

LANDMARKS



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LANDSCAPE OF MAN: AN INTRODUCTION TO LANDMARKS

AMANDA SPENCE, DESIGN COMMISSION FOR WALES

Landmarks is the Design Commission for Wales' autumn 2015 conference and exhibition which explores the relationship between the natural resources of the Welsh landscape and human intervention, with the aim of informing and inspiring a future for design in the rural landscape. This publication serves as a lasting reference to the themes and thoughts which have been uncovered through Landmarks.

The Design Commission for Wales selected nine illustrated essays, each of which demonstrates a critical response to the theme of Landmarks and, in doing so, stimulates and contributes to the debate. For the Landmarks exhibition at Ruthin Craft Centre, we curated the work of several designers which, as a whole, creatively and critically responds to the complex issues and challenges of working with the Welsh landscape, whilst highlighting the value of good design. Excerpts of their work are included here amongst the essays.

Preparing Landmarks has been an exciting journey of discovery, not least because of the talented and thoughtful people we have met along the way. We were delighted when aerial photographer, Alex MacLean agreed to survey Wales from the air to capture the physical and historical character of the region, and present the images at the Landmarks conference to aid in visualising the nature and context of the human impact on the Welsh landscape.

A character who emerged a number of times, both in the essays and our research for Landmarks, was the late Dame Sylvia Crowe (1901-1997). One of the most influential British landscape architects of the 20th Century, Crowe is remembered for her passionate approach to design, particularly around large-scale infrastructure projects. She leaves a legacy across Wales, including landscapes at Trawsfynydd and Wylfa power stations, and Landmarks has become an opportunity to celebrate her work.

Our ultimate ambition is that Landmarks will provoke those who plan, design and shape the land, to observe, interpret and act more inquisitively as they shape the future of the Welsh landscape.

MARKED LAND

With its magnificent mountains, verdant valleys and characterful coastline, Wales is renowned for the beauty of its natural landscape. Yet, over centuries, it has been transformed by the designs of mankind. Farming, industry, transport, energy, wars, religion and tourism have all left their marks on the Welsh landscape in the form of field boundaries, deforestation, roads, canals, quarries, mines, power stations, factories, monuments, pylons, wind turbines and the like.

Alex MacLean's aerial photography reveals '...an organic interdependency between humans and the natural world'¹ which we tend to overlook when presented with a typical 'landscape' photograph or painting. In fact, the marks on the landscape record this complex relationship between mankind and the land. Working with MacLean on the book, *Taking Measures Across the American Landscape*, landscape architect, James Corner '...believed the landscape to be as good a measure of cultural value and...way of life as any other,...gauging the topographical facts of the land as reflections of the character of the society that had shaped it.'²

The landscapes of Wales are constantly changing, due to both natural and man-made actions, just as what we demand from the landscape changes over time. The taxonomy of images by fieldcollective for the Landmarks exhibition records how humans have shaped the land, and documents changes in the landscape which cannot be captured by means such as conventional mapping alone.
[Page 08]

In *The Pattern of Landscape*, Sylvia Crowe explains the various relationships between mankind and the landscape, saying, 'It has been their home, their enemy, their god, their working partner or a storehouse to be plundered. All these attitudes to the environment can be found in the world today. But there is also a dangerously superficial attitude which looks at the landscape as if it were a picture, unchanging and independent of the forces which influence it, a backcloth rather than a part of life.'³ This attitude is still prevalent today, and influences the ways in which we continue (or not) to make new marks on the landscape.

PRESERVE OR PROGRESS

In the past, people used and adapted their local surroundings out of necessity to provide food, fuel, shelter and communication. Today, a prevalent romantic attachment to the 'natural' landscape leads to a focus on conservation and preservation, deeming any significant new interventions negative and requiring hiding or mitigation. This view can be narrow, at times obstructing value-adding good design.

Two centuries or so ago, major interventions in the landscape, such as Telford's Menai Suspension Bridge and the Pontcysyllte Aqueduct, were considered great feats of engineering elegance and symbols of progress to be celebrated. Today, we tend to try to hide new constructions in the landscape, pretending they are not there, but dual-carriageways and power stations are difficult things to hide. Despite this fact, 'hiding' and 'blending in' are often attempted at the expense of good design. Why are we designing and engineering so few projects we can be proud

of and which will add lasting value to our landscapes? In his essay, Mike Biddulph reflects on how and why we variously judge developments in their settings, and why we tend to expect things to 'fit in'. [Page 14]

There are many complex tensions in the landscape which need to be managed and balanced. Demands for historic conservation, habitat enhancement, improved transport connections, renewable energy, economic farming, jobs, culture and communities, health and well-being, water management, communication infrastructure and attractive tourism are often in conflict. With the system of landscape designation in Wales - National Parks and Areas of Outstanding Natural Beauty (AONBs) - currently under review, *Landmarks* provides a timely opportunity to debate the complex issues involved in shaping our future landscape.

Owain Williams' exhibition piece both highlights and challenges the tensions over reverence for the Welsh landscape through a fictitious proposal for an object which is at once a cabinet to display the precious landscapes and a building which challenges the expectation for integration with its landscape context. [Page 24]

INTERPRET AND INFORM

In order to 'progress' in our attitudes to design and landscape, we must understand and interpret, at various scales and on various levels, the contexts and places in which we are working and let this inform design. As Sylvia Crowe stated:

'Constructions conceived as self-contained problems of design have been the bane of the landscape for the

past century; but there is at last a dawning realization that every building, from a single house to a new town, from a small factory to a nuclear power station, must be considered in relation to its site and as part of the complex pattern of our national landscape.'⁴

The Landscape and Visual Impact Assessment (LVIA) process provides a formal method for assessing landscape context. It is 'a tool used to identify and assess the likely significance of the effects of change resulting from development'⁵ on the landscape, and is intended to assist decision-making. Mary O'Connor outlines the benefits of LVIA in her essay, explaining that early analyses can be fed into an iterative assessment-design process that ensures a proposal has addressed the important landscape and visual issues. [Page 34]

However, the formality of the LVIA process limits interpretation of landscape to those things which can be easily measured or quantified and deals primarily with visual aspects, leaving out the more enigmatic qualities to do with emotions, history, culture, narrative and memories. This is a dilemma Crowe grappled with as she wrote *The Pattern of Landscape*:

'It is particularly difficult to apply rigid criteria to landscape, for the response of the beholder is infinitely variable and not solely visual. It is deeply concerned with all the senses; scent, sound and touch all play their part. To an artist, a scene may be purely a composition of shapes, colours and textures. But others may see it with the eyes of a farmer, a geologist or a historian.' 'To assess the value of a landscape involves a knowledge of its viability; the degree to which it fulfils its particular

role as part of the functioning surface of the earth, and, in human terms, a judgement of the visual and emotional reactions it evokes.'⁶

In agreement with this way of thinking, Wayne Forster argues in his essay that, in order to be valuable to the designer, the 'discovery' of site requires the 'empathetic' turn. [Page 44]

Architect, Rhian Thomas explores this idea on a practical level in her exhibition pieces which aim to find narrative in relationships of field and site through deep mapping practices. The work and process by which it was made also consider how cultural notions of the past, perception and the embodied experience of the architect on site can propagate future architectural relationships with landscape and locality. [Page 54]

LANDSCAPE OF THE FUTURE

There are many issues which must be considered by the designers, planners and decision-makers shaping the Welsh landscape; and some large-scale, strategic, cross-discipline thinking is required to address the challenges in a coordinated and meaningful way.

Alister Kratt suggests that replacing the present Wales Spatial Plan with a National Development Framework (NDF) presents an opportunity for Wales to define what it wants, and set out where and how it will be delivered. He believes it is a chance to positively plan in a coordinated way for the future, refitting and reimagining areas that may be said to have long lost their purpose or historical reason for being. [Page 26]

Two areas which generate much debate and controversy are the provision of housing in rural areas, and the generation of energy; both are necessary, and both make significant marks on the landscape.

Ed Green's essay proposes a strategy for housing which would reconnect our communities with the countryside. He argues that settlements which have a positive relationship with the surrounding landscape become better places to live – more legible, ecologically richer, and more beautiful. [Page 68] Taking a different approach, architect, Andrew Docherty's Development Patterns exhibit abstracts the pattern of a traditional Welsh quilt to represent a way of ordering the many strands associated with rural housing to reinstate the character, craft, materiality and beauty of housing in rural Wales. [Page 78]

The impact of renewable energy developments on landscapes and seascapes is considered by Simon White in his essay. White emphasises that the design and consenting processes involved in delivering large-scale energy projects will be crucial in achieving successful and sustainable energy-scapes in the future. [Page 82] Learning from the past, artist, Helen Grove-White looks at the imminent decommissioning of Wylfa nuclear power station, a personal journey of discovery which has illuminated the landscape of the site in a new way, and led to a study of the work of Sylvia Crowe in helping to shape it. [Page 92]

Our experience of landscapes is never static; landscapes change during the course of a day and from season to season, and our view of them changes as we travel across them. Landmarks is also prompting designers to think about

how interventions in the landscape positively contribute to experience and memory. Two pieces consider journeys through the landscape. HASSELL's installation highlights the well-being benefits of landscape in the healing process; [Page 100] and Marcelle Newbold's essay documents memories of a familiar journey, made unique and rich by association with natural and man-made landmarks. New development, she argues, is important in creating texture in our experiences, adding layers to our memories and shaping the Welsh landscape. [Page 104]

We hope that the words and images that follow encourage you think openly and critically about the relationship between natural resources and human intervention, and that they inform and inspire a future for design in our landscape.

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- ¹ James Corner & Alex MacLean, *Taking Measures Across the American Landscape*, (Yale University Press, 1996), p. 15.
- ² *Ibid.*, p. xvi.
- ³ Sylvia Crowe, *The Pattern of Landscape*, (Chester: Packard Publishing Limited, 1988), p.7.
- ⁴ Sylvia Crowe, *The Landscape of Roads*, (London: The Architectural Press, 1960), p.12.
- ⁵ The Landscape Institute and Institute for Environmental Management & Assessment, *Guidelines for Landscape & Visual Impact Assessment (GLVIA3)*, (Routledge, 2013)
- ⁶ Sylvia Crowe, *The Pattern of Landscape*, p.57.
- ⁷ *Ibid.*, p.114.

TAXONOMY OF A LANDSCAPE

FIELD COLLECTIVE

In the late 1980's, my father MJ Thomas acquired part of the photographic archive of British landscape photographer Leonard Gayton, covering Wales and its borderlands. The documentary photographs of Gayton and his wife Marjorie came to embody the image of the British landscape during the 1950's, and they were published widely. The Gaytons' landscape photographs and ideas on landscape photography were not intended to be original or in any way remarkable, but it was their commitment to methodically recording the topographic beauty and regional specificity that established their reputation.

Having reviewed over 2000 photographs from Leonard Gayton's collection, covering over 20,000km² of territory, we have identified recurring themes in his work. The selected photographs are intentionally arranged into typological grids and have been chosen to capture the locally distinct landscape and terrain and its intersection with civilisation. Gayton has recorded the impact humans have had on the land and how they have shaped the landscape, often without having to show humans in his photographs.

In 2013, MJ Thomas began a process of locating the vantage point of the earlier photographs and systematically returning and repeating an identically composed image sixty years later. The exhibition also compares the landscapes of the 1950's with those of today and considers how natural processes and human presence have influenced the landscape since. Re-visiting the same sites over many years enables us to build particular relationships with place. The images have the power to document landscape changes not captured by other means, such as conventional mapping, in a country where human intervention and natural beauty inspire wonder in equal measure.

There is a critical methodology to the documentation and organisation of the work on exhibit, culminating in taxonomies of landscape, sites and structures – from exposed geological strata to field boundaries, a hermit's enclave to a Cistercian abbey, a Cenarth coracle to a stone beudy.

FIELD COLLECTIVE

Rhian Thomas and Rob Stevens established fieldcollective in 2010 as a platform for exploring the territory between architecture and other creative practices. This 'in-between' space amid orderly and established ways of working provides opportunities for exploration, innovation and generating new dialogues between art, architecture and its surroundings.

RHIAN THOMAS

Originally from St. Asaph, Rhian Thomas is an architect at Loyn+Co Architects in Penarth. She joined the team in 2013 and has played an integral role in delivering bespoke projects that build on the studio's consistency of language and techniques. Having established a strong reputation over the years for designing and creating quality architecture, Loyn+Co has recently been commissioned to design several significant residential masterplanning proposals, including Northcliff in Penarth for which Rhian is project architect.

Rhian graduated from the Welsh School of Architecture (WSA) in 2003. Between 2005 and 2013 she worked at the Design Research Unit Wales (DRU-w), and formerly at Wyn Thomas Gordon Lewis. She continues to combine work in practice with teaching at the WSA.

Rhian has a particular interest in design in cultural landscapes, and using fieldwork techniques as a way of understanding site and how this can inform composition and form. She has always taken pleasure in the way work is made, and continues to find new and exciting ways to represent ideas. She has exhibited at the National Eisteddfod of Wales, the Mission Gallery, Ruthin Craft Centre, and for a pop up art collective in Cardiff.

ROB STEVENS

Rob Stevens graduated from the Welsh School of Architecture in 2007 and subsequently took a research and teaching position at the WSA to pursue design research on the topic of 'personal cartographies' – mapping experiential place. Through fieldcollective, he continues to explore the potential of mapping as a means of informing creative practice, and has had his illustrative drawings and maps showcased in a number of exhibitions in Cardiff and in several publications. He is a visiting tutor at the Welsh School of Architecture.

Rob has worked in architectural practice for six years with a conservation practice, Davies Sutton Architects, and RIBA award-winning design-led practice, Hall + Bednarczyk Architects, before joining HASSELL, a leading international design studio. Recent projects include a £1m visitor centre for Dwr Cymru Welsh Water overlooking Llandegfedd Reservoir, for which Rob was project lead. Since joining HASSELL, he has been a strategic member of the design team for two multi-million pound healthcare projects.

MJ THOMAS

Michael John Thomas studied Physics at Aberystwyth University, graduating in 1973. He began his teaching career in Nottinghamshire, and later north Wales, before being appointed Head of Physics at Eirias High School, Colwyn Bay in 1980. He took early retirement from teaching in 1989 to pursue his interests in photography and educational publishing.

He established Celtic Picture Library in 1985, which specialised in images relating to Wales and its culture. The client base grew steadily, and whilst most clients were based within Wales, reproduction rights to his images were sold to publishers throughout the world. Although the picture agency no longer operates commercially, MJ Thomas still pursues his photographic ambitions for pleasure.











ESSAY ONE
MIKE BIDDULPH

1

LOOKING IN CONTEXT

MIKE BIDDULPH



<1>



<2>



A PROBLEM AND A PROCESS

The way that we think about, or judge what a building or structure looks like in a landscape is conditioned by our culture, education and experiences. There is nothing inevitable about it.

Some might dismiss the issue as subjective, but such responses are an important aspect of our lives. The fact that we do not all agree should be a reason to be interested in why we have preferences and what shapes them. The fact we do not always agree means that reactions to developments can be strong. I want to reflect on how and why we variously judge developments in their settings, and suggest at how we should consider context to encourage better design.

Good design responds to context. Understanding context is not exclusively, however, preoccupied with what it looks like, and often designers are concerned about a wide range of issues which they must accommodate. I am going to focus on what things look like though, because for the wider public what something looks like remains a major concern, and the success of development is heavily judged against whether people like looking at it or not.

Fortunately, today we have a planning system in which views and opinions about developments proposed by others can be discussed and debated. The system tries to be systematic and transparent in accommodating the evidence and opinions of various interests in the decision making process. In theory, the process is democratic and reasons for decisions are there

for anyone to see. The planning system is, as you would hope, concerned about many issues, but what things look like remains a concern. The fact that we have a planning process does not leave everyone happy though. The difference in our judgements is there for everyone to see.

A simple example highlights the tension and legacy for people affected by development. The architect of an eco-housing scheme called Harold's Field in the village of Boughrood publically dismissed local people's doubts about his design and stated that the way the scheme looks, '... is a clear statement of our social and technical priorities'¹. He wanted ecological demands to be at the forefront of his outcome, and it is the reason the scheme looks the way it does. A local resident responded, 'eco-friendly the new houses in

Boughrood may be, but their blank walls looming over the village road are about as uplifting as storage units in an industrial park². The scheme got planning permission, and you can judge the outcome in visual terms for yourself. <1>

THE HISTORY OF SEEING BUILDINGS IN LANDSCAPE

We have quite a heightened sense of how we want developments to appear in the landscape and our interests probably link back to times when industrialisation was transforming our cities, and in particular how the then middle and upper classes responded to this. The role of artists since the 1700s cannot be understated. Painters have been very busy representing our landscape and, in turn, shaping how we see and think about it. A few key artists were instrumental in Wales. Richard Wilson established a tradition of painting unsentimental grand canvases of the Welsh landscape, and a recent exhibition at the National Museum Cardiff celebrated his life and achievements.³ The Reverend William Gilpin published widely circulated and enjoyed sketches of the River Wye and South Wales in 1782⁴ <2> and through subsequent work established the principles of the picturesque in art.⁵ His images became a key source of inspiration for subsequent travellers and artists. They included Turner, whose paintings of what was a poor and remote Wales established the dramatic (and often dramatised) qualities of key buildings in the landscape.

Such images stood in stark contrast to the urban realities that many people endured day-to-day. We need to thank Napoleon for our tradition of landscape art and

appreciation, as he and his armies cut off Europe for holidays or the Grand Tour for the affluent taste formers. As a result of the influence of these and other art works, our judgement of landscape is based not only on how useful or productive the land(scape) is, but on what it looks like. Back then it was a judgment of the painting experienced far from the original subject or site, and the lives lived there. Today it is the same judgement of the subject or site by anyone who is interested.

Such images influenced ideas about how we might judge a building in a landscape, but they also influenced how such building might be designed. Until the mid-1800s formal architecture was strongly influenced by ideas derived from antiquity. Adapted from the thinking and practices of Palladio⁶, notions of beauty were uncompromisingly neoclassical. It took the romantics and those with an interest in the picturesque to change this, and the rugged landscapes of Wales had a significant role to play because of the attention drawn to them by the artists. Whilst the neo-classical plan was formal and imposed on its landscape, the desire for buildings to respond to their site and frame different views resulted in what would latterly be regarded as the modern plan. It seems interesting that very contemporary designs for homes owe something to the legacy of this liberation of the plan which was a re-evaluation of very domestic buildings such as rural cottages that informed this tradition.

In, *The picturesque: architecture, disgust and other irregularities*,⁷ Macarthur discusses how, prior to the arrival

of the picturesque, architects only saw geometric shapes and rooms in both plan and elevations which were generally arranged with reference to contrasts, unity and order, proportion or symmetry. Such notions were universal but abstract. In particular, he notes how the plan and elevations were subject to the same judgements. The picturesque encouraged or allowed the plan to become irregular, and for its form to be determined by external visual relationships with its context, 'architects tried to take lessons from painters; to imitate rural buildings, particularly humble cottages, whose 'plans' were accretions of rooms without figure'⁸. Prior to this, cottages were regarded by landed gentry and their architects with disgust. Subsequently, however, the design of the cottage became associated with attempts to socially reform the economically dependent tenants of landed gentry on recently enclosed farmlands. New houses built for farm workers came to reflect a sanitised version of vernacular building traditions. The view of the landscape and rustic buildings translated into a celebration of vernacular building form and image which has continued to this day, and which continues to influence public taste. Such acts were, at the time inherently political. Some observed that open views over neglected or unproductive land towards romanticised cottages for dependent tenants highlighted the economic and social significance of this aesthetic direction. The idea of the sanitised view probably still holds contemporary resonance but it has been democratised. Today it is not only the landowner who likes the view. We all judge landscapes and buildings with only some regard for other ways in which we might benefit from what we see in terms of how the land is being used. If we do





Hide It



Reflect it



Copy it



Cut and paste it



Ignore it

<3>

<4>



not make money from the land in view, we are more likely to judge it principally by how it looks.

FITTING IN

Today, the normal planning expectation is conservative; that development should 'fit in'. There are two ways to judge this. The professional way would be to thoroughly analyse the site and context, establish their visual qualities and then determine which aspects of the proposal fit in, and which do not as part of a wider understanding of the scheme. Welsh Government guidance on design, *Planning Policy Wales: Technical Advice Note 12*, notes that a contextual approach should not prohibit contemporary design.⁹ This is good. The other way is to look at the design and, based on your culture, education and experiences, express a view. The concern is that members of the public and sometimes their councillors do not share the objectives of the architect or land owner, and soon a battle of rhetoric prevails.

To be more specific, it could be said that there are five different approaches to dealing with the visual aspects of context: hide it, copy it, cut and paste it, reflect it, or ignore it. <3> The approaches that the public like tend to include hiding a development or copying and pasting aspects of an immediate context, such as familiar detailing, onto new developments. This is a common approach to design for plan smiths who have no particular interest in, commitment to or skill in designing. In theory, the planning system is able to accommodate all justified approaches except those where visual aspects of a sensitive context have been

completely ignored. Planners, of course, give permission for adequate and not necessarily well-designed development. Some designers do not mind hiding their schemes, but normally the best want to reflect aspects of the context in a design, and this is what the guidance on design in the planning system would encourage. Ignoring a context completely is usually the result of inadequate analysis in the design process or disagreement about what is important. For example, a desire to create jobs might outweigh many other concerns in some settings.

