns of work and employment.

Patterns of growth in the United Kingdom

The south east of England is predicted to continue to be the fastest developing and growing part of the United Kingdom, and this trend will be likely to continue. The proximity of south Wales to south east England creates opportunities to benefit from this growth. The same factor may also extend commuter patterns between south Wales and the south east of England due to continued property inflation in that part of England.

Changing places and patterns of work

Information and communications technologies have enabled people to work from home or to otherwise be more mobile or nomadic in their work ¹⁶. This trend is likely to continue. The development of this trend will also require increasing provision of a variety of different workspaces outside of the home and the office, or 'in-between' spaces. The general trend for increased home-working and nomadic working is complemented and reinforced by increasing levels of self-employment, either out of necessity or as a matter of lifestyle choice. The proportion of persons employed in small and medium-sized enterprises is likely to grow too, with the requirement to accommodate such businesses in suitably-sized premises and deliver advice to these businesses.

¹³ Deloitte and Oxford Economics. 2013. Tourism: jobs and growth. London: Deloitte

¹⁴ Department for Business, Innovation and Skills (2013) A Strategy for Future Retail Accessed at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/252383/bis-13-1204-a-strategy-for-future-retail-industry-and-government-delivering-in-partnership.pdf March 12th 2015

¹⁵ Statistics for Wales. 2014. Statistical Bulletin SB 80/2014

¹⁶ Pratt, A.C. 2009. Social and economic drivers of land use change in the British space economy. Land Use Policy, 26S, pp. 109-114.

Summary

The key economic trends identified in this section are:

- an economy that continues to be open to global economic change, and likely to experience both a more competitive environment for foreign direct investment and an increase in commodity prices as a consequence of this;
- an economy that increasingly focuses on customisation of goods and services for consumers;
- the health and social work sector of the economy becoming increasingly important

The land use implications likely to arise from the issues explored in this section are:

- an increasing amount of manufacturing activity that is accommodated in town centres, residential areas and community and domestic spaces;
- changes in the composition of the high street, with a wider range of non-retail uses such as leisure, recreation, socialising and personal services;
- land and property in use for food retailing becoming vacant and available for alternative uses;
- the requirement for more places for work activity outside of the home and formal workspaces;

The skills and development needs that may arise are:

- understanding the methods and implications of managing markets
- understanding and analysing the composition and operation of local economies, and how these operate differently in different places;
- understanding alternative funding mechanisms, including for the social economy and alternative or innovative enterprises;
- how to accommodate employment, manufacturing and workspaces in residential areas and ensure compatibility of uses.

Environment

Introduction

This section explores a wide range of issues broadly related to the environment, from climate change effects and resources such as energy, water and waste through to the value of green infrastructure and development in the marine environment.

Climate change

Climate change will result in various environmental impacts with major implications for land use and land management¹⁷. There is already evidence of climate change-induced variations in weather patterns that affect Wales. The effects include rising sea levels, an increase in average temperatures and changes in precipitation. More frequent storms and heavy rainfall incidents will result in increased incidence and severity of flooding. These and other aspects of climate change are ones that can be partially addressed through effective land use planning¹⁸.

Energy production

The increasing reliance on renewable energy sources will result in increased land-take for energy production. Renewable forms of energy production have lower energy density than various non-renewable sources. This means that greater amounts of land are required to deliver the same amount of energy. This is likely to result in increasing conflict between land used for renewable energy production and other uses such as food production¹⁹. Land values in rural areas and marginal areas are likely to increase as a consequence, with changing patterns of land use in these areas.

Valuing land

Land performs a variety of different roles, and sites may perform a variety of different functions simultaneously²⁰. Planners will increasingly need to assess the value of land in social, economic and environmental terms as a consequence of an ecosystems approach to planning. This will require expertise in valuation techniques that go beyond traditional economic valuation practices.

Water

Modelling of water flows for rivers in Wales shows a predicted increase in winter months and a significant decrease in summer months²¹. This is expected to have significant implications for biodiversity, especially for flora and fauna in riverside

¹⁷ Royal Town Planning Institute. 2014. Planning Horizons. Future Proofing Society. London: RTPI.

¹⁸ Welsh Government. 2014. Welsh Local Government Climate Adaptation Resource.

¹⁹ Foresight. 2010. Land use Futures, London: Government Office for Science, section 5.6.

²⁰ Foresight. 2010. Land Use Futures, London: Government Office for Science.

²¹ See <http://webarchive.nationalarchives.gov.uk/20140328084622/http://cdn.environment-agency.gov.uk/geho1208bpas-e-e.pdf>; see also Royal Town Planning Institute. 2014. Planning Horizons. Future Proofing Society. London: RTPI.

environments. It will also have implications for activities that depend on water extraction, such as industrial activities. Availability of drinking water is likely to be affected too. In practical terms this will require more careful management of water resources and efforts to reduce levels of water extraction. Heavily-engineered approaches to water management are expensive, and will need to be complemented by integrated and sustainable methods. This will require improved integration and planning around water catchment areas, and enhanced understanding and skills in implementing catchment area-level approaches ²².

Intensification of agricultural production, partly in response to reducing dependency in food imports but also through warming temperatures and longer growing seasons, is also likely to impact negatively on water quality through increased pollution. New forms of water pollution – such as those arising from pharmaceuticals or personal care products ²³ – will also become significant and require management.

Increasing water scarcity is predicted particularly for large parts of England in future ²⁴, and especially the south east of England. There will be an increasing requirement for infrastructure for transfer of water between areas with available supply – including parts of Wales - and those that are already over-extracted.

Waste management

Wastes of various forms will increasingly be regarded as resources from which a range of useful products and benefits can be derived. Energy from waste technologies are likely to become more prevalent as part of a more varied and resilient energy framework. The siting of waste management facilities will possibly become more localised and less remote from sources of waste. Siting of facilities will be controversial, yet will increasingly be seen as part of local urban infrastructure.

Green infrastructure

Green infrastructure provision is also likely to become of greater importance. Woodlands and forests will be increasingly important in delivering multiple benefits ²⁵, including environmental benefits. Woodlands will have a role in water management, biodiversity protection and enhancement, and production of renewable materials. Stakeholders expressed the view that woodlands and forests are not currently being managed in a way that delivers or optimises these benefits.

The marine environment

Increasing demand for land for various uses will continue the trend towards off-shoring various forms of ‘development’ to the marine environment. Emergent technologies for tidal energy are one example that may proliferate in future. The

²² Royal Geographical Society and Institute of British Geographers. 2012. Water Policy in the United Kingdom: the challenges. RGS-IBG Policy Briefing, challenge 4 and 5. See also Foresight. 2012. Land Use Futures, section 5.2

²³ Royal Geographical Society and Institute of British Geographers. 2012. Water Policy in the United Kingdom: the challenges. RGS-IBG Policy Briefing, challenge 4.

²⁴ Foresight. 2010. Land Use Futures. London: Government Office for Science

²⁵ Foresight. 2010. Land Use Futures, London; Government Office for Science, section 5.4

environmental impacts of these technologies are often uncertain, although their impacts are likely to be significant. Planners will increasingly need to be able to manage pressures on an already complex and busy marine environment.

Summary

The key environmental trends identified in this section are:

- Rising sea levels, increasing average temperatures and other changes in weather that will impact on various weather-related conditions;
- An increasing dependence on renewable energy sources, as well as other forms of renewables such as building materials;
- Increasingly scarce water supplies

The land use implications likely to arise from the issues explored in this section are:

- Land required for various uses will become more extensive leading to conflicting demands for land, particularly in rural areas, and increase the value of land in use for agriculture and other marginal land.
- Different land uses may be combined in varied ways, with land and sites performing multiple functions. The planning and management of land will become more complex and demand adoption of more integrated approaches.
- Land will need to be managed in a way that pays careful attention to water, including flood management, water supply and water quality.
- The marine environment will be subject to increasing pressure for 'development'
- Waste will be managed closer to sources of waste generation, with energy from waste and sewerage management being integrated more closely into urban areas.

The skills and development needs that may arise are:

- The requirement for a better understanding of multifunctional land uses;
- Enhanced understanding of scientific issues and how they impact on land use planning, and vice versa
- Improved understanding of an ecosystems approach to planning, as well as better understanding of water catchment area approaches and the significance of green infrastructure
- Improved understanding of water management in urban and rural contexts
- Improved mediation skills to deal with conflicting demands for land
- A better understanding of the value of land other than in economic or commercial terms

Governance, regulation and finance

Introduction

This section explores a series of issues that affect the way that the land use planning system is managed. Trends identified in this section do not have such a direct impact on land use planning. They nevertheless raise important issues and challenges for the delivery of the planning system in future. The section explores changes in governance and regulation, as well as some of the technologies that shape how places are governed and managed.