CREATING SPACE FOR DESIGN

Sometimes we might challenge the preference for hiding a development or uncritically copying aspects of a context so that a scheme 'fits in'. Architectural literature is full of mirth for facadism or the post-modern practices of sticking borrowed details onto structures to make them 'contextual'. Whilst this type of pastiche might be a common expectation, there are those that suggest that alternative strategies might be better.

We now understand that new developments within historic environments should have architectural integrity (well organised spaces, inclusive access, and energy efficiency etc.) and might visually contrast. This notion of contrast has a long tradition and features strongly in certain European settings. We should complain about new buildings in a historic context where elevations merely copy aspects of a historic place, but with no equivalent craftsmanship or understanding about how to give buildings the design integrity they need. Some new visitor centres in Wales are examples of good contemporary buildings, suited to their

<5>





purpose and complementing, through contrast, a building or landscape that should be the focus of our enjoyment. <4>

If there is no distinctive built character to a place then it certainly seems right that new forms of development might be embraced. Thomas Sharp, writing back in 1968 about visual traditions in British towns, said that our towns and villages unselfconsciously established their unity through variety; a physical and visual consequence of our ownership and mercantile heritage, informed by local building traditions and practices which were progressively influenced by new ideas from outside.¹⁰ This explains how a variety of building forms have always been accommodated within a town. But what about building within the wider views of the countryside?

The celebration of landscape very often involves the juxtaposition of well-designed structures. Historically we see this in the use of buildings or structures in landscape art. Often the focus of a picture is a building, as in Gilpin's sketch of Tintern. <2> The celebration of many of our great civil engineering achievements is partly because of the drama that they create within the landscape. Who could imagine the view of Llandudno and the Great Orme without the uncompromisingly magnificent pier? <5> Today we make special visits here to enjoy this view unburdened by any memory of what it was like before. Others make special trips to enjoy views of the Pontcysyllte Aqueduct, the dams of the Elan Valley or the bridges of the Menai Straits. The internet allows us to see maps and photographs so that we can appreciate the places other people enjoy, and the

<6>

juxtaposition of beautiful nature and great engineering is a common theme. <6>

However, there is usually controversy when locally cherished views change as a result of new forms of development, such as wind farms. <7> Distinctive landscapes are nationally assessed and viewing corridors carefully plotted to find sites where development will have least visual impact. Despite this care, changes to landscape views can be difficult for some to take. People will accept changes to their local views – relentless building of business and retail parks, housing estates, roads, petrol stations – ugly things that they look at all the time, every day; but the development of a few turbines on what they think should be a stable and natural horizon falls into a different category. They would photograph the once modern windmills in the open views of the Dutch polders, but turbines in the open views of mid Wales are a different kettle of fish.

History suggests that even some 'ugly' things can be accepted in time and that this process might be fuelled by nostalgia. The south Wales mining towns, once imposed on their contexts, have become a part of the visual landscape of Wales and can be appreciated both for how they look and what they represent. The strict terraced streets and buildings are being softened by a greening valley landscape which allows us to see and appreciate them in a new light. <8> Maybe it takes the passing of time, knowledge that such places were important and a gradual loss of memory for the once harsh forms to be reappraised, just as the rural cottage was reappraised by previous taste makers.



<7>

MANAGING THE IMPACT OF SMALL DEVELOPMENTS

Sometimes it is the small and almost personal things that are the most interesting. I am sure that we can all think of things that have caught our eye. When I first visited Llangrannog, a small village on the Ceredigion coast, I was struck by that moment of drama created by the house, Craig-y-don, sitting uncompromisingly on the cliff overlooking the village. I do not know if others really notice it, or what they think. There is nothing special about this building. In a normal town you would just walk past it without a second glance, but here the juxtaposition of the building, cliffs and sea made a good subject for a sketch, and marked this place as distinctive and memorable. <9> There is nowhere in the world like this. There are limits to the success of this type of development though. More houses like this would quickly become sprawl, and the charm and individuality would be lost. According to maps, this house was built between 1880 and 1900. Would such a house in such a position get planning permission today?



It is hard for us to judge what we might appreciate in a similar way in the future, but we can be helped by our understanding of why we need some forms of development, or how communities are benefitting from them. Despite my focus in this essay, we need to look beyond the visual in our judgment of things. Maybe it takes a sense of local community ownership and even fiscal compensation for projects like wind farms to be judged not only on what they look like.

<8>

Such examples remind me that simple, affordable but thoughtful developments can establish something memorable, something that would make an artist put pen to paper. Wales is full of these small interventions – robust building structures, affordable materials and carefully chosen colours or patterns. It is the history of a relatively poor nation that such developments were normal. Its legacy can still be beautiful even if it sits boldly in view. It remains the job of the planning system, but also the people of Wales to manage the development of interventions in our landscape so that this visual quality prevails.



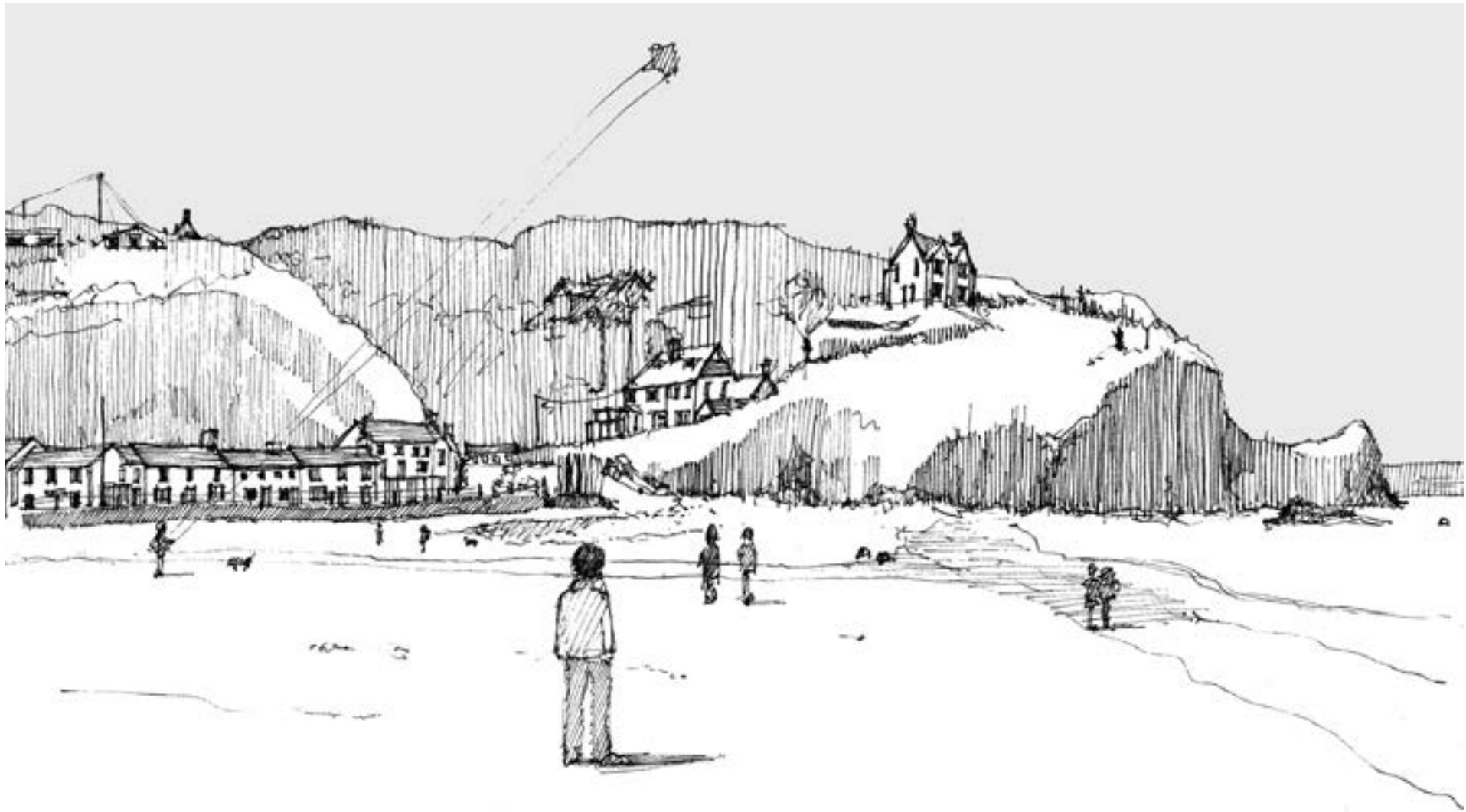


IMAGE CAPTIONS

- 1 The eco-housing scheme is Boughrood when seen within the context of the neighbouring cottages.

- 2 Popular sketch of Tintern Abbey by the Reverend William Gilpin made in the 1770-1780s. Gilpin published many images of landscapes and helped to popularise ideas of the picturesque which went on to influence landscape art. Source: Gilpin, W (2005) *Observations on the River Wye and several parts of South Wales*. London: Pallas Athene.

- 3 Five different approaches to dealing with the visual aspects of a context: hide it, copy it, cut and paste it, reflect it, or ignore it.

- 4 Raglan Castle Visitor Centre shows how a contemporary building can complement a historic building in its landscape

- 5 The magnificent Llandudno pier is an accepted part of this view of the Great Orme

- 6 The internet provides a place where we can see how people enjoy the sharp juxtaposition of great engineering structures in our landscape, in the same way that Gilpin enjoyed the view of Tintern in the Wye Valley. Source: Google Earth

- 7 Wind farms in the mid-Wales landscape remain unpopular

- 8 Aberfan and Merthyr Vale. The scarred landscapes of the South Wales valleys have been replaced by greenery which reframes our view of the famous terraced homes

- 9 A drawing of Llangrannog highlights how the house Craig-y-don stands out on the headland. This typical turn-of-the-century house compliments the view, but more houses like this would undermine the drama. Would such a house in such a position get planning permission today?

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BIOGRAPHY

Dr. Mike Biddulph was a Senior Lecturer at the School of City and Regional Planning at Cardiff University. He is most widely known for his work on liveable streets and the design of neighbourhoods. As a planner and urban designer he has also published extensively on how planning systems can be used to achieve urban design objectives. Mike also set up the very successful MA in Urban Design at Cardiff University. He now works for Cardiff Council.

OFFICE TO THE ORDNANCE SURVEY, TREHERBERT

OWAIN WILLIAMS

'heritage exaggerates and omits, candidly invents and frankly forgets, and thrives on ignorance and error.' David Lowenthal

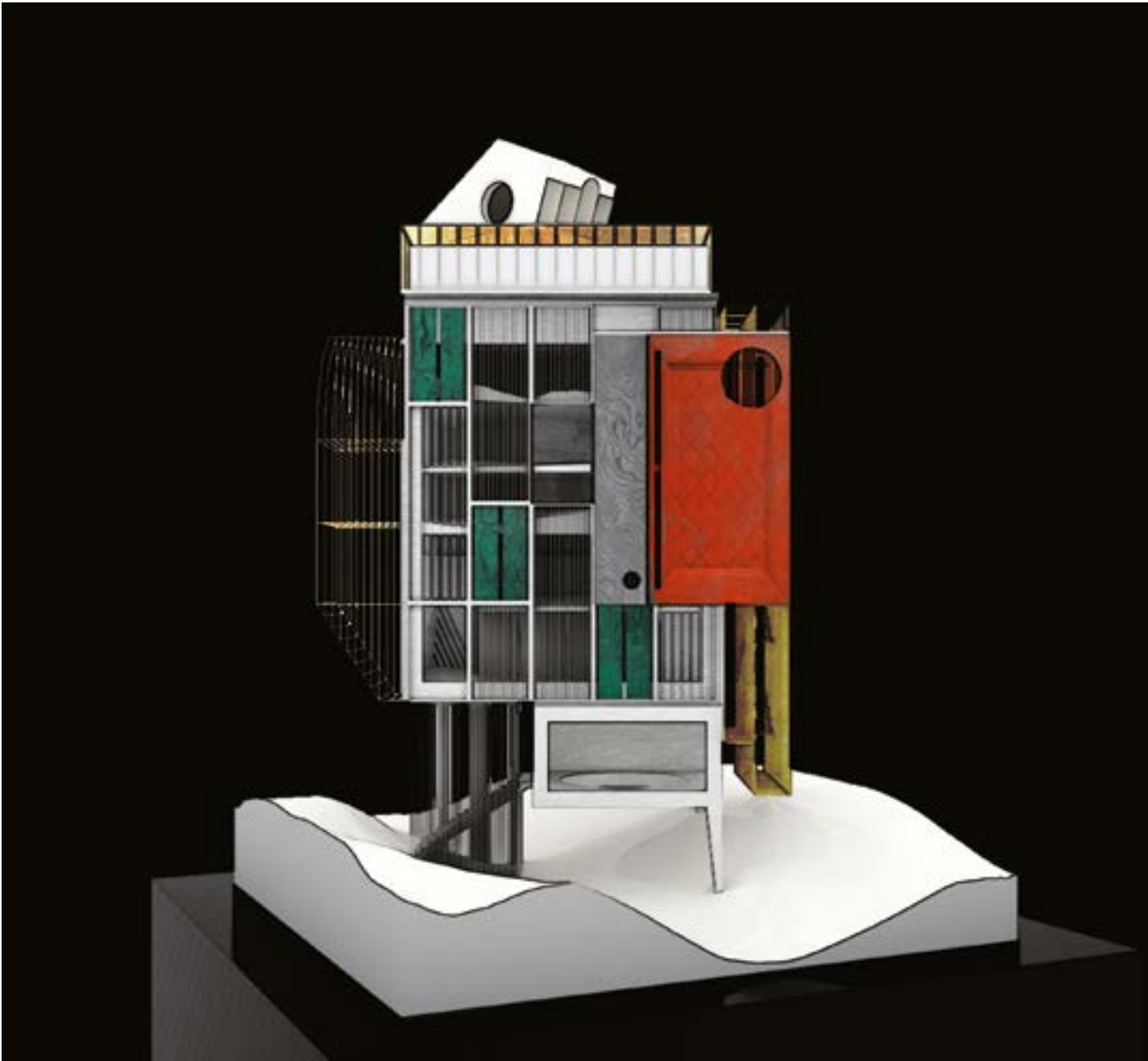
A lingering phantom in our visual narrative in Wales, landscape has become a go-to analogy in cases where an architectural vocabulary is otherwise missing. Elsewhere in Britain, architectural styles such as the Greek revival movement have offered a recognisable language of restraint and sobriety to support its institutions- the British Museum, University College London and the National Gallery all instances of its appropriation. Similarly, the competition for the Houses of Parliament ultimately won by Charles Barry in 1835 came with the prerequisite that the proposed building should be in the Gothic Revival style, establishing a visual idiom for governmental and religious power. By and large, architects practicing in Wales have existed outside of this tradition, and have struggled to adequately deploy a relevant architectural idiom.

This is still apparent in how we choose to represent ourselves on the global stage. A study of media produced by the Welsh Tourism Board indicated that nearly 30% of images were of castles or similarly ruined structures. This architectural mode is described by the board as one of many aspects which make Wales unique, alongside 'the Welsh language, myths and legends'.

Architecture is no exception to the ubiquitous influence of mythology and storytelling. A Royal Society of Architects in Wales (RSAW) survey found the Welsh public's favourite building to be William Burges' Castell Coch, a Gothic revival castle built on Cardiff's mountainous outskirts for the Marquis of Bute in the mid-to-late 19th century. In his *Guide to the Buildings of Wales*, John Newman introduces this 'castle of romantic dreams' as a zenith in the national architectural tradition. Gothic Revival becomes the architectural setting of the Welsh myth.

The influence of Burges is present in this proposal for An Office to the Ordnance Survey. The architect's hybridisation of furniture-making and architecture come together to form an archivist's cabinet to record our landforms, as well as an architectural proposal for a large scale building. Standing in the end-of-the-valley topography of Treherbert, the building challenges the expectation for integration and sets its own rules for an autonomous architecture. Within the cabinet, full scale topographical replicas form the interior of the building, liberating the ground-plane and pulling it into the artifice of the building.

The cabinet serves to suggest that landscape, architecture and furniture are treated as elements interchangeable in both scale and hierarchy. The reverence of landscape in Wales is at once respected and undermined by its representation; at once natural and artificial; at once heritage and cultural fabrication.



BIOGRAPHY

Owain Williams is an architectural designer working on projects in scales varying from children's books, to gardens, to writers' sheds, to housing.

Having graduated with Distinction from the Bartlett, University College London in 2013, he featured on the Dean's List of high achieving post-graduate students. Having also attained a First Class Degree in Architecture in 2010, he was nominated for the RIBA President's Medal for his work in design and draftsmanship.

Owain was the designer of the Bronze medal winning Fresh Garden at the RHS Chelsea Flower Show 2014. His work has also been exhibited at the Royal Academy Summer Exhibition.

In 2012, Owain was the grateful recipient of the National Eisteddfod Scholarship for Young Architects, supported by the Design Commission for Wales. Born in Quaker's Yard near Pontypridd, Owain now lives and works in London.



2

**WELSH PLAN:
A NATIONAL VISION
+ THE NATIONAL PLAN**

ALISTER KRATT



'Write the vision; make it plain on tablets, so he may run who reads it.' Habakkuk 2.2

In July 2015 the Planning (Wales) Act, which enables wide ranging changes to the planning system in Wales, gained Royal Assent. Reflecting a devolved government with new ideas, the Act seeks revisions to the Planning and Compulsory Purchase Act 2004 and, by proxy, changes to the effect of the Planning Act 2008 when applied in Wales. Within the legislation a commitment is made to the preparation of secondary legislation to replace the present Wales Spatial Plan with a National Development Framework (NDF). The NDF is intended to set out national land-use priorities and infrastructure requirements for Wales. The idea is potentially aspirational in its reach and, if correctly approached, could be the first of its kind to deliberately seek to secure the multiple and interrelated benefits of major development via a coordinated statutory spatial plan.

The NDF provides the opportunity to coordinate, orchestrate and make the investments made in Wales work hard, so that the outcome is greater than the sum of the parts. This will require, in part, a change in mindset, which at present can be brutally summarised as 'everyman or project for himself'. The alternative is to foster a culture of enlightened self-interest such that commissioning authorities, developers and private and public sector investors further the interests of others, whilst also serving their own interests. Put simply, this enforces the proposition that an individual, group, or even a commercial entity will 'do well by doing good'. This approach underpins



<1>

sustainable growth and regeneration. Investment in one project or initiative should be purposefully designed to support the success of other projects or initiatives in parallel, as well as deliver coordinated benefit to local communities, the environment and the Welsh economy.

The NDF presents an opportunity for Wales to define what it wants, where it will be sited, how it will be funded and delivered and why it is needed. It is a chance to positively plan in a coordinated way for the future, seeking to spread

wealth and economic prosperity, refitting and reimagining areas that may be said to have long lost their purpose or historical reason for being. Successful plans tend to be those that are underpinned by a vision, are founded on an understanding of history, the present day context and drivers of change and look to the future. The decisions we make today will have lasting effects on generations to come. What we do needs to be good and always on an upward trajectory.



The national vision embodied in the proposed NDF can secure a positive legacy founded on good environmental planning, balanced growth, a strong sense of community and place, design merit, engineering excellence and responsible management. Above all, it can represent the nation, painting a single picture of the future underpinned by a clear narrative that allows people to capture the idea, 'so he may run who reads it'. A vision can, and should, be a reflection of a collective mindset, driven by sound and inspired leadership and governance based on a set of clear objectives. It can inspire, painting a picture of success, so that as wide a demographic as possible supports its delivery. As such, the masterplan - the NDF - should be anchored in an understanding of economics, need, delivery, place (countryside, settlement, history and culture) and a clear and transparent approach to the identification of projects and opportunities. Joined up thinking and clarity of process will lead to efficiency and can ease delivery and support the promotion and financing of development and national infrastructure worthy of this and future generations.

Accountability should be expressed in design excellence so that change is celebrated and development recognised as an enabler of further positive change in the environment, in communities and in the economy. Accountability should also result from meaningful application of the vision – as the measure against which emerging plans, projects and initiatives are assessed. So we will ask the question, 'does that proposal help to deliver the vision for Wales?'

It is important that the NDF addresses the drivers for change

that we face. The drivers comprise the social, economic and environmental factors that operate at different geographic scales but are collectively shaping and changing our world. These drivers can initiate changes in how society organises itself and how we shape policy. Key to application of drivers is securing an understanding and appreciation of context, including environment, stakeholders, existing initiatives and local, regional and national needs and opportunities. Drivers which are commonly accepted comprise:

Climate change – meeting carbon reduction targets, building resilience to extreme weather events and other consequences of a changing climate

Energy – energy generating capacity, energy security, a shift to renewable energy from fossil fuel dependency and the move towards long life generating technologies and securing affordable energy

Health and Wellbeing – social inclusion, linking global thinking to acting local, balancing locally experienced adverse effects and change with meaningful social, environmental and economic benefits and generation of positive outcomes

Economics – employment, investment in the economy, workforce skills, preparing for future scenarios and patterns of activity, declining communities and changes in the rural and urban economy including industrial and commercial sectors

Natural Resources – changing land management patterns,





long term decline in biodiversity, homogenisation of landscape and townscape and management of natural resources including water and interconnected systems

As well as addressing today's drivers of change, the NDF should be sufficiently flexible to anticipate and accommodate changing priorities and drivers of change that may occur during the life of the framework.