Governance challenges

Government will perform increasingly difficult roles in addressing international tensions and conflicts over resources such as energy, water, raw materials and food. Supplies of resources and materials are expected to become more volatile²⁶. A key role for government will be ensuring security of supplies of these resources, as well as encouraging reduced use of constrained resources or those with volatile supply. Their role in security of supplies is also complemented by roles in ensuring security of the population, including from natural events but also social threats such as terrorist activity. Continuing investment in infrastructure is likely to remain a significant priority, as is ensuring that such infrastructure is resilient.

There is uncertainty over whether the shape of political organisations and processes keeps pace with the changing nature of the challenges faced by governments²⁷. This is due to the short-termism of political institutions, as well as other barriers to political and institutional change. There is therefore likely to be less rapid and dramatic change in political institutions and governance mechanisms than is anticipated. The consequence may be that governance mechanisms are unable to effectively address some of the other, significant challenges outlined in other sections of this report²⁸. Other studies in Wales identify that local governance institutions, particularly local authorities, usually require support in addressing 'futures' work and their implications²⁹. This is especially so for areas closely related to the planning system such as climate change adaptation and infrastructure resilience.

Membership of the European Union

The European Union has been acknowledged as a significant driver of land use change³⁰. There are considerable uncertainties about whether the United Kingdom will exit the European Union. The basis of its departure from the European Union if it did so is also highly uncertain. It is nevertheless clear that exit from the European Union would have significant economic³¹, social and also environmental

26 Lee, B et al. 2012. Resources Futures. London: Chatham House.

27 Club of Rome. 2012. 2052 Shaping our Future.

28 Netherwood Sustainable Futures and PwC. 2014. Generation 2050. Better Long Term Decision Making. A Resource for Local Government.

29 Netherwood, A. 2008. Futures, Trends and Horizons Scanning for Welsh Local Government.

30 Foresight. 2010. Land Use Futures. London: Government Office for Science.

31 Thompson, G. and Harari, D. 2013. The economic impact of EU membership on the UK. House of Commons Library

consequences. Certain economic sectors – such as agriculture – would be particularly affected. Particular places in Wales that secure financial and other support from European programmes would also be affected. Significant parts of the planning system are impacted upon directly by the European Union, especially in terms of environmental regulations, environmental protection and environmental assessment. Yet some studies suggest that the extent of United Kingdom legislation that is derived from the European Union is exaggerated³². In addition to the possibility of exit from the European Union there is also the possibility of transformation of the European Union.

Public services provision

The trend over the past two decades has been for public services to be reconfigured, with an increased role for mixed and private provision of these services³³. This trend is likely to continue. A further series of market, charitable and non-governmental organisations are likely to emerge as service providers. These will become increasingly important in providing services to more vulnerable groups in society in particular. In addition, there is likely to be a requirement for improved integration between different governance mechanisms, including those related to land use planning³⁴. Public sector funding and resources are very much determined by short-term political cycles. Yet some studies do explore the shape of public organisations and public services where finances are ‘broke’³⁵. These studies highlight the possibility of constrained public resources and the need to prioritise services. In UK local government this is likely to result in the short to medium term in decline in services other than public transport, social care and waste management³⁶.

Changing ways of engaging and involving communities

The increasing diversity of society will require planners and others to develop effective and meaningful ways of engaging different groups in the planning system. Communications technologies and social media are identified as one area where there could be innovation in engaging citizens and communities, including in real-time voting and decision-making³⁷. This may contribute towards a trend for further delegation from public organisations to members of the public.

Changing tools for shaping land-use change

There is a requirement for planners to develop a wider range of tools to manage development. There will be an increasing need for planners to complement regulatory tools with other mechanisms such as penalties, incentives, land ownership and management. A notable trend has been reduced levels of regulation which enables greater freedom for markets and developers to determine patterns of land use change. Professionals working in the public sector will need to develop a better understanding of how to manage and intervene purposefully

Standard Note SN/EP/6730

32 Euromove.org.uk

33 Institute of Public Policy Research. 2005. The Future of Public Services Regulation. An IPPR Discussion Paper.

34 Foresight. 2010. Land Use Futures. London: Government Office for Science.

35 World Economic Forum – ‘Future Governance’ website – www.wef.ch/futgov, visited March 2015

36 Local Government Association. 2014. Future Funding Outlook 2014.

37 Institute for the Future – ‘Governance Futures Lab’ available at www.iff.org/govfutures/ visited March 2015; World Economic Forum – ‘Future Governance’ website – www.wef.ch/futgov, visited March 2015

in market processes³⁸. Additionally, there has been a trend in various sectors towards self-regulation, often as a means of managing regulation in the context of diminished public resources. This usually requires the setting out of clear goals and standards, and better use of performance management frameworks, rather than direct regulation by public bodies.