In establishing the NDF, our cultural attitude to development and infrastructure can be re-calibrated from something often considered inappropriate or a necessary evil, to something to be proud of and inspired by. Is it right to assume that new development will, by definition, blight the landscape and national assets, and if so, why?

Previous generations were once fiercely proud of their progress. As a nation, we now seem afraid of change and can rarely talk about it positively. Indeed, we lack the language or confidence to express this in the world of planning. The industrial revolution, for example, certainly had an impact. However, it was also a period of optimism and vision. Great advances were made and signalled a progressive culture as well as triggering the modern global economy we occupy today. We can learn much from this, but our contemporary culture is now much more cognisant of the environment and indeed deferential to it in many ways. However, this attitude should not lead to a loss of optimism, vision or seeking to make great strides. It simply means we must do so in ways that conserve and enhance the environment and the places we hold most dear.

At present, we are dealing with the 'least worst case' mindset. We must look towards positive planning, confident design outcomes and a change in language, presently driven by the methodology and terminology of Environmental Impact Assessments (EIAs). Change is not necessarily a negative thing. We seem incapable of talking about new infrastructure as a positive thing, partially on the premise, perhaps, that change cannot be managed and is, in effect, a negative, an unfortunate consequence of progress.

In the case of infrastructure, we should recognise what it stands for and represents to our nation. We should deliver good infrastructure and be proud of it. Ultimately, it is an element of our landscape that enables, and in its absence, hinders much in our society. Infrastructure should not merely perform a practical function but should contribute, where possible, to quality of life - even in the everyday things of life. It should respond appropriately to context and environment, be of sound design and consider legacy potential, multifunctionality and have the capacity to adapt over time to changing circumstances and demands. Through the application of coordinated spatial planning, supporting a clearly articulated vision, the NDF can realise such aspirations.

The Welsh landscape is a canvas upon which the history of our society's progress has been painted. It has changed over time through the building of communities, establishment of industry and commerce and changes in land-use. Our appreciation of it has changed in parallel.

Mountainous places, once wild and feared, were at other times places of solitude and sublime inspiration. Our landscapes are complex, reflecting man's interaction with and imposition on them. Change can happen in distinct periods of intense activity or through gradual change without us even realising its cumulative effect. Our landscapes can be considered from many perspectives; a canvas, a resource, a place, an asset - landscapes of beauty, leisure, home, industry, power, commerce and nature. Society's interaction with our landscapes is rich, and our understanding should be similarly so.

Our generation's response should be appropriate and seek to positively contribute to the rich legacy of the past. Perhaps we have realised what we have inherited from previous generations (good and bad), and that we have a responsibility in what we hand on to future generations. Within the lifetime of our generation, never mind the numerous political cycles and strategies of the governments, we will, and indeed have already, 'made' history. We will continue to apply new layers of history across Welsh landscapes, and the NDF can span political cycles to given certainty and direction over time, and help us address change positively and responsibly cognisant of context.

The more obvious hand of man on the landscape of Wales is mapped on the coast, and contrasts with the elevated interior of the Cambrian Mountains, the Brecon Beacons and Clwydian Hills. You need only to look at a map and let your finger trace the settlements of the coast - Newport, Cardiff and Swansea - all significant centres of population with



strong industrial and commercial histories, contrasted with the smaller but equally significant communities of Fishguard, Aberystwyth and Llandudno, to name but a few; all different with diverse histories and roles. Yet the interior has also seen significant change over time, including protection through designation of National Parks and Areas of Outstanding Natural Beauty (AONBs), a history of industrialisation and mining, and later widespread afforestation and community decline as the industries left. These places have changed and continue to go through radical change. Wales needs a structure within which to define and orchestrate change. The NDF can be that structure.

The industrial revolution certainly had an impact, but it was also a period of optimism, vision and making great strides, and signalled a progressive culture. Development was viewed as both good and bad and recorded in art and literature. Many of its outcomes we now treasure and consider to be important parts of our cultural heritage and worthy of protection. <5>

Artists have recorded and portrayed images of the Welsh landscape on canvas that still have an impact and reflect our cultural mindset. These images have underpinned society's appreciation of what is 'natural' and 'beautiful', and indeed established the image of the Welsh nation to some.

In the case of Wales, landscape painting has portrayed the 'beauty' and 'scenery' of the place for which it became widely known and visited, typified by Turner's View of Snowdon and Caernarvon Castle, <2> and the



<6>

work of Augustus Edwin John and Richard Wilson. <3> But interestingly, the emerging infrastructure and industry of the day was also painted as part of the landscape, such as in Turner's Bridge Near the Usk, and perhaps more dramatically, Nant-y-Glo Ironworks by Henry Gastineau <1> and South Wales Industrial Landscape by Penry Williams, composed like an Italian romantic scene. The more recent, Steel Works: Cardiff at Night by Lionel Walden appears slightly more sinister.

Perhaps we are living under the continued misunderstanding that the landscape of Wales is a landscape that does not change and should not change; but it does change, it will change, and should be permitted to do so. However, that change needs to be managed and controlled.

It is my strong opinion that the general culture of Wales, and indeed the UK, is founded on an ideal image of the countryside which affects our judgement of change, impact and apparent risk of industrialisation and urbanisation. We must change our mindset, and the NDF needs to address change positively to avoid criticism of negative outcomes arising from much needed new

development. This does not however negate the need for good design or good planning. Quite the reverse! It accentuates the need for good design and good planning to ensure change can be responsibly accommodated.

We need to change our language so people understand what is being said, and aspire to start on the premise that development could be an inherently good thing that does not need 'mitigating'. We must understand that changes in our climate and culture need to be addressed.

History is not only a record of the past, but can inform our understanding of the future. We can learn from the past. Niall Ferguson notes, 'There is in fact no such thing as the future, singular; only futures, plural. There are multiple interpretations of history, to be sure, none definitive – but there is only one past. Although the past is over, for two reasons it is indispensable to our understanding of what we experience today and what lies ahead of us tomorrow and thereafter.'¹

Ferguson is of course correct – it is up to us all to shape the future. We will get the future we deserve, and so it is implicit on us all to engage in the planning and design of a positive

future, one that we are proud to pass on to future generations. History, somewhat ironically, has a critical role in framing the future. Huw Bowen, Professor of Modern History at Swansea University, believed that, '... an understanding of our history is absolutely essential for the development of a modern, cohesive, confident, forward-looking Wales that is secure about its identity and place in the world stage.'²

So how does the past impact us? We must not let a romantic notion of the past fetter our judgement about the future. We must see the past for what it was, in the context of prevailing drivers of change at the time, and learn from it. In that context we can judge what is successful and why, and we can consider what failure, and success look like. This can inform our approach to proper planning and the drafting of the NDF in light of the current drivers of change.

We enter a period when we will see marked change in the face of emerging Nationally Significant Infrastructure Projects and Development of National Significance, which will increasingly occupy our view and landscapes as the first projects are now consented and with many more being planned and submitted. Such development will be set against the effects of a changing climate and myriad small scale development and land-use changes as our economy recovers and grows. <6>

Market driven outcomes, often with poor design standards; numerous planning policy initiatives and changes in organisational structures; lack of leadership; changing environmental legislation and planning policy all hinder delivery of good, well planned growth in an economy. The

National Development Framework, if correctly planned, can do much to smooth growth, afford understanding, demonstrate vision and accountability and provide an opportunity to deliver development outcomes which can be celebrated and viewed positively by future generations.

WHAT MOTIVATES ME TO WRITE?

I have a passion for an enriched and enlightened debate, based on intelligent and rigorous understanding of the past, the present and the future, in order to define the role that planning and design must take.

My strong desire is to encourage a spirit of correctness and a conviction across society. I want to ensure that things are done well so that the inheritance we pass on to our children and grandchildren is the very best we can achieve. I want to take pride in what we, as a society, create. We all have a role to play, and it is my conviction that the NDF is the mechanism by which the whole of Welsh society can shape a positive vision for this fine nation.

**'Write the vision; make it plain on tablets,
so he may run who reads it.'**

The essay originates in a presentation given by Alister Kratt in 2014 in Cardiff immediately following the publication of Planning (Wales) Act and on a lecture given as part of the Landscape Futures series hosted by the Landscape Institute given in Cambridge in 2014.

BIOGRAPHY

Alister Kratt studied Landscape Architecture at Heriot Watt, Edinburgh and is a Board Director of LDA Design.

IMAGE CAPTIONS

- | | |
|---|---|
| 1 | Henry G Gastineau: Nant-y-Glo Ironworks, © Amgueddfa Cymru – National Museum Wales. |
| 2 | J. M. W. Turner: Caernarvon Castle, North Wales. © Tate, London 2015 |
| 3 | Richard Wilson: Dolgellau Bridge. © Amgueddfa Cymru – National Museum Wales |
| 4 | View from Crymlyn Burrows, Swansea towards Port Talbot. |
| 5 | Pontcysyllte Aqueduct, North Wales: Elegant infrastructure integrated into the landscape. |
| 6 | Swansea Bay Tidal Lagoon: New multi function infrastructure in Wales. |

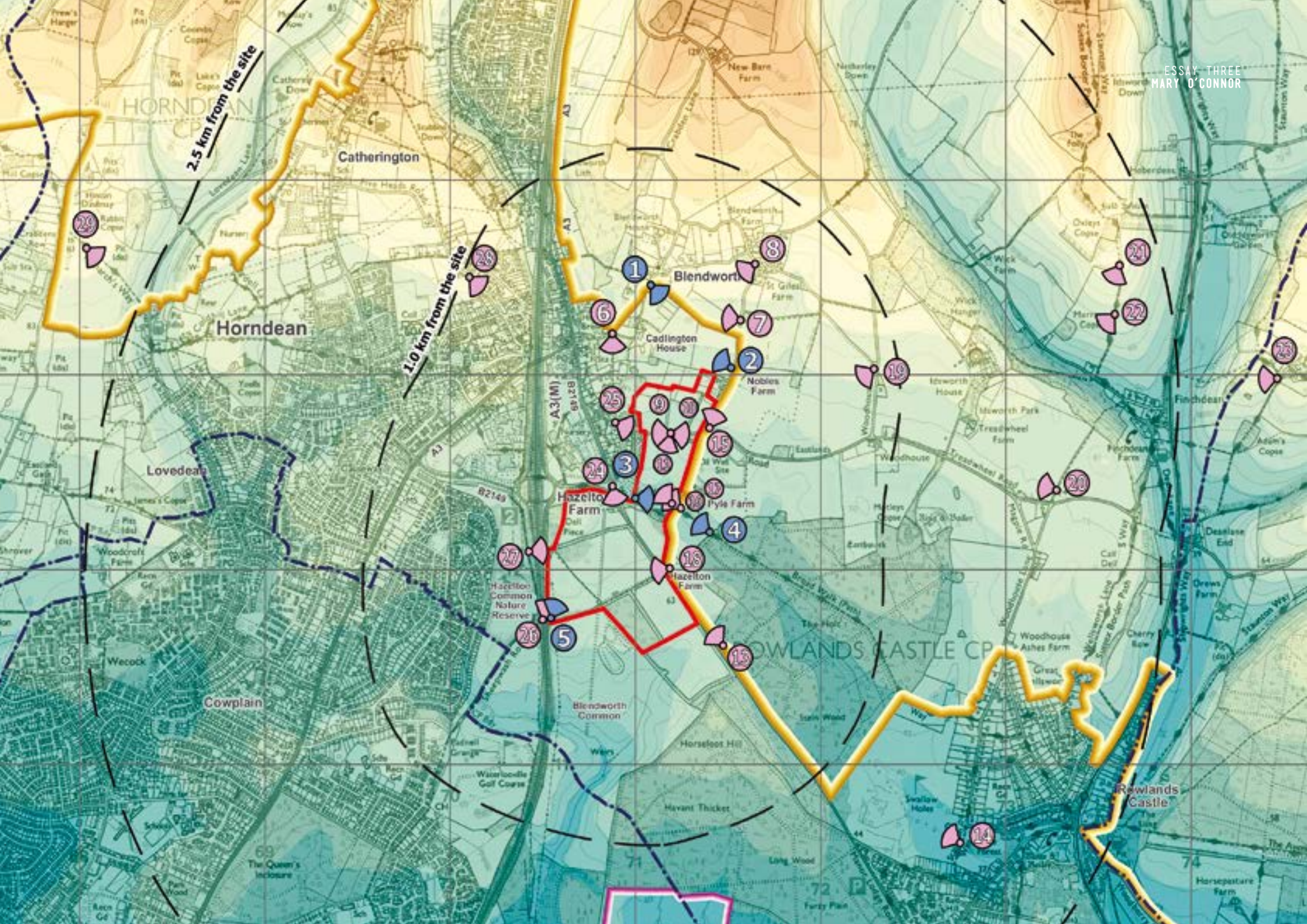
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- ² Huw Bowen, 'Who is writing the big books needed to give Welsh history a profile on the world stage?', *Wales Online*, (18th July 2014)

3

**LANDSCAPE + VISUAL IMPACT
ASSESSMENT: THE BASIS FOR
HOLISTICALLY DESIGNED
DEVELOPMENT AND ROBUST,
EVIDENCE-BASED DECISION MAKING**

MARY O'CONNOR FL



Landscape and Visual Impact Assessment (LVIA) sounds like a dry procedural undertaking for the purposes of satisfying statutory requirements, in relation to applying for planning permission or other consents for development proposals. That is, of course, one of its principal purposes: to identify the 'likely significant effects' of the proposals on these aspects of the environment.¹ But it also provides the basis for holistically designed development and robust decision making. It supports the integration of development into its surroundings and decisions about the form and layout, appearance and details, so that the development will be a well-thought-out, sensitive and beautiful landscape in itself.

There is increasing interest in evidence-based decision making: putting the best available evidence from research at its heart, while acknowledging that judgement based on experience and expertise has an important role.² This is particularly relevant to decision making about change in the landscape, as it is not susceptible to quantitative measurement of change and needs a qualitative evaluation of effects on the landscape³, of judgements based upon a process of analysis and reasoning.

WHAT IS LANDSCAPE?

The European Landscape Convention's (ELC) definition of landscape is widely accepted: 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'.⁴ This is the first international convention to focus specifically on landscape, which the UK signed up to in 2006. It is 'a people-centred

and forward-looking way to reconcile environmental management with the socio-economic challenges of the 21st century and to help people and communities to re-connect with place'.⁵ The ELC definition reflects a holistic understanding of landscape, based on the belief that the landscape contributes to individual and social well-being. It tells us why the landscape is important to people, that we should look after it, plan positively for its future, and integrate it with wider policies for planning, the economy, and 'any other policies with possible direct or indirect impacts on landscape'.

WHY DOES IT MATTER?

The landscape is not just about its natural components and cultural heritage: it provides the setting for people's lives, supports local identity and distinctiveness, and needs to be safeguarded as a finite resource. The rapid rate of change is leading to the transformation of landscapes. The result is that areas precious to people or enjoyed as everyday places are becoming unrecognisable to them and they are not able to create that relationship of belonging to or identifying with the new landscapes of change.

Therefore, plans for change need to be based upon understanding the landscape physically and culturally: the underlying or natural factors making it what it is and how it was shaped by people using it in different ways down the millennia. This is where LVIA comes in, providing a structured approach to inform our responses to site and context and a foundation for judgements about the effects

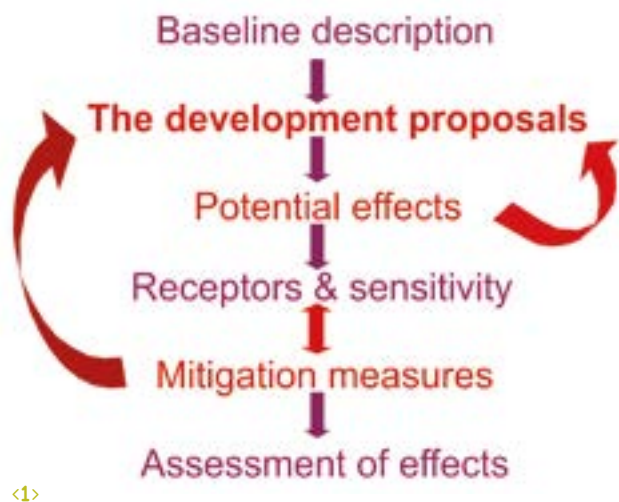
of change. LVIA in development planning can elucidate what the essential qualities of the landscape are and how new development can be accommodated.

WHAT IS LVIA?

As part of a statutory procedure, LVIA has a formal role in providing decision makers with evidence in the form of description, analysis and reasoned judgement, on which to base their decisions about the acceptability of a development proposal.

LVIA is a tool used to identify and assess the likely significance of the effects of change resulting from development, on both the landscape as an environmental resource in its own right and on people viewing the landscape.⁶ It is usually part of a larger assessment of environmental effects (EIA: Environmental Impact Assessment) of a development proposal, sitting alongside assessments of effects, under headings such as ecology, cultural heritage, noise, hydrology, as well as effects on people. EIA also requires the interrelationship of effects between these topics to be considered and measures to be proposed to address the significant effects identified – usually known as 'mitigation'.

This process generally means that it is advisable that the 'topic specialists' are involved early in the development of the scheme proposals. Then EIA can be an 'iterative process' during which the analysis of environmental issues informs the evolution of the scheme design. <1> Early



<1>

involvement of landscape architects in major developments because of the need for LVIA has proved to be a benefit. They contribute to shaping the proposal, coordinating the overall character of and landscape strategy for the development, often as part of the mitigation strategy for the potential effects identified. Issues emerging from the other topic studies can be assimilated and, ideally, those having implications for landscape and visual considerations can be incorporated into a holistic design for the development. The landscape architect's approach is often guided by green infrastructure thinking, integrating the requirements of ecology, cultural heritage, recreation, open space provision, land use needs, etc., and leading to a holistic development proposal with its own well defined character – a new landscape.^{7,8}

LVIA is a step-wise process of, in summary: understanding the development or project being proposed; investigating the existing nature of the landscape where the site is located and of the views available to people in the area; systematically identifying the changes to the landscape and visual amenity

likely to arise from the proposals, and assessing whether the effects of those changes are likely to be significant and whether adverse or beneficial in their consequences.

EIA does not happen in isolation. As well as discussion and communication amongst the EIA team. The decision-making authority – whether the local council or others – and relevant bodies concerned with the decision-making process are consulted about the scope of the assessment studies being undertaken. Consultations provide a vehicle for their concerns to be brought into the assessment process, especially when measures are being considered to address likely adverse effects which may be significant.

Ultimately, the LVIA will accompany the application for consent and will inform the decision as to whether the development should be allowed.

LVIA is also used to build up databases of background information to provide a foundation for the decision makers considering how the proposal in front of them inter-plays with the present and evolving situation. Examples are LANDMAP or landscape character assessments and related planning and design guidelines. In many cases the outcomes of these assessments are carried forward to further analysis of the current and foreseeable pressures on the landscape, highlighting what is important and where change should be constrained. Of particular relevance, is consideration of how new forms of development, such as wind farms, are resulting in cumulative landscape and visual effects that can be recorded dynamically using the

power of GIS. Cumulative LVIA of this kind provides a basis for robust and defensible decisions about further such development in an area.

HOLISTICALLY DESIGNED DEVELOPMENT

The ideal process to achieve holistically designed development is an iterative cycle of assessment and design that involves:

- > early consideration of potential effects and how to avoid them;
- > evolution of the scheme design and alternative solutions;
- > early incorporation of mitigation measures;
- > integration of mitigation for other topic issues.

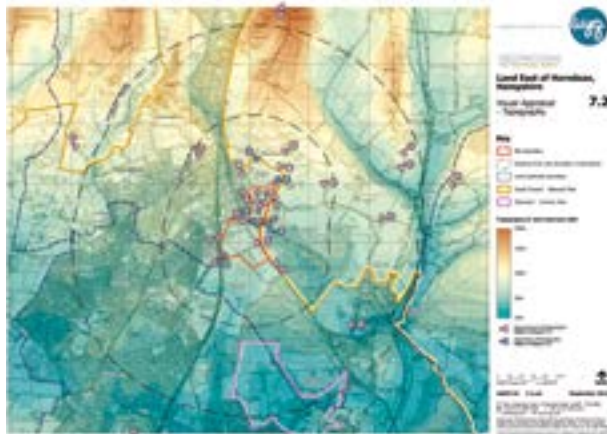
This is the fundamental process, which ideally should also involve discussion with stakeholders. Following are two examples of contrasting forms of development where LVIA provided a basis for integrating the opportunities and constraints revealed by the assessment process to enrich the design of the proposal that was put forward.

Example 1

Land East of Horndean: housing, employment & community facilities

The 'iterative assessment-design' approach was key to the success of this design of a residential development near Horndean⁹ - a proposed extension to the village whose site shared a boundary with the South Downs National Park.¹⁰





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The initial approach was to ask, “how much of a buffer would be required in order to make a development in this location acceptable?”. However, creative thinking, engagement with stakeholders and decision makers, understanding of the landscape of the site and its surroundings, of the national park and the existing village, led to a master plan that responded to its context. That was achieved by a process of <2/3/4>:

- > understanding the ‘baseline’ – the landscape features and character of the site and its context, valued aspects of the landscape; the people with views of the landscape and the site and where they experience those views;

<3>



- > understanding what might be affected by development on the site, and how that might affect the landscape of the national park, and how changes in the site might affect the views experienced by people – the ‘receptors’ and ‘potential effects’;
- > considering how (adverse) effects could be avoided



<4>

by the way the development was designed – ‘iterative assessment-design process’ – or reduced or offset – ‘mitigation measures’.

Ways of avoiding adverse change in the landscape of the national park and in peoples’ views of the landscape containing the site directed consideration of: the relationships at the edges of the site, connectivity with the surrounding landscape, and features and elements within the site. The constraints on and opportunities for the development of the site could then be defined and provide a framework for the master plan. <5>



<5>

The outcome was a master plan design that integrated the development with the settlement to the west and provided a 'soft' transition to the countryside of the national park to the east. It proposed a series of development areas of different character interspersed with open spaces, with the whole integrated in an overall 'green infrastructure' that connected with its context. It also minimised adverse effects on valued landscape resources and on the visual amenity of people in the surrounding area – and received planning permission.

Example 2 Bryn Defaid Coal Surface Mine

For a quite different form of development and one nearer home in South Wales, Bryn Defaid is a 104 ha surface coal mine development on the west side of Mynydd Aberdâr. This is a scheme to mine the remaining coal reserves

beneath historic workings of the 19th and 20th centuries, which would take place over a period of about five years, followed by restoring the site. Landscape considerations were important to the design of the development, which aimed to avoid visibility from the nearby Llwydcoed to the south while long distance impacts were considered to be too transient to be of material consideration.

The design of this development evolved in response to early consideration of potential impacts on the landscape, on communities, on biodiversity and on cultural heritage interests, as well as the potential cumulative impacts with other projects in the area. As for Horndean, this included early identification of sensitive receptors and likely impacts. <6> The phasing of the development, the locations of its various elements, the retention of existing features, and provision of screen bunds or advance planting were all incorporated into the overall design of the development

proposal. The objective was to mitigate adverse effects by avoiding or reducing them in the way the development was designed and would be carried out.

Surface mining offers opportunities for 'progressive restoration', that is, to backfill and restore the land as each phase of extraction of the coal is completed. Those opportunities were identified early, as a response to the initial findings of the LVIA, the findings of the other environmental topic assessments, and identification of cumulative effects (CLVIA).¹¹ In this development, the developer, Celtic Energy Limited, was committed to a 'landscape-ecology-cultural heritage-led solution', especially when it came to the ultimate restoration of the site after extraction of the coal was finished. <7> All these considerations were reflected in the design of the development as put forward for consultation with the local communities and to the local authority in the



planning application. Further assessment was therefore focussed on the development proposal that had evolved from the progressive and iterative assessment-design process.

The result was a proposal that not only addressed the landscape and visual effects of the development as far as possible, but also was a design that had taken the landscape and visual effects into account from the start and the contributions from the other topic specialists. These were all integrated in a holistic landscape design, which responded to the character of the place and would contribute to enjoyment of the site by the public and in the views from the surrounding area. This proposal also received planning permission without contention.

ROBUST, EVIDENCE-BASED DECISION MAKING

L VIA can provide support to 'evidence-based decision making' and the robustness of the decisions made about development proposals, as demonstrated by this third example.



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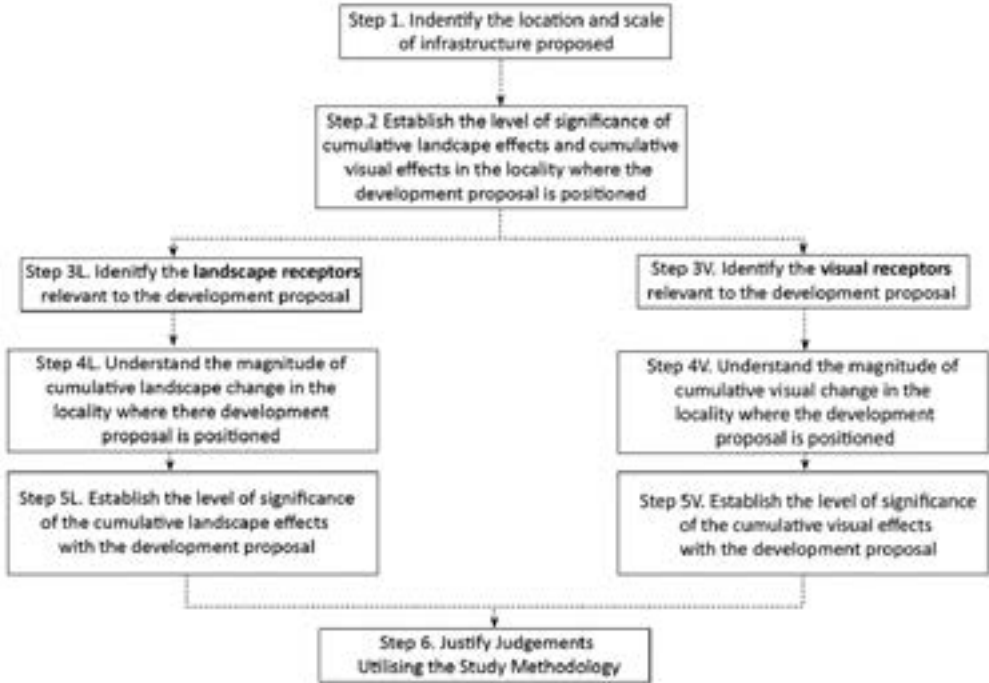
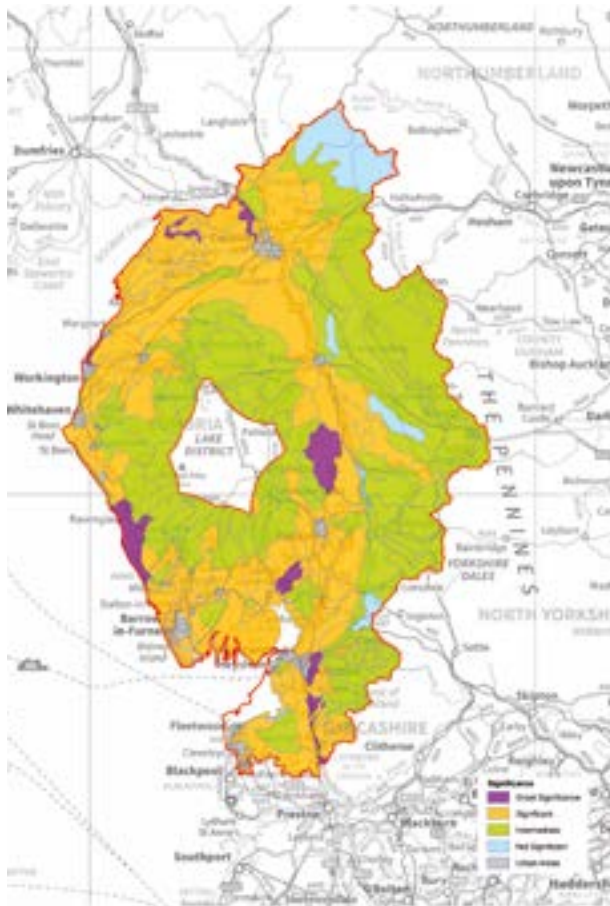
Example 3.
CIVI: Cumulative Impacts of Vertical Infrastructure
CIVI is a sub-regional study for Cumbria County Council (CCC) and its partners, helping to guide decisions about



<8>

development proposals and to manage the landscape by identifying the cumulative effects of vertical infrastructure. <8> It provides a basis for decisions about further proposals to be taken within the context of that information – most notably on- and off-shore wind energy development and the National Grid's North West Coast Connections (NWCC), upgrading the transmission network in the region.

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The CIVI study applied LVIA to assess how existing and proposed developments involving the introduction of vertical elements into the landscape are resulting in cumulative effects on landscape character and visual amenity. The study:

- > derived a bespoke assessment methodology, applying the principles and step-wise process of LVIA which was rooted in existing guidance;
- > analysed the existing landscape character assessments covering the area to identify the landscape and visual receptors;
- > devised criteria and values to be used in GIS analyses, based upon terms and criteria in accepted usage, and methods to combine them to reach assessment conclusions at each stage;

> determined the significance of the cumulative effects of the existing infrastructure present in the landscape, to provide a baseline context against which proposals for further developments could be judged. <9>

CIVI was designed from the outset as an evidence base to support application of local planning policy when making decisions about vertical infrastructure (VI) proposals, and was developed in consultation with local planning officers. Previously, there was no objective evidence and very little guidance for those assessing the cumulative impact of such developments. A key part of the project was step-wise guidance to planning officers in applying the assessment to their decision making, making use of a 'worked example' to guide them through the process. <10>



CIVI was also designed to influence decisions about the upgrade of the National Grid (NWCC). It is currently being used to inform CCC and partners' response to the NWCC, and National Grid are using it to aid the development of their proposals.

The study built upon landscape characterisation studies already carried out, collated information about the landscape and the vertical infrastructure development within it. It brings the landscape character assessments together into a single, consistent set of distinct landscape areas, the relevant parts of the landscape information tabulated into a consistent format to which the results of the assessment were added. That meant existing landscape information could be used and, enriched with the findings of the CIVI assessment, applied with confidence.

This assessment and the accompanying guidance, GIS database and analyses, were incorporated into the Council's own GIS, for reference when considering individual proposals. It has been used in the Council's evidence at a public inquiry where the central issue was the cumulative impact of a wind energy proposal, and is being used to inform recommendations to planning committees in regard to applications for vertical infrastructure development. It allows each stage of the assessment process to be inspected and is designed to be adaptable as new information becomes available, and will support planning decisions into the foreseeable future.

The CIVI study has advanced the application of LVIA

methodology, coupled with harnessing the power of GIS to collate and organise information, to carry out analyses, and to map the information and outcomes of the analyses. It is published on the council's website where it can be referred to by developers when formulating their development proposals, again ensuring landscape and visual issues influence the design of the proposal. It gives the decision makers a practical tool to enable them to provide robust responses to development proposals from a firm foundation, ensuring the landscape and visual issues are properly considered.

CONCLUSION

The key role of LVIA is that the potential for landscape and visual effects are considered early in the process, before any decisions are made about the form of the development or the disposition of its elements on the site. Those early analyses can be fed into an iterative assessment-design process that ensures the solution put forward in the proposal has addressed the important landscape and visual issues and avoids the kinds of unwelcome effects that might otherwise lead to rejection of the proposal. It also ensures that the effects being identified in relation to the other environmental topics being assessed are taken on board in the master planning of developments and integrated into a holistic design.

Project examples 1 and 2 were designed with the constraints as well as the opportunities in their landscape context. Neither could have been 'hidden' behind so-called

'landscape buffers'. They are or will be presences in the landscape and will be integral parts of their respective places.

Both these schemes were granted planning permission without contention – because not only were the designs founded on sound landscape principles, but the process was transparent and the development as proposed was supported by a clear assessment that identified and addressed its impacts, giving the decision makers and the local communities comfort. In the case of Bryn Defaid, the LVIA and CLVIA were especially important given the historical opposition to surface mining in the area.¹²

The third example project, CIVI, highlights how LVIA contributes to reconciling pressures for development on landscape character and visual amenity, and provides a robust evidence base from which defensible decisions about development proposals can be made.

In these circumstances, LVIA does indeed yield a positive outcome for both the design of developments and in providing a robust evidence base to support good decision making.

IMAGE CAPTIONS

- 1 Iterative assessment-design process.
- 2 Horndean – baseline information about the landscape topography.
- 3 Horndean – landscape features of the site.
- 4 Horndean – interpretation of the landscape analyses to identify constraints and opportunities for the proposed development and responses to its context.
- 5 Horndean – the master plan for the development; different character of different parts of the development relate to the site's context and character.
- 6 Bryndefaid – the restoration strategy partly recreates the landscape that existed prior to the historic mining and partly re-establishes post-mining features that support valued habitats and vegetation.
- 7 Bryndefaid – the site reintegrated into its landscape and visual context after this phase of mining followed by restoration.
- 8 CIVI – examples of different kinds of 'vertical infrastructure' in different landscape settings .
- 9 CIVI – reference map of the overall significance of cumulative landscape effects of vertical infrastructure in the study area.
- 10 CIVI – the guidance to planning officers included a step-wise project appraisal process.

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- ⁴ Davies, P. (2004), 'Is Evidence-Based Government Possible?' Jerry Lee Lecture 2004, 4th Annual Campbell Collaboration Colloquium, Washington D.C. 2004
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BIOGRAPHY

Mary O'Connor FLI is an Associate Director at WYG. Her professional expertise is in the field of landscape planning and environmental impact assessment, in particular, landscape and visual impact assessments, green infrastructure and master planning, and landscape design for new developments. Her work extends across the energy, industrial, commercial, minerals, highways and housing sectors, public consultation and working with local communities. Mary has given evidence to a number of public inquiries, concerning the landscape and visual aspects of developments.

Mary has been active in The Landscape Institute, including as a member of Council, and was Honorary Secretary when the Institute was granted its first Royal Charter. She had previously represented the profession in Northern Ireland on Council, and had been Chair of Landscape Institute Northern Ireland, and continues as a member of Landscape Institute Wales committee.

She is a member of the Advisory Panel for The Landscape Institute and Institute of Environmental Assessment's Guidelines for Landscape and Visual Impact Assessment, 3rd edition, published in April 2013 (GLVIA3). She has acted as adjudicator in a number of Landscape Awards schemes, including the Landscape Institute Awards.

Mary was elected Fellow of the Landscape Institute in 2015.



4

EMPATHY

WAYNE FORSTER





<1>

EMPATHY WITH SITE

The exploration of site, including the analysis of its climate is often presented as a technical operation where the aim is to produce precise and objective data. This analysis is often conducted at some distance from site. However, in this essay, it is argued that this is a narrow and possibly misleading position and, in fact, in order to be valuable to the designer this 'discovery' of site requires the 'empathetic' turn.

Reference will be made to a number of recent projects completed by the Design Research Unit Wales (DRUw) and to the work of others in which this exchange can be evidenced. These examples illustrate that close engagement with site and climate helps the architect to understand and anticipate how the location itself can provide guidelines for design. It is argued that through its qualities - tactile, visual, olfactory etc. - and its properties - which may be shifting and changeable - site affords certain responses and constrains others.

The case studies illustrate a skill that is based on a number of techniques often used in combination, including the more orthodox and well known graphical and modelling techniques, through to walking and 'storying' in which situations of close temporal and physical distance are taken into account. This requires an intellectual, as well as a physical and geographical, engagement in which empathic reasoning is a deliberate action, and, furthermore, may involve a bodily sense of emotional connection with site.

BEGINNINGS

The analysis of site was introduced right at the start of my formal architectural education. This was done brilliantly, through a one-week course of study and analysis at the Museum of Welsh Life (now St Fagans National History Museum) just outside Cardiff. This open-air museum was used as an outdoor laboratory to effectively introduce principles of environmental design, especially design with climate. This was an unforgettable experience and this knowledge of the potential to make buildings that were specific to place was deeply engrained. However, on reflection this amounted to a basic inventory of site conditions and may be described as quite orthodox. <1>

Like the considerations of topography, those aspects of climate – rain, wind, solar access and to some extent light - may be considered as relatively 'stable' factual information. Here, the instrumental relationships between the physical characteristics of climate and the potential form and nature of buildings are central. In *Architecture and Environment: An environmental history of architecture 1600-2000*, Dean Hawkes points out that, in this architectural science-led method, 'the climate exists, the building, in various manners and degrees responds to this and this is how to design buildings that keep occupants warm in cold places, cold in hot places, responding to the diversity of the seasons – indeed to be overtly 'climate-responsive'.¹

A good example of this method is the analytical work conducted by DRUw in 1998 for the design of a low-energy factory about 70 km west of Cardiff. <2>



<2>

It can be seen that the analysis of site was led by those functional concerns outlined by Hawkes above, and the resulting diagrams are as much an expression of explicit intentions as speculative propositions. Studies in response to climate and space-use on site pre-dominated. In response, the design integrates three environmental ‘pop-ups’ located at regular intervals that admit daylight and promote the mechanism for wind-driven ventilation with spatial aspects of manufacturing plant and services and inter-process storage. <3>

The Baglan factory transparently responds to the instrumental demands of the site analysis. This is most obvious when seen from above, as the orientation and siting are contrary to the rest of the masterplan. Other aspects of context, beyond the obvious performative aspects of the building, are at play but bypassed most critical commentary. These emanated from references to the theme of ‘forceful



<3>

forms’ – found throughout the locale in the functionalist industrial buildings and plants that dominate the south Wales coast and valleys coalfields. On reflection, this analysis of site explicitly registered climate, but only implicitly referenced aspects of culture. Site analysis was only partial, as the emphasis was on the physically specific rather than the often shifting cultural and temporal dimensions. Our approach to site, although we were not entirely conscious of it at the time, was about take what may be described in as an ‘empathetic’ turn.

INTERPRETING THE PROTECTED LANDSCAPES OF WALES

A few years later we were commissioned by the three National Parks in Wales to research and prepare Supplementary Planning Guidance for sustainable design. On slightly unfamiliar territory, both literally and intellectually, we



<4>

were forced to re-think attitudes to site and context. We immediately found some difficulties as we engaged with the myriad ‘stakeholders’ involved in all this – from archaeologists and ecologists to builders and developers.

Designated National Parks cover 20% of the entire area of Wales. They are home to just 2.9% of the population, yet they are regarded as ‘pinnacles in Welsh landscape quality and heartlands of Welsh culture’.² If Areas of Outstanding Natural Beauty are added then close to 50% of the area of Wales is designated as protected landscape. <4>

In a review of the National Parks in Wales, a future vision was spelled out as follows: ‘The National Parks of Wales are landscapes of national importance that capture much of what is distinctive and special about rural Wales environmentally and culturally. They lie at the heart of the identity of rural Wales, both for the Welsh people and



the wider world. They have huge potential to enrich the lives of people in Wales and further afield, and contribute importantly to the economy of the nation. They are cultural landscapes, moulded by their communities over millennia, where the interaction of people and place is central to their character....³

The prevailing and overriding mission of the National Parks was and remains (although this may change) to conserve and protect. We discovered that to build in protected landscapes is almost always regarded by their guardians and stewards as invasive. The regulatory codes seek to preserve the look of our cultural landscapes and change is generally seen as something that will always be detrimental. A common impression of protected landscapes was well put by Raymond Williams, as one of 'natural picturesque stability, utopian tranquillity and scenic permanence'.⁴

Two polar views prevailed – site as either a place of exquisite quality meant to remain unchanged over time; or as a place of flux expressing the qualities of progress and evolution. The real question at the heart of what was supposed to be a straightforward - task to provide design guidance that promoted sustainable development - was not so much about whether a landscape is going to change, but rather how it was going to adapt over time and remain recognisable. This raised questions that would relate to our own design work:

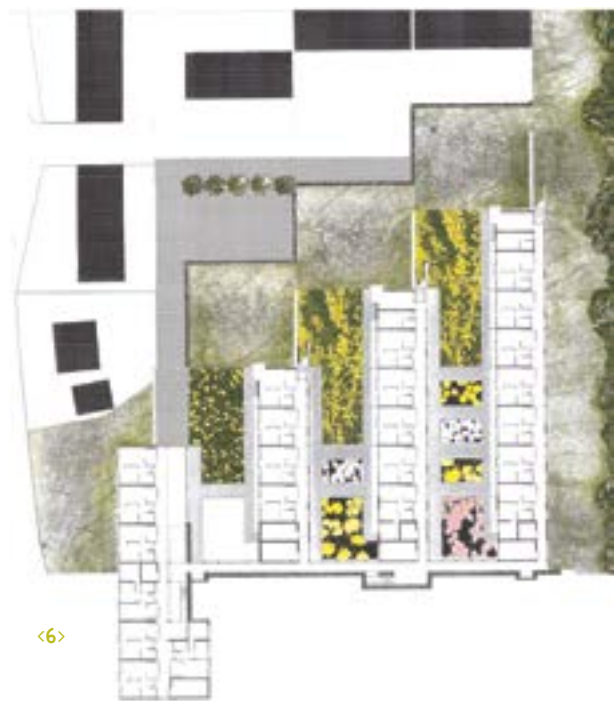
- How will a conceptual framework or narrative evolve from which to explore the design of an appropriately scaled project that responds to the needs of site, and that



informs cultural notions of the future, and has a critical attitude to the landscape?

- To what extent can a wider understanding of place re-engage the architect with the site to 'afford' opportunities for design in protected, cultural landscapes?

Not long after our National Parks project we had opportunities to probe these questions further in our own design work and we began to extend the ways in which we attempted to understand site.



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TWO PROJECTS

Two major things emerged from our National Parks work. Although planning policy and design guidance strongly advocated response to the specifics of place, a bland anonymous homogeneity dominated in the new projects we were shown by Parks. We found an absence of distinctive character when this is exactly what the Parks wanted to encourage.