Smart Cities

An important trend in one aspect of governance and regulation is the growth of smart cities. The term smart cities refers to the use of emerging technologies to help manage urban systems. A smart city uses intelligent technology to enhance our quality of life by providing us with information to help us make informed choices, or by using data to better manage the provision of urban services. Access to real time information enables people to use the internet and relevant apps to turn their heating on and off, or plan a journey by checking for available room on trains and buses or even identifying busy routes before leaving the house. Key areas for development and use of smart technologies include: metering and management of resources such as energy, water and waste; management of transport systems and information; and enabling provision of personal services, such as assisted living, remote health services and advice, and social interaction and support.

It is anticipated that these 'smart city' technologies will be increasingly integrated into the design and management of urban environmental systems.

Summary

The key governance and regulatory trends identified in this section are:

- an increasing concern with ensuring security of supply of resources;
- a risk that governance structures do not adapt quickly enough to meet the social, economic and environmental challenges that society faces;
- increasing uncertainty about the role of European level governance;
- the increasing importance of mixed-provision of services across public, private and voluntary sectors;
- a need to make decisions about priorities for delivery of public services;
- the expanding scope for technologies to support the delivery of more efficient and effective urban areas.

The land use implications likely to arise from the issues explored in this section are:

- increased securitisation and protection of infrastructure to ensure that it is resilient;
- land being prioritised for meeting basic needs and reducing dependence on external provision of supplies such as food and energy;

³⁸ Confederation of British Industry. 2014. 'Our Future Public Services: a challenge for us all'. London: CBI

- the more localised provision of a variety of services to individuals and communities.

The skills and development needs that may arise are:

- how to harness communications technologies and social media for engaging communities and individuals in the planning system and using these to inform consideration of the wider public interest;
- how to manage and deliver efficient and effective planning services with a mixed public, private and voluntary provision of those services;
- a better understanding of mechanisms for shaping and influencing markets, as well as other more innovative and efficient means of regulation.

Annex A. The project's activities

The project involved:

- a desk-based study;
- a stakeholder seminar; and
- consultation with representatives of local planning authorities

The desk-based study reviewed a range of different materials that explored future trends for a series of different sectors. The identification of relevant sectors was informed by an initial analysis of Planning Policy Wales. Futures studies and exploration of future trends can be very wide-ranging and open-ended. The analysis of Planning Policy Wales therefore helped to define the scope of the project and ensure the findings and recommendations were practical, applied and relevant to land use planning. The project team reviewed various Foresight reports and other organisations' analyses and speculations on future trends. Key documents of direct relevance to planning – such as the Foresight Report on Land Use Futures³⁹ and the Royal Town Planning Institute's Planning Horizons series⁴⁰ – were included in the review and were complemented by wider, sectoral studies for specific sectors.

The project team organised a half-day stakeholder seminar in March 2015. Over 30 different organisations or individuals were invited to participate in the seminar, representing a wide spectrum of sectors and interests. Thirteen organisations participated in the seminar. The project team invited others who could not participate to outline key issues in correspondence and identify useful sources of evidence and information. Sectors represented at the seminar include business, transport, housing, renewable energy, environment, sustainability, design and tourism. Sectors invited to participate but not represented at the seminar include retailing, waste, language, water and agriculture.

The final stage of the project involved consultation with organisations representing local planning authorities in Wales.

³⁹ Foresight. 2010. Land Use Futures. London: Government Office for Science

⁴⁰ Royal Town Planning Institute. 2014. Planning Horizons. Future Proofing Society. London: RTPI.

The project team included the following academics from the Cardiff University's School of Planning and Geography:

Dr Neil Harris,
Dr. Mike Biddulph,
Dr. Huw Thomas,
Dr. Francesca Sartorio and
Dr. Andrea Frank

Owen Struthers managed the project for the Welsh Government.