Writer, Jan Morris claimed, 'There is no such thing as a Welsh Architecture', but conceded that the distinctive hallmark of the building art of Wales exists in the conciliatory power, the ability to unite a structure with its setting, and make it feel part of nature.⁵

Architect, Frank Lloyd Wright, who was Welsh on his mother's side, claimed to have, 'sat and listened to the stories told by the stones, and read the grammar of the earth'. We had also become accustomed to walking sites and landscapes, and what we did next was largely instinctive.

We were awarded two projects around 2006-7, both on significant but quite different sites; one for a rural elderly care facility and the other for a visitor and study facility on a protected historic landscape. On both we went about the business of site analysis in more or less our usual way – topographical and climate studies pre-dominated. However, we did spend longer than usual on site and in the locale, and what were usually cursory studies of history and culture were extended.

On the care home, sited in Llanybydder in rural Carmarthenshire, significant characteristics were uncovered. We were forced by circumstances relating to the closure of the existing care home to build on a rather steep, north-facing, green field site on the edge of the village. This was hardly perfect in terms of climate, orientation and accessibility. We resolved to ensure that all living units would face west. In that way residents would have a direct view of the iron-age hill fort that dominated and originally formed the settlement and enjoy solar access in the afternoons and evenings. <5>

This was very much in our established milieu of site analysis. However, our extended contextual studies led us in various directions. The village has and continues to be the site of a very important monthly horse fair. The rural nature of the site located in the centre of sheep farming and the woollen trade suggested that many of the residents of the home would have a strong visual, practical and emotional affinity with the land. The village was also home to an amazing private collection of Welsh Quilts. These functional fabrics had been raised to an art form in the 17th-19th centuries, and the so called geometric quilts seem to resemble the patterns, colours and textures of the landscape.

Our reading of the landscape and topography was deeply influenced by these things, which had a formative role in the plan and sectional composition of the resulting building. <6>

At Margam Park, the landscape is listed in the Register for Historic Landscapes in Wales, and has been 'managed'



for over 3000 years. In this significant and sensitive place, we were in pursuit of an adjectival architecture, where an analysis of site may 'structure' the project.

In *Topographical Stories*, David Leatherbarrow refers to the possibility of the building as an elaboration of the terrain which, 'is not substantial in its own terms, nor self sufficient, but dependent, or adjective to its milieu'.⁶ Leatherbarrow's explanation that, 'site – or more broadly ambient landscape – is not what surrounds and supplements the building, but what enters into, continues through, emanates from and enlivens it'⁷ comes close to explaining what we tried to do at Margam – frame, hold, ensure spatial continuity, nestle, sense climate, feel nature... And the nature was tangible. <7>

Sited literally at the collision of the 'picturesque' and the 'industrial', the resident deer herd on its original 18th Century chase was directly adjacent to the furnaces of one of Europe's largest steelworks. Our studies determined that our building proposition would be 'conciliatory' with the nature of the site – accommodating all the features of the site – water, trees, archaeology and that the building would be a part of this system. We deliberately created a 'promenade architecturale' that was right at the boundary of outside and inside – where life is lived. <8>

These two projects illustrate our 'repertoire' of techniques in site analysis at this time. What was becoming much clearer was that circumstantial, and sometimes chance discoveries, or just wandering was proving as influential in the design process as the 'hard' data derived in our earlier work.



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THE EMPATHETIC TURN

Jan Morris' use of the word 'conciliatory' in describing the only specific character of a Welsh architecture seems to be related to the potential of 'empathy' as set out by Richard Sennett in *Together*.⁸

Sennett, in writing about the advantages of empathy has stated that dialogic processes, especially those involved with regular spoken conversation, involve a type of listening that attends to the implicit intentions behind the speaker's actual

words. Compared to dialectics, a dialogic exchange can be less competitive, and more suitable for facilitating cooperation.

The thesis of Richard Sennett's book is that 'our emotional and cognitive capacities are erratically realized in modern society'. He argues that, 'people's capacities for cooperation are far greater and more complex than institutions allow them to be'. The problem is that we are being 'de-skilled' when it comes to cooperation. For Sennett, the way out of this impasse is 'dialogic

cooperation' which 'entails a special kind of openness, one which enlists empathy rather than sympathy in its service'. In this form of conversation, listening is as important as speaking, because only by listening can you understand and empathise with the opposing point of view and thereby gain perspective on your own position. This seems close to the actions of conciliation. Depending on where you look, empathy is explained as one or more of several loosely related processes or mental states⁹ including:

- > Feeling what someone else feels
- > Caring about someone else
- > Being emotionally affected by someone else's emotions
- > Imagining oneself in another situation
- > Imagining being another in that other's situation
- > Marking inferences about another's mental state
- > Some combination of the above

As architects interested in site-responsive architecture, it is the capacity within empathy of 'imagining' that is of particular interest to us. Dialectics is about 'the verbal play of opposites that gradually builds up to a synthesis'. But dialogics is about mutual exchange for its own sake. As Sennett puts it, 'The subjunctive mood is most at home in the dialogical domain, that world of talk that makes an open social space, where discussion can take an unforeseen direction. The dialogic conversation... prospers through empathy, the sentiment of curiosity about who other people are in themselves.' Subjunctive forms of verbs are typically used to express various states of unreality such as wish, emotion, possibility, judgment, opinion, necessity, or



action that has not yet occurred. Most importantly for us, subjunctives are used for stating possibilities, conjectures, 'what ifs'. Metaphors are claimed as a primary way of making sense of the world, telling us not that one is like another, but that it is another. This enables us to see similarity in difference. This seems to make sense, for in parallel with gathering the facts of site – topography, climate etc. - we were now adding this subjunctive description. For example, at the Llanybydder scheme where we imagined the site as a quilt, or at Margam where we imagined a promenade which 'floated' 1.5m above grade. Metaphors are creative in the manner in which they permit the creation of meanings and make connections between things so as to understand them.

FUTURE PRACTICE

What does all this mean for our future work, and for the work of others designing in the landscape? For our part, our drift toward the empathetic and conciliatory seems likely to continue as we are able to identify positive outcomes in our work. We were excited to realise the creative potential of chance discoveries of the quilt and respect for the creatures that inhabited the Margam landscape.

Since the exemplar projects referenced here, our reading of WG Sebald seems to offer further potential of what some have called 'objective chance'¹⁰ in referencing associations with site and design outcomes, and goes some way toward capturing and integrating apparently unrelated and irreconcilable elements.

There is a danger that this kind of empathetic site analysis may be an end in itself as we become more fascinated with it. Other uncertainties prevail. How will we find the time to engage in this way which, as well as attending to the physicality of site, demands skills borrowed from anthropologists, historians and archaeologists? The *RIBA Plan of Work 2013* makes only reference to 'Site Information' but is silent on studies of site of this nature. So is this pre-occupation of ours outside 'normal' practice? Is this practice likely to be productive?

The 'repertoire' of empathetic techniques including images, myth and folklore, histories, metaphors and maps may be drawn on as frames of reference and routines, and potentially brought to bear in the design process, but nothing is guaranteed. In some of our recent (unbuilt) project work, references to folklore, of the positioning and siting of particular species of trees, marking of threshold and the direct translated meaning of place names have all influenced our designs.

The approaches to identification or interpretation of site outlined here lies opposite to those techniques that rest on techno-rationalist theories which tend to present the world in terms of mathematical or at least abstract relations. In these modes, theory becomes the handmaiden of quantification. Unfortunately, this trend has gained almost total hegemony in design practice; almost, because there is a small but growing group of influential commentators in the fields of archaeology and anthropology, like Christopher Tilley and Tim Ingold, who argue for a more phenomenological

or materially led methods. 'The objective is to gain an insider's knowledge of place and landscape, as opposed to a knowledge acquired by mediated representations which can only provide an outsider's perspective'.¹¹

That this results in 'only' personal opinion and is entirely subjective is the accusation levelled at these, but here, site is seen as text to be read and systematically interpreted.

In *The Rings of Saturn*¹² concluding a meditation on landscape, dream, memory, and the power of transformation, Sebald writes, 'What manner of theatre is it, in which we are at once playwright, actor, stage manager, scene painter and audience?'. This multi-layered historical approach, which also involves being there, enables the designer as an arranger or bricoleur, a fine-tuner of the hermeneutic, where the project of empathy with site is the understanding itself as well as something that goes on, to inform the design and making process. In conclusion we wish to stand with O'Donnell and Tuomey, saying, 'Our ambition is to build something completely new that feels like it was already there before we started, as if we had discovered the scheme rather than designed it'.¹³

IMAGE CAPTIONS

1	Lessons in site study at St Fagans National History Museum
2	Baglan: the site for a low-energy factory
3	Baglan low-energy factory
4	National Parks
5	Care home in Llanybydder, Carmarthenshire
6	Site studies for care home in Llanybydder, Carmarthenshire
7	Site studies at Margam Park
8	Margam Discovery Centre

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- 3 *Ibid.*, p.v.
- 4 Raymond Williams, *The Country and the City* (Oxford University Press, 1973)
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BIOGRAPHY

Dr. Wayne Forster is deputy head of the Welsh School of Architecture - one of the UK's leading schools of Architecture. Wayne's role in the School centres on activities in academic leadership in design, teaching and learning and practice based research through the School's Design Research Unit (DRUw) which was set up to pursue design based research.

In his approach to architecture, emphasis is placed on the geographical context of the building - on topography, climate, light and tectonic form and energy use and sustainability. This has dominated much of his work over the past 25 years, both in the design studio and in more orthodox research work - the use of local materials, building techniques based on tradition and innovation and especially the design of the building envelope in response to an appreciation of the local climate are all constituent parts of critical enquiry and practice.

DRUw has won a number of design awards including RIBA awards for design in 2001 and 2010 and for research conducted in UK Universities in 2013.



TRACES OF THE FUTURE

RHIAN THOMAS

The intensified and enigmatic landscape of the Black Mountains provides the environmental canvas which inspired the exhibition pieces, which aim to find narrative in relationships of field and site through deep mapping practices. Each piece was conceived following a 4 day exploration 'in the field', as this way of [field]working offers a useful key into some of the ways of knowing and engaging place. Perception and intuitive responses to sense making, and how to record this, also factor.

The imprint of the hand described by Raymond Williams in *People of the Black Mountains* can be considered as a metaphor for a landscape that bears the imprint of human intervention through millions of years of occupation, creating a unique landscape identity. The pieces aim to reveal the deeply layered landscape 'text' which exists in the Brecon Beacons, by describing the remains of ancient traces of human activity and manmade marks and incisions which characterize the Black Mountains landscape; old ways, ruinous structures, ancient markings and inscriptions and their composition and siting.

Cesarino wrote that ichnographia includes both markings on site and drawings on paper by comparing the architect walking the compass legs on paper to the architect physically walking the plan on site. The process undertaken in conceiving and composing the pieces aims to reveal the

importance of the relationship between fieldwork and site-drawing through investigating the concept of ichnographia, relating to literal on-the-site-drawing, the analogical site-on-the-drawing and the analogical drawing-beyond-the-site. The actions of inscription related to this are explored through printmaking in each of the pieces.

The work and process by which the work was made also considers how cultural notions of the past [learned from fieldwork and deep mapping techniques], perception and the embodied experience of the architect on site can propagate future architectural relationships with landscape and locality. The evolving body of work seeks to explore architectural relationships with landscape and identity, and to challenge a conservation led approach to landscape. An argument may be posited that landscape identity can be thought of as two extremes: either as a place of exquisite quality meant to remain unchanged over time; or as a place of flux expressing the qualities of progress and evolution. Wherever humans exist, landscape has by necessity continually evolved and been modified. Our landscapes have always been augmented and enriched by human intervention and these actions are fundamental to how we sense and understand place. The question is not so much about whether a landscape is going to change, but rather how it is going to adapt over time and remain recognizable?

RHIAN THOMAS

Originally from St. Asaph, Rhian Thomas is an architect at Loyn+Co Architects in Penarth. She joined the team in 2013 and has played an integral role in delivering bespoke projects that build on the studio's consistency of language and techniques. Having established a strong reputation over the years for designing and creating quality architecture, Loyn+Co has recently been commissioned to design several significant residential masterplanning proposals, including Northcliff in Penarth for which Rhian is project architect.

Rhian graduated from the Welsh School of Architecture (WSA) in 2003. Between 2005 and 2013 she worked at the Design Research Unit Wales (DRU-w), and formerly at Wyn Thomas Gordon Lewis. She continues to combine work in practice with teaching at the WSA.

Rhian has a particular interest in design in cultural landscapes, and using fieldwork techniques as a way of understanding site and how this can inform composition and form. She has always taken pleasure in the way work is made, and continues to find new and exciting ways to represent ideas. She has exhibited at the National Eisteddfod of Wales, the Mission Gallery, Ruthin Craft Centre, and for a pop up art collective in Cardiff.

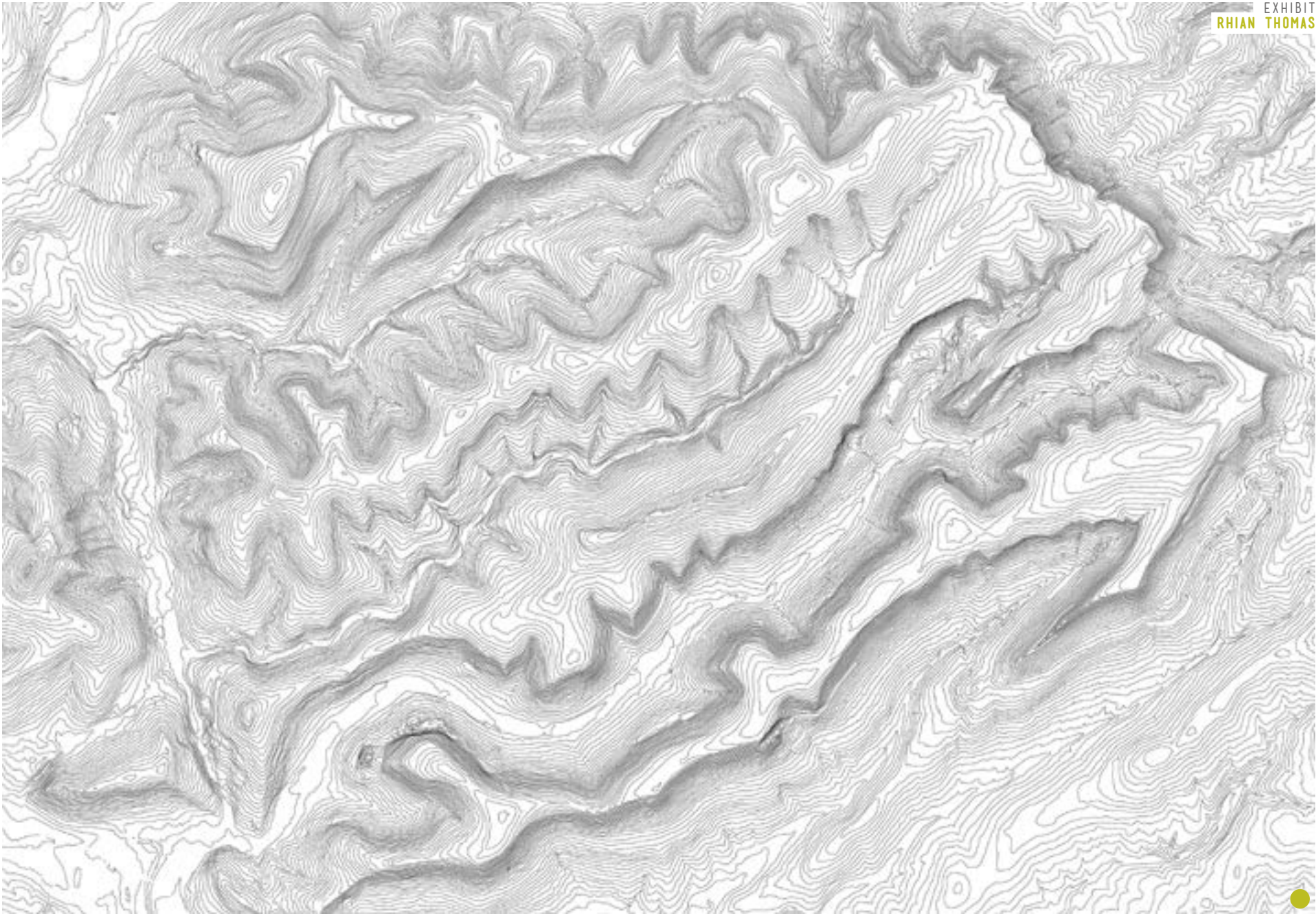
FIELDCOLLECTIVE

Rhian Thomas and Rob Stevens established fieldcollective in 2010 as a platform for exploring the territory between architecture and other creative practices. This 'in-between' space amid orderly and established ways of working provides opportunities for exploration, innovation and generating new dialogues between art, architecture and its surroundings.



'SEE THIS LAYERED SANDSTONE IN THE SHORT
MOUNTAIN GRASS. PLACE YOUR RIGHT HAND ON IT,
PALM DOWNWARD. SEE WHERE THE SUMMER SUN
RISES AND WHERE IT STANDS AT NOON.
DIRECT YOUR INDEX FINGER MIDWAY BETWEEN THEM.
SPREAD YOUR FINGERS, NOT WIDELY.
YOU NOW HOLD THIS PLACE IN YOUR HAND'.

RAYMOND WILLIAMS,
PEOPLE OF THE BLACK MOUNTAINS



5

FROM AFFORESTATION TO MULTI-PURPOSE WOODLANDS: THE INFLUENCE OF DESIGN

DAFYDD FRYER





This essay is intended as a personal commentary outlining how forestry has influenced and changed Wales' landscape. Sometimes viewed negatively, and justifiably so, the increase in woodland cover has likewise brought about significant benefits. The purpose here is to highlight the benefits of integrating design with forestry management planning.

FORESTS AND WOODLANDS IN THE LANDSCAPE

Woodlands are important visual elements in the landscape that change over time. They have great potential to enhance the environment and contribute significantly to landscape quality. They often are the dominant element in the landscape, shaping and enclosing space, framing views and providing colour, texture and scale.

In terms of landscape composition, forests, woodlands and trees have long been appreciated in the landscape design of grounds of great houses and parks. The late 18th century naturalistic approaches pioneered by Capability Brown and Humphry Repton replaced the earlier formal geometric style. The idea of a romantic 'wild' landscape informed the development of the 'picturesque', championed here in Wales on Thomas Johnes' Hafod estate. This approach to design influenced subsequent landscape architects and our appreciation of landscape today.

LANDSCAPE CHANGE: THE HISTORICAL CONTEXT

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Early Impacts of State Forestry

Wales' countryside has seen dramatic changes in the last 100 years, particularly through the afforestation programme post World War I. The Forestry Commission's primary purpose when formed in 1919 was to establish a strategic timber reserve.

Extensive tracts of marginal ground in the uplands were ploughed, <1> drained and planted with quick-growing productive species. Conditions limited species choice to predominantly coniferous, evergreen and non-native trees. These emerging 'alien', even-aged plantation monocultures had a great impact on the character of the Welsh landscape.

The visually uncomfortable geometry of many blocks was a consequence of maximising planting within the rigid legal

boundaries of land acquired. That this was often achieved on challengingly steep and boggy land was a remarkable feat and testimony to foresters during those initial years.

Awkward geometry, such as regimented lines of young trees, angular shapes of contrasting species and linear elements such as rides also emerged within forests. Creating belts of deciduous larch around forest margins was an early but flawed attempt to soften the evergreen stands of spruce, pine and fir. <2>

As plantation forestry became more apparent, public criticism grew. Whether 20 year old thicket-stage plantations or 40 year old 'mature' un-thinned stands of Sitka Spruce, negative descriptions arose such as blanketing uplands, blocks stuck on hillsides and serried



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ranks of conifers. <3/4> In critically describing those dark impenetrable spruce stands in *Afforestation*, Welsh poet R. S. Thomas¹ also captured the perceived cultural change taking place within upland communities.

LANDSCAPE DESIGN: THE EARLY DAYS

THE FORESTRY COMMISSION: PIONEERS OF FOREST DESIGN

During the 1960s, FC began responding positively, working with renowned landscape architect, Dame Sylvia Crowe,² FC's consultant for 13 years from 1963 to 1976, to consider approaches to improving the appearance of forests. It was logical that designs should emulate 'natural' patterns and forms, and that principles of composition used by designers in other fields should be applied to forests in the landscape.

Many crops were reaching economic maturity in the 1980s and 1990s bringing the risk of timber stands being felled

consecutively. Despite timber production still being the major driver, this wholesale 'rolling up of the carpet' would have been unsustainable, and FC began appointing their own landscape architects to provide solutions to sequencing and shaping felling sensitively.

Both Oliver Lucas and Simon Bell started their careers as foresters in West Wales before FC invested in their training as landscape architects. Lucas' *The Design of Forest Landscapes* was essential reading for prospective forest designers.³ Bell's lively design courses were well-known to many aspiring designers with his *Elements of Visual Design in the Landscape* focusing on design principles.⁴

DESIGN PRINCIPLES: A VOCABULARY

Underpinning the forest design process are widely used principles of shape, landform, pattern of enclosure, scale, diversity, unity and spirit of place. These are outlined in *Forests and Landscape - UK Forestry Standard Guidelines*.⁵



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SHAPE, LANDFORM AND PATTERNS OF ENCLOSURE

Forest planners were encouraged to design in elevation from selected viewpoints to resolve awkwardly shaped forests and their constituent parts. Aiming for more naturalistic shapes, designs were influenced by the underlying terrain, such as the irregular ground typical of Snowdonia or the smooth and rolling hills of the Brecon Beacons.

In analysing views of the forest, it is critical to understand the underlying landform. 'Visual forces' identify where the spurs and valleys lie, and help formulate a composition that responds to topography. <5/6> Understanding the character of the surrounding countryside is critical. Building on enclosure patterns, such as field boundaries, helps integrate new forests with existing landscape.

SCALE

Scale is a major factor in how comfortably forests sit within a



landscape as well as being an important consideration in the design of felling and re-planting shapes. Hilltops and higher slopes accommodate more expansive shapes, whereas the intimacy of a valley bottom demands a small-scale solution. The rule of thirds helps to resolve the visual balance between elements such as woodland and open ground.

DIVERSITY, UNITY AND SPIRIT OF PLACE

Diversity creates visual interest and is welcomed. However, in landscapes which have an intrinsic simplicity, diversity can appear visually confusing and cluttered.

Achieving unity whereby the component parts of a forest landscape contribute harmoniously is desirable. This applies to different woodland elements as much as to the forest integrating seamlessly with its surrounds.

Many locations have a special character or 'spirit of place' making it memorable to people. Retaining and enhancing special features, such as crags, water, ancient trees, striking views or historic and cultural associations, ensures that the most is made of the qualities of a landscape.

FORESTRY COMMISSION WALES (FCW) FOREST DESIGN PLANS: A STRATEGIC FRAMEWORK TO DELIVER FOREST MANAGEMENT

From 1990 until 2007 FCW had its own landscape architect working primarily on forest design. Until 1992, only sensitive forests had holistic design input. Elsewhere the 'firefighting'



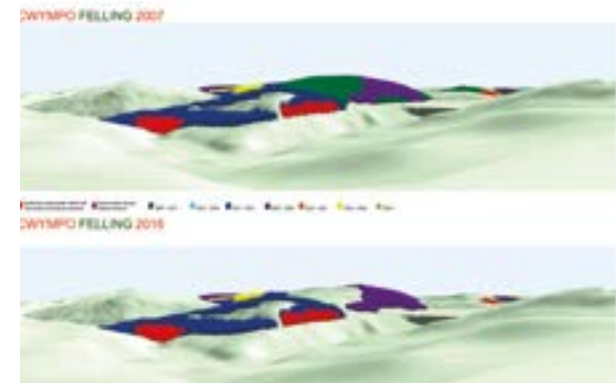
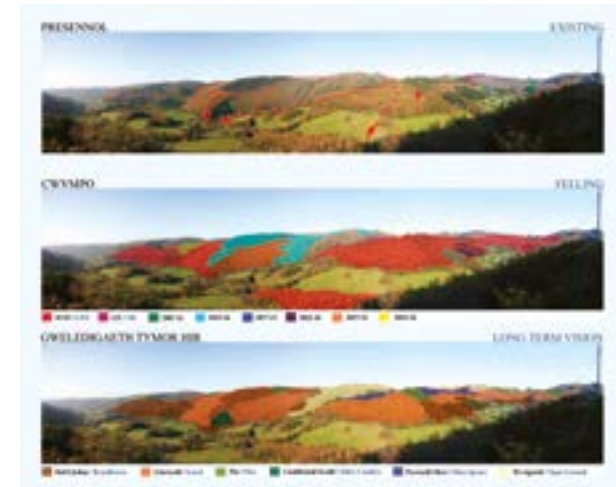
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approach persisted, with only highly prominent areas due for felling considered from a landscape perspective.

FOREST DESIGN PLAN (FDP) COVERAGE FOR FCW'S PUBLIC ESTATE

Between 1992 and 1994 there was an impressive focus on producing FDPs for all 130,000 hectares managed by FCW. The landscape architect's role was to set standards, ensure consistency, provide training, and lead on the most sensitive designs.

There was a genuine commitment from senior management to embrace a design process, which brought timber, landscape, recreation, conservation and archaeology together under one plan. These plans were known as forest design Blue Books, after Repton's famous Red Books. Underlying this drive was the need to get a firm handle



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on long-term production forecasting. The days of 'cherry-picking' timber volume for the market needed to be put to an end, and sustainable long-term design planning provided the vehicle for doing this. Deciding where and when areas should be felled over a sequence of five year felling periods enabled planners to both predict and provide a consistent volume supply to the market.

Plans were refined over five year review periods; and with

improved ecological, archaeological and recreational data becoming available, the overall vision became far more robust.

THE DESIGN PROCESS: BENEFITS OF COMMUNICATING THE VISION

Stakeholder consultation became a more important part of the design process. Twenty years earlier, it was organisations such as RSPB, the Ramblers and the Campaign for the Protection of Rural Wales who were vocal in their criticism of plantation forestry. Having seen the multi-purpose direction of FCW's plans in the mid-90s, it was arguably their support that staved off another round of government selling off the public estate.

Robust procedures and standards developed during the late 90s. Guidance clarified the need for a brief, pre-design analysis <7>, an overall concept, design in elevation <8> and felling and re-stocking (future vision) plans. FC's



now updated *Design Techniques for Forest Management Planning* offers a step by step guide through the design process.⁶ With The UK Forestry Standard, FDPs were monitored through the UK Woodland Assurance Scheme (UKWAS).⁷ Design plan approval focussed on the detail of the five year period, but also considered the long-term vision (usually up until 2030-40).

DEVOLUTION: EVOLVING FOREST POLICY

Following devolution, the Welsh Government's strategy, *Woodlands for Wales* became the overarching policy steer for all forests, woods and trees.⁸

The following policy areas have influenced forest design on the Welsh Government Woodland Estate (WGWE) in the last 15 years:

CONTINUOUS COVER VERSUS CLEAR-FELLING: THE VISUAL IMPLICATIONS

Where and whenever practicable, continuous cover will, over time, be the favoured approach to woodland management.

People react to dramatic change. The high impact of clear-felling looks untidy, with harvesting often requiring extraction tracks and leaving unsightly debris behind. However, nature relatively quickly greens-up these sites. They can be re-stocked with the preferred species mix or left open, as along riparian corridors. Clear-felling, spatially sequenced across the forest, builds in age-class diversity and resolves species geometry

within crops. Short-term internal views are opened up, as are hidden landscape features with cleared ground providing alternative habitat for wildlife, such as nightjars.

Continuous cover (low-impact silvicultural system) offers continuity in the landscape and lower levels of disturbance to ground flora and surface run-off. It offers opportunities for greater diversity within the internal structure and composition of the wood. This low impact approach is desirable on planted ancient woodland sites where policy aims to restore these to predominantly broadleaves. From a visual perspective this approach delays the opportunity to remove offending boundary and species geometry. If all woodland was managed on this continuous canopy basis then views out would be less likely unless small-scale interventions were designed in along trails, either permanently or implemented on a rotational basis. <9>

The drive towards low-impact systems will not happen overnight and in many locations is unlikely to be practical. Plateau forests, exposed to high winds on poor, damp soils do not lend themselves to be thinned and will remain as dense plantation stands until economic felling age, e.g. 40 years for Sitka Spruce. A large proportion of forested land, especially on steep slopes, has never been thinned. If not thinned regularly from an age of 20 years onwards, the threat of wind-blow occurring following a late thinning greatly increases.

One aspect of forestry that looks as untidy as clear-fell sites is the all too common sight of adjacent wind-blown stands post clear-felling.





DIVERSIFYING OUR WOODLANDS

Since devolution there has been a strong drive towards greater use of broadleaves and diversification. Initially there was a confidence to produce FDPs with ambitious outcomes for landscape, recreation, conservation and heritage, whilst maintaining the short to medium-term flow of timber to the market. Diversification remains critically important in building resilience to pests and diseases and will in itself deliver far more attractive woods. <10> However, the ambitions to achieve social and environmental goals have been moderated in recent years after closer scrutiny of the long-term productive capacity of the WGWE.

COMMUNITY ENGAGEMENT: THE RELEVANCE OF MACRO AND MICRO-LEVEL FOREST DESIGN

The early strategic direction emphasised opportunities for social forestry and community engagement, offering the public an opportunity to shape their local woods. Public preference studies highlighted what people consider important in visually attractive woodlands. Diversity of structure and composition emerged as the most important. Other preferences included organic rather than geometric shapes, open areas, variety of tree size and species, views under canopy, the effects of colour, light and seasonal change and the presence of water.

Many of these views were reinforced in the numerous public sessions held, especially in the South Wales Valleys, where, between 2000 and 2006, a team of community rangers

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operated. Frequent requests related to detailed site-level design, such as good access, paths and seats. With FDPs working at a scale of 1:10,000 it was at the micro-forest planning scale that these requests needed to be addressed. A valid criticism of the focus in Wales on macro-design was that the same level of attention, with exceptions, was not given to detail design to benefit the visitor experience.

DELIVERING NEW FOREST LANDSCAPES: BENEFITING THE WELL-BEING AND PROSPERITY OF SOCIETY

'The new forest landscape for the South Wales Valleys' received the Landscape Institute's 'highly commended' strategic planning award in 2007. Often cited as the largest urban forest in Europe due to its unique proximity to 800,000 people, 56 FDPs totalling 28,000 hectares, offer a 50 year vision. The plan focuses on three broad character zones prioritising delivery across the social, environmental and economic spectrum:

- > Sheltered lower valley slopes – the back-drop to people's lives, retaining trees, diversifying crops and implementing small-scale interventions, ultimately moving towards mixed but predominantly broadleaved woods. Access should be more welcoming and lower margins better integrated with adjoining land.
- > Exposed upland plateaux – with limited public access and restricted species choice, productivity remains the prime focus except where broad-leaf and open spaces feature along riparian corridors. Structural diversity is achieved

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through clear-felling.

- The mid-slopes – a transition zone where soils offer a mix of productive conifer species and broadleaves. The underlying landform offers opportunities to create balanced clear-fell shapes within a continuous cover context, offering both interest and variety, internally for walkers and externally as viewed from communities.

CURRENT PRESSURES: CHALLENGING THE STATUS OF FOREST DESIGN

FOREST REGULATION AND SUSTAINING THE WGWE'S PRODUCTIVE CAPACITY

Between 2005 and 2010, FCW saw greater scrutiny and regulation of FDPs. The long-term productive capacity of the WGWE was of concern to the industry. The strong environmental and social steer at the beginning of the millennium had impacted on land available for productive conifer growing. Commitments to restoration of planted ancient woodland sites and upland peat bogs, conifer removal from riparian corridors, and addressing abrupt forest margins all contributed to loss of productive land.

The regulatory arm of forestry, that approves FDPs, was rigidly interpreting the UK Forestry Standard, especially in respect of 'deforestation' around forest margins. Open space proposals were scrutinised in great detail, often with an insistence that

these be re-stocked or at least provide 20% cover.

In response to these pressures, originally approved design solutions to boundaries were revoked at management board level, plans were amended so as to re-stock back up to the fence-line.

As these young crops develop many second rotation forests will be repeating those awkward vertical and horizontal edges of the original afforestations.

CLIMATE CHANGE

The serious impact of pests and diseases is all too apparent since 2010 with the devastation caused by Phytophthora Ramorum on larch. Bio-security fellings have been most harshly felt in the south Wales valleys, such as the Afan Valley <11>. Well thought-out long-term plans have to be completely re-envisioned, although this blank canvas does offer opportunities for an imaginative new approach. However, the loss of larch, highly regarded due to being both deciduous and a productive conifer, leaves a greatly impoverished palette.

What is disappointing after five years of clearing affected crops is, that the appearance of remaining adjacent crops is not being addressed.

Also impacting on existing plans is the removal of crops to accommodate wind energy projects, although mitigation

planting will benefit communities elsewhere. The whole scale of works associated with sensitively locating turbines and ancillary roads has possibly contributed to the focus moving away from maintaining forest design standards.

Greater recognition is now given to the WGWE's contribution to carbon storage and sequestration. Any un-necessary loss of tree cover is seen to have a negative impact on the estate's contribution to the carbon agenda.

To help meet Wales' carbon emission reduction targets, the Welsh Government is aspiring to create an additional 100,000 hectares of woodland by 2030. With current cover as low as 15% (the European average is 37%), this is an excellent opportunity to create well-designed additional woodlands that enhance rather than detract from existing landscapes.

In the past, FCW largely failed to acquire land adjacent to the public estate in order to resolve awkward straight-edged boundaries. This is an opportunity to re-focus on achieving this and will also assist in resolving loss of productive ground within the existing land-holding.

Have these new challenges, plus the WGWE's productive capacity, contributed to senior managers viewing landscape, the role of design and forest composition as less critical today? Since 2007, FCW and latterly Natural Resources Wales, do not utilise in-house professional landscape design expertise as part of the forest planning process.



NATURAL RESOURCES WALES (NRW): FOREST RESOURCE PLANS

AN INNOVATIVE NEW APPROACH TO FOREST PLANNING

With Natural Resources Wales forming in 2013, a challenging new phase for forest design planning is being embarked upon. Bringing together expertise from the three legacy bodies is an excellent opportunity to deliver cross-cutting natural resource management that will be at the fore-front of sustainable development. Within this framework, Forest Resource Plans will feed into broader Natural Resource Management Plans, three of which are currently being trialled in the Tawe, Rhondda and Dyfi catchments. The implication is that integrated ecosystem service planning will deliver a comprehensive suite of actions that will directly benefit society and the environment.

INTEGRATING DESIGN AND VISUAL APPRAISAL WITH RESOURCE PLANNING

The principles of forest design are as relevant as ever. There should be no let-up in the long-term process of transforming dull, even-aged plantations into exciting diverse woods that do justice to the stunning landscapes of Wales. Professional landscape design input into resource planning is as needed today as it was in that pioneering period of the 80s and 90s. Whilst the commitment to maintaining design standards across key sensitive forests appears assured, there is a need to recognise that, as per the European Landscape Convention (ratified by the UK in 2006), all landscapes are important and deserving of the standards set out in Forests and Landscape – UK Forestry Standard Guidelines.

NRW is currently blessed with landscape architects and specialists, but all work in fields not directly related to forest design. Consultants experienced in the art of forest design are a precious commodity. With responsibility for managing 7% of land in Wales, and a focus on delivering benefits to people and communities, the case for in-house forest design expertise once NRW establishes itself more fully must be a strong one.

BIOGRAPHY

Dafydd Fryer qualified in forestry at Bangor and landscape design at Manchester. He is a chartered landscape architect with over 35 years' experience. From 1978 to 1989 he held positions at Dyfed County planning department, Manchester City architects, and Swansea's landscape section. A varied portfolio included housing regeneration, land reclamation and civic schemes, as well as community, conservation and recreation projects that included county-park, nature reserve and ANOB management.

Between 1989 and 1992 Dafydd worked at Garden Festival Wales, Ebbw Vale as design co-ordinator for consultants, Gillespies. Transforming the former steel works site into a major visitor attraction involved dealing with inspirational individuals, themed garden contributors and multi-disciplinary design teams. He also created several popular themed gardens. During this period numerous media opportunities presented themselves, including co-presenting S4C's Palu 'Mlaen gardening programme at St Fagan's.

Since 1992 he has been based in Aberystwyth where he worked as Forestry Commission Wales' landscape architect, leading on forest design.

Currently, as Natural Resources Wales' 'urban forest architect' in the Communities and Regeneration team, he now champions the beneficial role of urban trees.

IMAGE CAPTIONS

- 1 The Rhondda: Site preparation during the early 1960s - the first steps toward afforestation and major landscape change

- 2 Talybont, Brecon Beacons: This 1985 aerial, prior to design implementation, features species geometry and in particular the use of larch 'amenity belts' – not an approach that would now be considered best practice © Forestry Commission

- 3 Gospel Pass, Black Mountains: This highly geometric 'stand-alone' block looks out of place on the hillside

- 4 Pen-y-bylchau - Lake Vyrnwy, Powys: 'Indians on the hill', an extensive and continuous skyline fringe of conifers seen from Llanfihangel-yng-Ngwynfa and the B4393

- 5 Gwydir, Conwy: Mapping 'visual forces' – a simple but effective way of understanding landform 'hidden' beneath the forest canopy. A hierarchy of arrows capture the main concave 'upward forces' (green) and convex 'downward forces' (red). These are then superimposed onto elevations to aid design © Crown copyright: Ordnance Survey

- 6 Cyneiniog, Ceredigion: Responding to landform - a modest clear-fell to extend the existing open ground down the spur

- 7 Bwlch Nant-yr-Arian, Ceredigion: Analysis to understand the forest's constraints and opportunities – aiding the prioritisation and balancing of design decisions © Crown copyright: Ordnance Survey

- 8a A44 viewpoint at Cwmbwyno, Bwlch Nant-yr-Arian: Elevations indicating both felling and future species proposals. Translated onto plan these would then be used to mark out shapes on the ground prior to site implementation

- 8b Nant-y-Moch, Ceredigion – adjacent to the dam: CAD elevations of proposed felling shapes, including testing the removal of 'dark green' 2007-11 coupe shapes

- 9 Gwydir, Conwy valley: A modest felling coupe shaped to provide a varied boundary within the predominantly continuous cover crop. Dame Sylvia Crowe had been responsible for a number of pioneering small-scale fellings along the Conwy valley in the early 70s

- 10 Breidden, Welshpool: A visually attractive mixed conifer and broadleaved woodland. Its diversity is further enhanced by small-scale fellings with re-stocking. Both the open ancient settlement site in the mid-distance, cleared of trees in the mid-90s, and the SSSI grassland leading up to Rodney's Pillar offer additional interest

- 11 Afan, Neath Port Talbot: This panorama conveys the considerable presence of forestry in the Afan catchment but particularly highlights the extent of Phytophthora fellings in and around the Afan Argoed visitor centre

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6

**GREEN FINGERS IN A
GARDEN OF LEAVES:
CREATING COMMUNITIES
WITHIN COUNTRYSIDE**

ED GREEN



INTRODUCTION

Over the course of the last two centuries our approach to making settlements has changed. The natural landscape that once sat cheek by jowl with town and city centres is now kept at bay by two barriers. The first is a sterile ring of suburban growth. The second is the settlement boundary itself – beyond which lies ‘open’ landscape, much of it intensively farmed or out-of-bounds. The developable land inside most settlement boundaries has been consumed by a midground that is neither town nor country, inflating land prices and exacerbating the housing crisis.

Wales is not dominated by large urban centres, but by natural landscape interspersed with modest urban, suburban and rural settlements. Many of these towns and villages struggle to provide the amenities or conditions desired by contemporary society, and established boundaries constrain their potential for further development. Consequently, their undesirable nature leads to a vicious cycle of low land values and lacklustre investment.

This essay proposes a strategy for reconnecting our communities with the countryside. By developing existing settlements such that they have a positive relationship with the surrounding landscape, they could become better places to live – more legible, ecologically richer, and more beautiful. They could create less carbon and generate more clean energy and resources, with the ultimate aim of transitioning from consumers to producers.

New communities should grow from existing centres, one

neighbourhood at a time. Neighbourhoods should be linked along a tree-like infrastructure of public transport and renewable energy networks. These finger-like communities should be interwoven with green fingers – ecological corridors that put homes and workplaces in close proximity to the natural landscape. Clear limits to growth should be established, to redefine settlement size and minimise the need for private transport. Our built environment should encourage organic growth and renewal, both inside and outside the community, and sustain life in all its forms.

BACKGROUND: A TWENTIETH CENTURY LEGACY

Suburban housing, the stuff that sits between most of our settlements and the surrounding landscape, is a legacy of the Twentieth Century. Throughout the course of the nineteenth Century, industrialisation transformed towns and cities into increasingly crowded, dangerous, polluted places. With the publication of *To-morrow: a Peaceful Path to Real Reform* in 1898, the Garden City movement galvanised the ongoing migration of the Victorian middle classes from industrial centres, which became an exodus out into the countryside.

The architects of the Garden City movement understood that contemporary urban centres were unfit for inhabitation, but that rural living was untenable for most, so they created a place in between. The Tudor Walters report and subsequent *Housing, Town Planning, &c. Act 1919* established maximum housing densities and layouts, and allowed for the building of large new estates outside of major towns and cities. With

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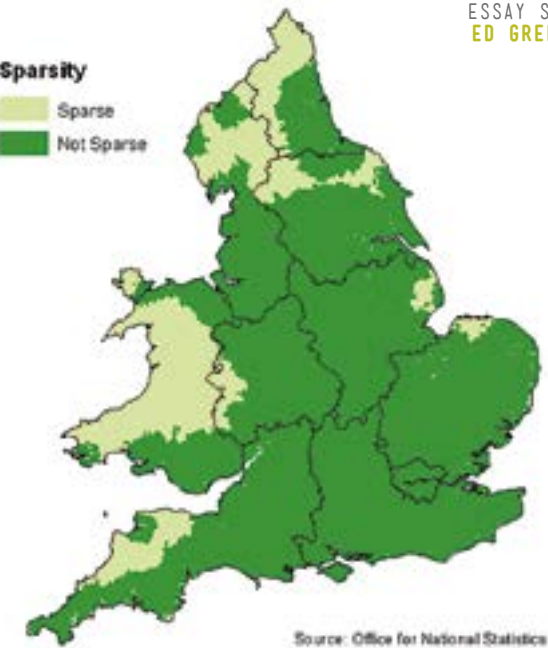
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good infrastructure, community centres and integrated workplaces, these settlements were designed as self-contained communities. The interwar housing boom began a long tradition of low density neighbourhood-building at the interface of town and country. It was during this period that the semi-detached home first proliferated as an icon of leafy suburbia <1>.

However, most of the growth that followed in the wake of the Second World War represented a different sort of fresh start <2>. One difference was the car. Between 1900 and 1950, the number of households with access to a car rose from next-to-nothing up to 13% (3 million cars). By 2000, car ownership had increased to 73%. Inevitably, these 40 million cars had to be considered in the design of new communities, 'where the

smooth wide road passes between miles of semi-detached bungalows, all with their little garages, wireless sets, their periodicals about film stars, their swimming costumes and tennis rackets and dancing shoes'.¹ The ensuing sprawling commuter-belt became the antithesis of Garden City ideals – a reliance on private transport, loss of workplaces or community spirit, and a pervasive lack of character, consuming space voraciously and breeding isolation. The same sprawl can be found today in any of the more 'developed' nations <3>.

Today, three quarters of the UK population live in suburbia. Arranged in wide, brown belts around towns and cities, these monocultures of low density housing represent the least sustainable type of living imaginable, and have consumed most of the developable land trapped between our

settlements and the 'countryside'. The resulting scarcity of developable land has inflated house prices beyond the reach of many households, and contributed to a housing crisis which shows no signs of abating.

**THE HERE AND NOW:
THE TRUE COST OF SUPPLY AND DEMAND**

'We are still nowhere near tackling our national housing crisis, which is causing misery for millions of people who are unable to secure a decent home at a price they can afford.'

Grainia Long, Chief Executive: Chartered Institute of Housing



There has been a steady slump in house-building throughout the 21st Century. We are constructing less than half the homes we need each year to keep up with demand, with a deficit of more than two million across the UK – a hole the size of Manchester, Birmingham and the West Midlands combined. According to a recent study, in Wales we need to build fourteen thousand homes built per year over the next fifteen years in order to meet demand.² Just over six thousand homes were built in Wales during the year 2014-2015.³

Many attribute the low level of housing supply to a shortage of affordable land, a consequence of the size and position of established settlement boundaries. The green belts of open landscape that encircle our major towns and cities are the culmination of fifty years of environmentalist pressure, with the primary aims of limiting how much of the country is developed, constraining suburban sprawl, reducing how much people travel, and providing access to the countryside. Green belt land has grown steadily since the 1950s to nearly two million hectares. However, much of it has limited ecological value (the proportion that is intensively farmed varies from



location to location). More than forty UK councils have already made firm plans to redesignate settlement boundaries. In 2010, the *Foresight Land Use Futures* report asserted that a 'coherent and consistent' strategic reassessment of land would enable settlements to grow in a way that results in net ecological gain, and increases access to our natural heritage.

'The time has come for a greener green belt. We need a 21st century solution... which puts in place a network of green wedges, gaps and corridors, linking the natural environment and people.'

Sir Martin Doughty, Chair of Natural England (2007)

Away from the South and South East coastline, the majority of Wales is sparsely developed, in comparison to the rest of the UK. <4> Settlements are modest in size. Many of these communities could be expanded to support larger populations, but lack of desirability, poor infrastructure and limited amenities leave land values depressed and limit the likelihood of investment. Major house-builders are particularly reluctant to build outside of South East Wales, due to perceived limits to growth and profit margins.

The particularly extreme range in Welsh land values, between affluent communities and these less desirable ones, also has implications for urban renewal, and for the rate of replacement of old, outdated housing. Almost a third of the Welsh housing stock was built before 1919, compared with around one fifth of the entire UK housing stock. In 2011, 18% of UK households living in pre-1919 properties were fuel poor, compared to 6% of households living in properties built

after 1964, and the depth of poverty for these properties (in £) is more than doubled.⁴ More housing in Wales is deemed unfit for habitation than anywhere else in the UK. In 2014 the UK Fuel Poverty Monitor estimated that half a million Welsh households are at risk of fuel poverty – a staggering 41% of all homes (compared to 26% of UK households). As the report concluded in its key recommendations, 'there is currently no action plan for eradicating fuel poverty in Wales'.⁴

'High energy bills are now one of the most prominent public policy issues across the UK... Yet, across all nations... fuel poverty will continue to rise.'

UK Fuel Poverty Monitor 2013-1024,
NEA/Energy Action Scotland

Land is one of our greatest assets. Its productive capacity underpins the economy through the provision of grown resources including food, and through its use for housing, business, transport, energy, recreation and tourism <5>. The ability of land to deliver multiple benefits simultaneously – so called 'multifunctionality' – adds to its value, and will be increasingly crucial as the population continues to expand. By linking all of the Welsh land reserves in an ecological network, and integrating ecology into our towns and cities rather than pushing it to the edges, we would move towards more healthy, viable, productive communities.

The catalyst for today's rethink is the end of ignorance. We know that the consumption of fossil fuels and carbon dioxide production must be cut drastically, if we are not to delay – let alone prevent - ecological disaster. We understand that

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out-of-town development diminishes existing communities, generates more travel, and bloats our ecological footprint. The persistent lesson of the last two decades is that the housing crisis will not be overcome by 'more of the same'. With a desperate shortage of homes and constant pressure for improved efficiencies, we now have a chance to reshape our existing communities. The connection between our settlements and our countryside should be reaffirmed, repairing more than fifty years of damage, and making space for the homes, workplaces and communities we so urgently need. By increasing the size and value of marginal and rural neighbourhoods, more equitable land values would result in more balanced communities and greater freedom for less affluent families. A major programme of community building in Wales could utilise new technologies and benefit from the success of recent 'big projects' such as the 2012 Olympics.

But where to begin? Inevitably, any potentially suitable location for community-building will already have existing infrastructure, resources, and some kind of settlement in

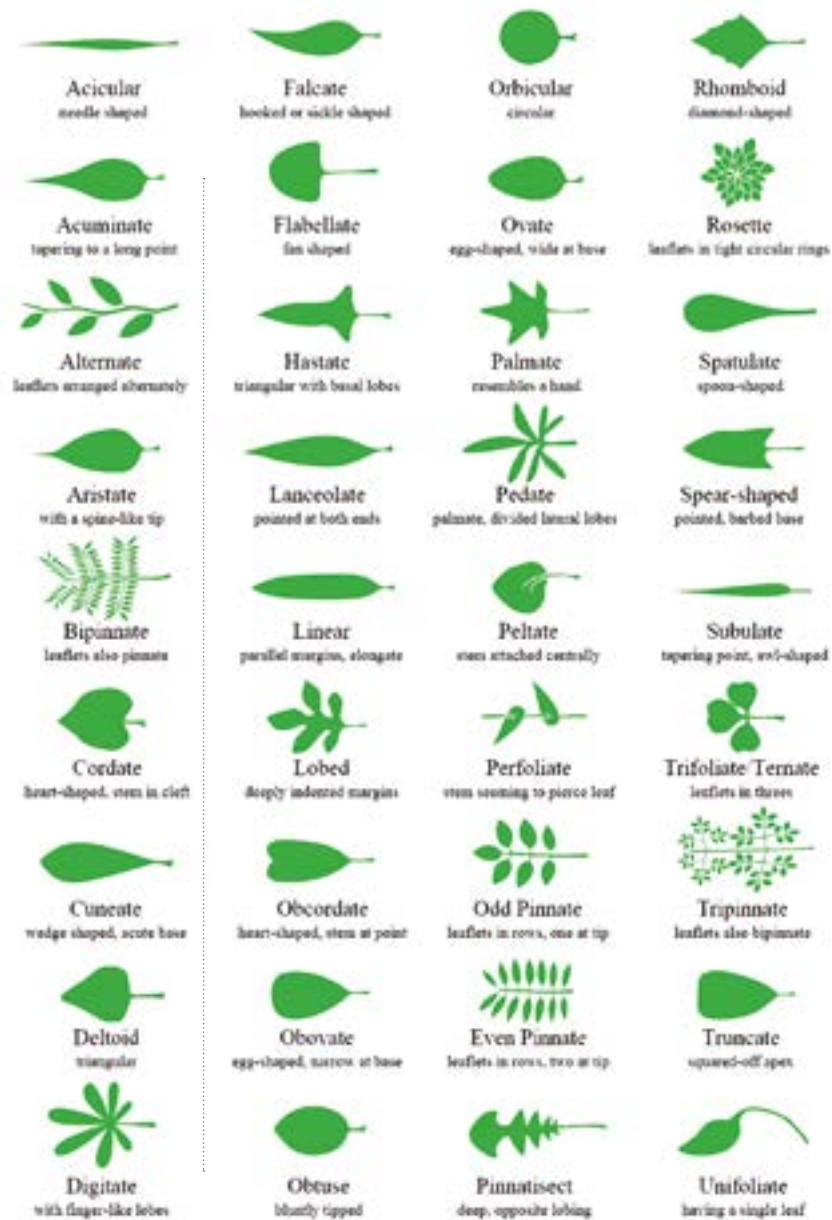
place. Expansion of existing communities should be encouraged for the benefits it can provide. At current rates of replacement, it will be hundreds of years before all of our outdated, energy hungry housing is replaced with homes that perform to acceptable standards of efficiency. By establishing ecologically balanced growth in locations where poorly performing neighbourhoods can be integrated, the potential to have a broader impact on energy consumption is greatly increased.

**VISION:
THE GARDEN OF LEAVES**

'Nature will bear the closest inspection. She invites us to lay our eye level with her smallest leaf, and take an insect view of its plain.'
Henry Thoreau, 1853

Inspiration for the growth of communities can be found in the natural world. Leaves

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provide an organic blueprint for appropriate patterns of development. A single neighbourhood might be equated to a simple leaf <6>. The blade establishes the footprint of the neighbourhood – a combination of homes, work places and amenity – connected to the world beyond via a leafstem. Running down its centre is the midrib. It is both public transport and high street, providing a community spine that traverses the entire neighbourhood. Veins suggest streets – running broadly parallel to one another they connect the infrastructure to the landscape outside. By controlling the length of streets, the maximum distance between public transport and landscape can be limited. This linear arrangement echoes that of modest rural communities, whose simple growth patterns tend to extend along a small number of transport pathways. It maximises permeability, and ensures that the countryside is always tangible.

Different sized neighbourhoods and different geographies demand different patterns <7>. For a small community, a simple form will suffice. A variegated edge increases the contact between community and countryside. A larger neighbourhood requires a footprint with multiple sub-blades. This ensures that connection to landscape is not lost in the deepest parts of the footprint, while secondary ribs maintain proximity to public transport. The underpinning natural environment must also be considered. Rivers and coastlines, steep terrain, predominant winds, solar access and environmental assets should all influence the form of the community, if it is to maximise the ecological and productive value of the land that lies beneath.

If the leaf diagram – even a complex one - is magnified far beyond the scale of a single neighbourhood, it ceases to function. The simple community-focussed structure breaks down when the centre is stranded far from the perimeter, and connection with the countryside is lost. Instead, a larger settlement requires a more complex form – discrete neighbourhoods that are nonetheless highly connected and integrated.

Foliage provides a fine model for this type of settlement pattern, with future growth blossoming outwards from the centre, one neighbourhood at a time. Subsequent neighbourhoods retain their distinction, connected to the whole via a linear network of branches spurring from one or more central trunks. Between these fingers of development, green corridors ensure proximity to landscape and ecology.

The landscape must be brought into the settlement as much as the settlement reaches out. By doing so, a settlement that uses land of ecological value is not simply consuming it. It is also extending the landscape back into the settlement in a way that breaks down the conventional distinction between greenfield and brownfield sites, and encourages multi-functional use of land, with all of its associated benefits. Because access to transport, ecology and amenity is planned in an equitable and balanced way, all parts of the community will be desirable. Land is inherently too valuable to allow low density residential spread or commercial monocultures to prevail. With an appreciation of the value of land will come a new awareness of waste - underused

or abandoned areas will swiftly be redeveloped, and much greater efficiencies in land use will be achieved.

If we are to make settlements without sprawl, we must begin with a clear idea of limits to growth – a finite size, defined by a boundary, beyond which the settlement will not be permitted to spread <8>. This clearly defined physical footprint, combined with an understanding of the importance of density, will determine the overall capacity of any settlement, along with the ease with which it can be traversed. It will enable an accurate assessment of ecological losses and gains, and will facilitate the planning and maintenance of a hinterland of resources.

With an aspiration that no home is located more than five minutes' walk from public transport or from countryside, the notion of a walking, cycling, healthy population is a realistic one, and the potential to simultaneously impact on both the existing housing crisis and the quality of life for residents becomes truly meaningful. Not only does the proposed settlement draw nature deep into its centre; equally it promotes ways of life that exist in harmony with it.

<8>



IN CONCLUSION

Existing settlements should be re-planned and their boundaries redrawn, to maximise the potential for connection between community and countryside. A simple hierarchical structure would facilitate growth, one neighbourhood at a time, without loss of legibility or sense of place, and with clearly defined social centres.

Limits to growth combined with established minimum densities should ensure that settlements do not become unmanageable in terms of their overall size. A tree-like development pattern with an effective public transport network as its spine would ensure that any settlement can be traversed effectively, without necessitating private car ownership.

This approach would bring the vast majority of people into contact with their landscape in a way that would change their lives for the better, enrich neighbourhoods that currently suffer from a paucity of character, and dramatically expand the ecological value of the precious land that lies beneath and around our existing settlements.

The ensuing growth in communities – in a new domain somewhere between town and country – would be unfettered by the stigma of ‘suburbia’, and open to new forms of development. Developers would be free to cherry-pick from new ideas and traditional forms, to take advantage of modern methods of construction and embrace a new-rural materiality.

Such a framework could provide a multitude of opportunities for community trusts, co-housing groups and for the burgeoning self-build and custom build markets. It would find a place for micro-agriculture and for new and emerging models of low carbon living and self-sufficiency that simply do not fit into most contemporary settlements.

As neighbourhoods push out into the countryside, so green fingers would bring nature into our towns and cities; providing aspect and character, improving legibility, and opening up ecological corridors that have been closed for decades. Development rooted in an appreciation of the innate geography of a place will inevitably result in a stronger sense of place, a more unique character and increased legibility.

Quality development borne of a clear understanding of the relationship between town and country would facilitate the expansion and interconnection of isolated neighbourhoods in rural locations. This, in turn, could increase the worth of established, often ailing communities in less desirable locations, and create a more democratic disposition of land values.

The preceding discourse makes a case for transforming our existing settlements into a new type of settlement that engages with its landscape, rather than turning its back on nature. Underpinned by networks of public transport, renewable energy resources and ecology, such a community

could produce more energy than it consumes, and provides

a pathway to true sustainability. For this approach to work, however, the traditional laissez-faire approach to development control must be replaced with some form of top-down development coordination. A key difference implicit in this approach is the provision of catalysis to stimulate the right development in the right places – with a holistic, community-wide understanding of the broader objectives being met. Redefined, the sub-urban landscape will not be a place of quick wins or fast bucks, nor will its growth be unconstrained. But it will be vibrant, mixed and in balance with nature – it will be alive.

Say hello to the future. Say hello to green fingers in a garden of leaves.

IMAGE CAPTIONS

- 1 Advertisement, the *Daily Mail Ideal Home Exhibition catalogue* (back cover, pub. 1939)

- 2 From the *Boring Postcards* series by Martin Parr, pub. Phaidon Press (2004)

- 3 Suburban development in Markham, Ontario (source Wikipedia commons, for public use, uploaded by IDuke, November 2005)

- 4 Office of National Statistics 'Sparsity' diagram, as drawn from Census data (HMSO, 2011)

- 5 Glyndwr vineyard, Cowbridge, Wales (Guardian Online, Sunday 10 August 2014, Photograph: The Photolibary Wales/Alamy/Alamy)

- 6 Leaf diagram (author's own)

- 7 Chart of leaf morphology characteristics, (source Wikipedia Commons, for public use, uploaded by Debivort January 2006)

- 8 Central Park, as photographed by Sergey Semonov (first prize, amateur category, Epson International Photographic Pano Awards, 2013)

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BIOGRAPHY

In addition to his architectural qualifications, **Ed Green** holds an MPhil in Architecture/Urban Design and a PhD in Architecture/Environmental Design. For the last fifteen years, he has combined professional practice with undergraduate and postgraduate teaching. His industry accolades include the Constructing Excellence 'Project of the Year' and UK Regeneration and Renewal 'heritage' award, and BREEAM 'Multi-res Project of the Year'. Recently, he has won several international design competitions involving new and emerging building technologies. He is now working with a number of industry partners on the delivery of these concepts.



DEVELOPMENT PATTERNS

ANDREW DOCHERTY

Development Patterns looks at housing in the rural landscape drawing from our experience as a rural practice living and working in the Welsh countryside. The supply of more housing is a necessity and a critically local and political issue. Housing provision in rural areas is also hugely controversial, where it is more often associated with erosion of the landscape, increased traffic and urban sprawl rather than people, communities and places.

Established settlements are perceived to be 'at one with the landscape' but have normally developed through necessity or physical and environmental constraints. Freed from this by modern mobility and construction, how do we plan sensitive new housing that is relevant to modern lifestyles as well as contributing to the beauty of the rural landscape?

Taking Welsh quilts and blankets as a starting point we propose an abstracted response to the problem of the design of rural settlements and housing. Evolving over many generations, the Welsh quilt is both uniquely practical and aesthetic, their colour and pattern embodying many of the concerns raised by the question of modern design within the landscape. Quilts are produced locally, crafted from local materials, made for and in response to the local landscape, climate and weather. They embody skill, history, tradition, art and commodity, beauty, decoration and function.

Like the quilt, traditional housing, whilst created out of need, is nonetheless bedded within the landscape. The patterns of pre or early industrial development reflect the patterns of the land, materials, labour, transport and weather. Freed from historical constraints by logistics, mobility and contemporary working practices, traditional housing patterns have unravelled.

The quilt can inform how we might both patch up and make new the design of modern rural settlements and housing by stitching together current patterns of need in Wales today. These include local materials and labour, low energy design, biodiversity, digital connectivity and the need to maintain community and a connection with the landscape. The pattern of the quilt represents a way of ordering these many strands to reinstate the character, craft, materiality and beauty of housing in rural Wales today.

ANDREW DOCHERTY

Andrew is a senior architect at Rural Office for Architecture. For the past three years, since joining the practice, he has been project architect for Caring Wood in Kent, a ground breaking carbon neutral country estate. Andrew is a former tutor at the Welsh School of Architecture, and before entering the profession, trained as a ceramicist. He has a keen interest in ornament and pattern language in architecture.

Andrew formally worked for White Design in Bristol on a range of eco and sustainable low energy buildings. These included award winning schools and the development of an innovative 180 bed sustainable hotel for the Eden Project.



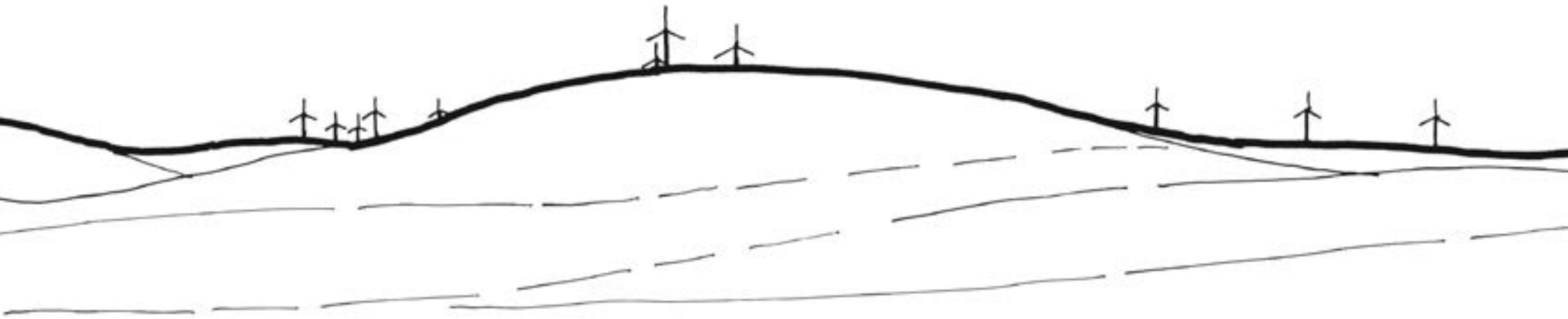




7

ENERGY - SCAPES OF WALES: SHAPING LAND AND SEA

SIMON WHITE



Wales must source enough energy to meet demand, and it must do this with carbon reduction targets in mind. Wales has substantial renewable energy resources due to its location on the western seaboard of the UK. There are strong planning policies supporting their use, addressing the necessity of combating climate change. The current UK Government's withdrawal of support for onshore wind, and the recent planning consent for Swansea Bay Tidal Lagoon and various offshore wind farms, appears to mark a shift in emphasis away from land to the sea. There are now clear tensions between the beauty and utility of both Wales' landscapes and seascapes. An exploration of these tensions is necessary if we are to develop a meaningful strategy for the management of those assets. The design and consenting processes involved in delivering large-scale energy projects are crucial in achieving successful and sustainable energy-scapes.

Many of the developments currently proposed are large-scale. Few onshore developments are more noticeable than wind turbines, the largest of which reach over 145m to blade tip – 10m higher than the London Eye. Currently consented wind farms in Wales include Pen y Cymoedd, which comprises 76 such turbines spread over an area 13km long by 5km wide. Tidal lagoons may yet challenge this scale with the preliminary proposal between Cardiff and Newport extending around 12km along the coast and 8km into the Severn Estuary.

Renewable energy projects substantially influence the character of our landscapes and seascapes and it is vital

that we learn from both consented and refused projects in order to shape future schemes so that they become positive landmarks and seascapes.

THE CONSENTING PROCESS

The consenting process for energy projects is governed by output thresholds. Onshore generating stations above 50MW and offshore developments above 100MW are classified as Nationally Significant Infrastructure Projects (NSIPs). These developments require a Development Consent Order (DCO) which is considered by an Examining Authority (of one or more inspectors) appointed by the Planning Inspectorate (PINS).

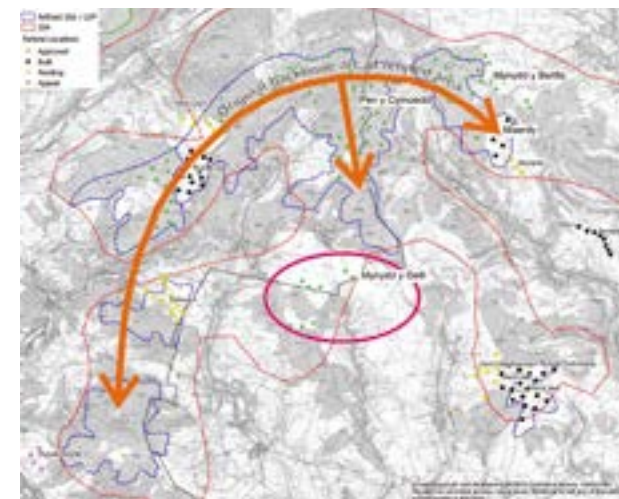
The Silk Commission's second report into Welsh devolution recommended that all renewable energy planning consents below 350MW should be handled by the Welsh Government. It is understood that provisions on this issue will be included in the Wales Bill in autumn 2015.

The DCO process is a sequence of six stages with well defined timescales (after the first stage). At the initial 'Pre-application' stage, the developer has to consult extensively on proposals. This involves the public, local authorities, statutory consultees, such as Natural Resources Wales (NRW) and non-statutory consultees, such as Design Commission for Wales (DCFW). This is the time at which the project is most likely to be changed, informed or influenced and when the need for the project should be established and justified by the proposer.

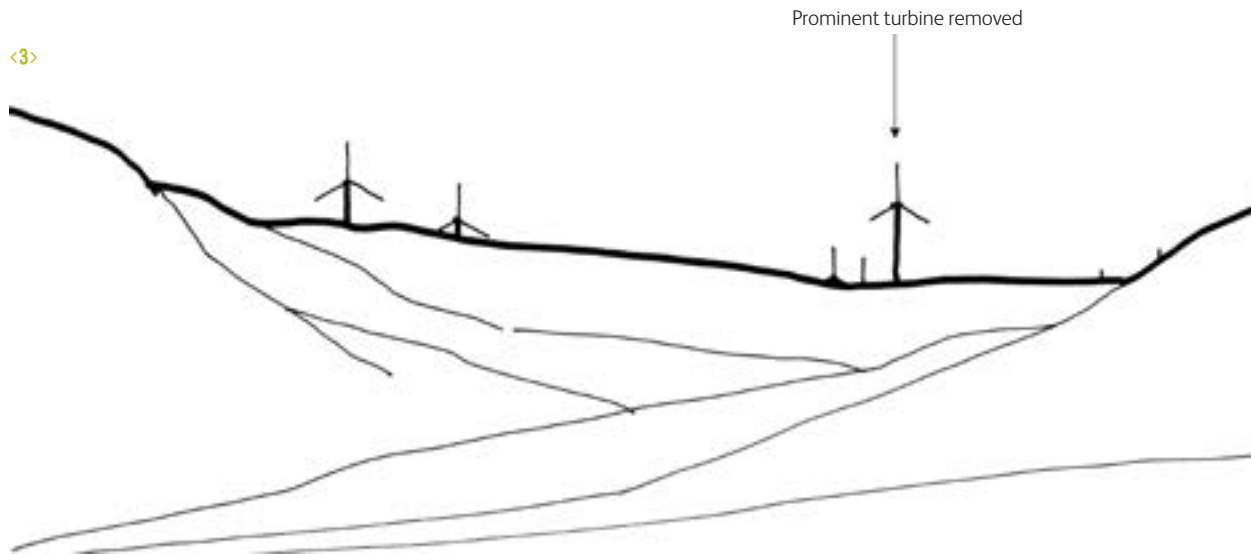
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Proposals below the above thresholds proceed through the usual *Town & Country Planning Act* planning application process to a local planning authority (LPA), and if refused can go through an appeals process heard by PINS.

THE POLICY CONTEXT

The key documents for assessing NSIPs on land or at sea are the overarching *National Policy Statement for Energy, EN-1*, and the *Statement for Renewable Energy, EN-3*. Marine developers must be mindful of the Marine Policy Statement and applicable Marine Plans. For developments below the NSIP threshold, *Planning Policy Wales (PPW)* and Local Plans provide the main planning policy framework.

The national planning policy and Technical Advice Note on (onshore) renewable energy, *TAN 8¹*, define seven Strategic Search Areas (SSAs) where large-scale wind turbine development should be concentrated. The broad brush boundaries of each SSA were refined by studies for the

relevant local planning authorities (LPAs).

WIND ENERGY

Until recently, there has been significant pressure on Welsh landscapes from wind energy developments, especially in and around SSAs.

There is a plethora of guidance on wind energy led by Scottish Natural Heritage² (SNH) but also including strategic-scale wind farms guidance by the Design Commission for Wales³ (DCFW). These are intended to encourage sensitive siting and design of wind farms including their relationship to each other. But is this guidance being properly applied, and is it having a positive influence in the consenting and refusal of wind energy projects? To investigate, it is useful to take a critical look at developments that have been refused, consented or built.

Hirwaun wind farm was proposed on the northern edge of

the south Wales coalfield plateau SSA. Two of the 115m high turbines were proposed within 70-80m of a well-defined escarpment of rock faces, steep slopes and glacial cwms which forms an imposing backdrop to the Cynon valley floor to the north. The juxtaposition of the turbines with the escarpment was considered to be harmful, reducing the drama of the landscape, as well as appearing as dominant features from nearby settlements, and the proposal was refused. <1>

Mynydd Marchywel wind farm was similarly refused as five 125m high turbines were proposed along a relatively narrow and distinctive ridge. There is an argument that most of the turbine structure should be seen so that the viewer can understand the structure fully and appreciate its proportions. However, prominent turbines can have the effect of saying 'look at me' and becoming a focal point rather than respecting the landscape and allowing this to prevail. Setting turbines back from plateau edges can help reduce this effect.

Pen y Cymoedd wind farm is a huge onshore wind farm which is now under construction within SSA F. <2> Its 76 turbines are located on top of the northern part of the South Wales coalfield plateau in coniferous forest plantation.

The wind farm was approved through the DCO process through negotiation with local authorities and others. The location, within some of the most recessive parts of the refined strategic search area, went some way to minimising adverse effects at the strategic level. In addition, there were a series of refinements to the layout. These included



removing the most prominent individual turbines including one overlooking the head of the Rhondda Fawr. <3> The removal of two turbines above Craig y Llyn created a gap above a sensitive and distinctive landform between the main arrays. <4> A number of turbines were removed on one side of the valley to avoid the adjacent valley settlement of Glyncoirwg feeling hemmed in.

There is no doubt that there will be very significant visual effects from this large but concentrated development. However, considering the benefits of the energy output it was considered worthwhile to refine the design and layout to try to achieve as coherent a scheme as possible.

The consented Mynydd y Gelli wind farm will comprise 11 turbines, 118m high. Part of this wind farm lies within SSA F, but all of it lies outside the refined SSA. <2> The wind farm is designed in four clusters on rounded hills, rather reminiscent of a 'teletubbies landscape' when viewed from some locations, except for the ex-mining settlements on the valley floors. <5/6> The landscape character is changed but the turbines are not too imposing due to the dispersed pattern with relatively small numbers in each cluster.

Whilst the layout may have some design merit, it compromises the spatial strategy of the refined area being placed away from the broad arc of proposed development as shown in Figure 2. This means that settlements sandwiched between that broad arc and this development may feel surrounded by wind farm development, which would be contrary to one of objectives in devising the final refined areas.



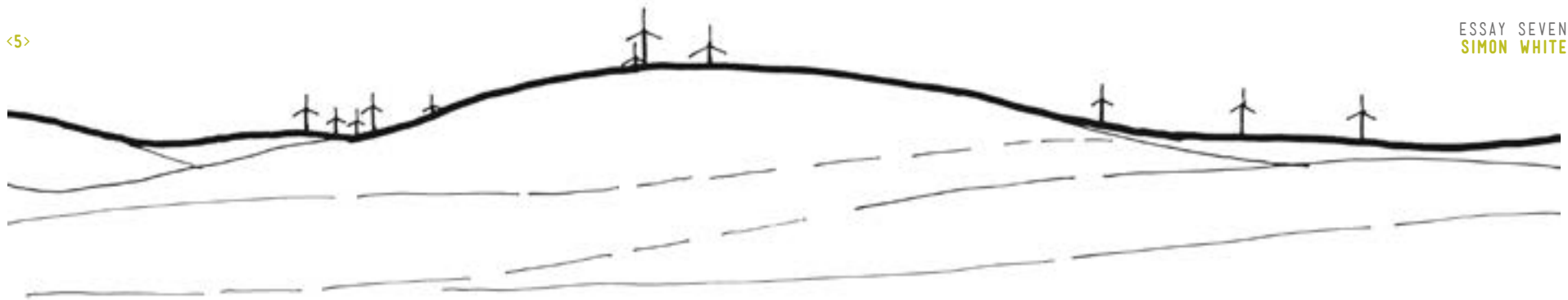
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The completed Maerdy wind farm has eight 145m high turbines located at the head of the curving Rhondda Fach valley in a slight dip between ridges. It is therefore apparent but relatively discreet and well mannered. The development forms a coherent, unified cluster of turbines and is in one of the best locations for a wind farm in the south Wales coalfield plateau landscape.

The area north of Milford Haven, away from the Strategic Search Areas, plays host to a number of oil refineries with associated chimney stacks, power lines and pylons. This appears to have attracted a number of piecemeal medium- and small-sized wind turbines. The combined composition

appears unsightly and lacks coherence, because of differences in form, structure, movement, scale, rhythm, and colour. <7> Overall design and composition does not appear to have been a consideration. This situation also illustrates a weakness of the Landscape and Visual Impact Assessment (LVIA) method in justifying unsightly development where some already exists. Cumulative impact of structures is rarely considered effectively. As a result, planning guidance on the cumulative impact of wind turbines on landscape and visual amenity has been developed for Pembrokeshire and the adjacent National Park.⁴ This now requires the design of adjacent structures and the relationship between them to be considered more carefully.

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Wern Ddu wind farm is located at the south-eastern tip of SSA A, Clocaenog Forest, in north Wales. What is of interest is the design of the turbines. The developer's worthy intention is to blend the turbines into their surroundings, but does it achieve this? The drop-shaped generator housings (or hubs) were designed by Foster + Partners, which sounds promising. Each turbine has large blades relative to the height of the tower- 70m diameter on a 65m tower, resulting in a rather squat appearance. The tower itself is painted from the base with a series of green rings fading to a warm grey towards the top. <8>

It could be argued that the rings neither mitigate nor

improve the appearance of the turbine as they undermine the visual integrity of the structure, are more noticeable against the sky, change the turbine's apparent proportions and emphasise the (moving) top of the structure. SNH guidance advises against the use of coloured rings. This project illustrates that the detailed design of wind turbines - as well as their location - is an important consideration.

TIDAL ENERGY

Swansea Bay Tidal Lagoon (TLSB) has recently gained its DCO consent, and barring problems with other approvals, the project should go ahead. Compared to wind farms, TLSB

has broader support in the political, public and professional spheres. It won the prestigious Landscape Institute's Presidential Award before it was consented - praise indeed! There is no doubting the core benefits of the project, with energy produced reliably four times a day as the tide flows in and out of the lagoon. This is complemented by other facilities. The public engagement process and presentation of the scheme were highly effective in gaining consent.

The following commentary may be seen as swimming against the tide of opinion as it takes a critical look at some design and seascape impact issues. However, this is done with an appreciation of the merits of the proposal.



Swansea Bay is a broad bay running from Porthcawl to the Mumbles. Urbanised areas along the coast contrast with the openness of the bay and the unifying sweep of magnificent sandy beaches. There are superb long views out towards Exmoor and across the bay, particularly from the promenade and corniche linking Swansea with the Mumbles. <9>

The project involves some big numbers. It runs 3.25km out into the bay with a breakwater bund seawall 9.5km in length. It incorporates up to 16 hydro turbines, 7m in diameter, producing 240MW (400GWh) of energy. Whilst essentially a tidal energy project, it also incorporates a

circular public route along the seawall, a visitor building and facilities for education, swimming, sailing and mariculture. The life expectancy of the project is 120 years, although it has a design-life of 50 years.

As an NSIP, the project required a DCO but, as it is located in Welsh coastal waters, it also requires a marine licence to be granted by Natural Resources Wales (NRW) and consents for the associated development.

The design process to determine the location and shape of the lagoon considered around 20 options. The shape of the lagoon appears to have been determined by the

project engineers, Atkins Global. An early option was a small 100MW scheme, with a pearl-shape sea wall set against Swansea Docks. <10> The pleasing juxtaposition of this, set against the shell-like curve of the bay, addressed aesthetic and seascape considerations and was welcomed by authorities. However, it was found to be uneconomic.

The final scheme is effectively a truncated triangle between the navigation channels with straight walls extending out to sea, rounded at the corners. <11> The bay can be overlooked from the surrounding hills and buildings, so the form does matter. It is not clear if basic aesthetic design principles – order, unity, integrity and integration⁵ – were applied.

It could be argued that design professionals should be fully involved at the earliest stages to work with engineers to optimise the design of the wall. In the case of TLSB, it appears that designers were brought in later, primarily to masterplan the associated development, refine details and mitigate adverse effects. Other major infrastructure projects, such as the two Severn Crossings and the Cardiff Bay Barrage illustrate that a balance between aesthetics, economics and functionality can be achieved.

The DCO process required the definition of the maximum dimensions or 'order limits' within which the development would be built. The rock armour seawall illustrated in the Environmental Statement (ES) was 14m AOD. However, the draft DCO order, examined in detail in the run up to the hearing, stated that a potential upward deviation of 2m was required by the developer. It was subsequently revealed that



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this was to accommodate potential sea level rise. This higher wall would have been more prominent and screened views of the beaches across the bay. As it had not been illustrated in the ES or specifically referred to in the Seascape Visual Impact Assessment (SVIA), the Examining Authority decided to exclude this from the DCO.

The Atlantic Array offshore wind farm proposal team dealt with a similar issue by comparing 220m high turbines at wide spacings with 180m high turbines at closer spacings to understand which the worst case was. This was then put forward for consideration by consultees.

It is clear that future ESs and visualisations will need to define and illustrate the maximum limits of a development envelope to allow for rises in sea level, as well as what may be built in the immediate future. Consultees should also be involved in agreeing a worst case.

DETAIL OF ASSESSMENT OF SEASCAPE AND VISUAL IMPACT ASSESSMENT (SVIA) AND COASTAL PROCESSES

The SVIA⁶ initially assessed the effects of the proposal on the coast and hinterland in comprehensive local detail but, in comparison, assessed the effect on seascape at a regional level- primarily on the regional seascape unit of Swansea Bay.⁷ The proposal does have a major effect on the bay as a whole. An assessment was requested to explore the bay at a more detailed local level, based on the pilot Pembrokeshire local seascape assessment approach.⁸ The local assessment captured the qualities and variations in the seascape to an extent, but fell short of considering sea bed sediment, water depth, wave climate and marine use, which help define character.

Similarly, coastal processes were initially assessed at a regional level in the ES, including the effects of tides and currents on sediment transport. This did not use sufficient

modelling to demonstrate what would happen at a detailed level, such as the net gain or loss of sand from beaches fronting Swansea and the Mumbles. More detailed analysis encouraged by NRW and Swansea, showed that the net effect was more likely to increase the retention of sand, which could be managed.

Consideration of seascape and coastal processes at a detailed as well as regional level will be critical in the assessment of any future lagoon proposals, some of which will impact on the fast-flowing and challenging stretches of the Severn estuary.

The quality of the offshore visitor building is very important. Located in the middle of the bay and seen in the same views as the iconic Mumbles, it will become a 'seamark' in its own right. A design was prepared but was excluded from the DCO as it was not necessary to the operation of the power generating station.

The design of the building will be secured by a separate planning process to the DCO. Therefore, proposals were submitted as part of planning drawings to inform the consideration of the scheme, but it was excluded from the DCO as it was not necessary to the operation of the power generating station. It is critical that the quality of the design is not watered down now that the DCO has been granted. The same should be said for all the other elements of the design such as parks, recreational and sporting facilities which are treated as other benefits of the scheme which mitigate the adverse visual impacts. A commitment to further engagement



with DCFW on these matters, highlighted in their reports and originally part of the draft DCO, has been removed.⁹

FUTURE ENERGYSCAPES

How can we learn from the schemes discussed in this essay to inform a better process for the design and consenting of future energy projects in Wales?

Planning Policy Wales (PPW) states that design goes beyond aesthetics to include social, environmental and economic aspects of development, and the relationship with its surroundings.¹⁰ The social component of PPW involves enhancing people's well-being and quality of life¹¹ which is influenced by the environment in which they live, work and play. For many, Wales' rural landscapes are places for escape and tranquillity, so it is vitally important that we carefully manage future development in them. It is equally important that urban populations, such as those in the south Wales valleys, have peaceful places nearby to enjoy. This is why achieving a coherent approach across SSAs is critical to achieving and maintaining well-being in these communities.

Poorly located and designed energy projects will negatively affect perceptions and increase resistance to necessary change, as well as diminish the beauty of the Welsh landscape which is essential to quality of life. In contrast, well designed schemes can reinforce positive perceptions, meaning future energy project will have a chance to become positive landmarks in the Welsh landscape.

The refined SSAs try to minimise adverse effects and provide

coherence at a strategic level, and the jury is out as to whether the approach is successful. The approval of wind farms outside SSAs is likely to lead to adverse cumulative effects and should be avoided. The cumulative effects of smaller wind energy developments with all other types of development should be given weight. The Pembrokeshire guidance sets a framework which is helpful in considering this.

SNH and DCFW wind energy development guidance is useful and applicable. There is no reason for these not to be followed. The Netherlands provides perhaps the most comprehensive example of strategic design considerations for turbines in Europe and there may be more to be learned from their approach.

The design of individual turbines should not be overlooked. Whilst individual manufacturers cannot be specified in planning permissions, principles of design should be discussed and specified.

There are some fundamental differences between wind farms and tidal lagoons apart from their obvious physical differences. These are that wind farms are theoretically temporary with the turbines and consents lasting 25 years. In contrast, tidal lagoons are potentially operational for 125 years and then likely remain as permanent structures. Secondly, wind farms have a light footprint and only one purpose- to generate energy – whilst tidal lagoons fundamentally change the regime of the sea and coast and can facilitate associated development for recreation. As lagoon walls and turbine structures will become permanent features it is important that there is a detailed

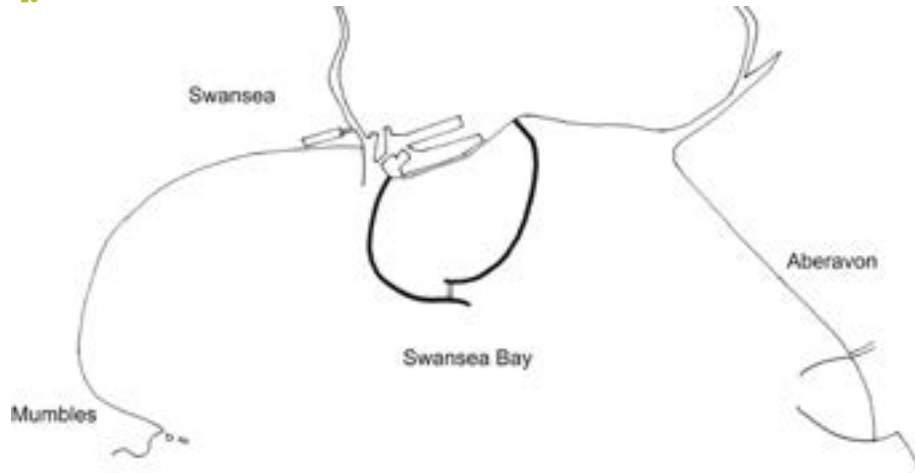
understanding of the intrinsic seascape character and marine and coastal processes from the start. Based on this information the proposals should be developed to embody strong design principles.

The NSIP process does not recognise the associated development as part of the core project and excludes it from the DCO, requiring further consents and licenses, and making the process more complicated and lengthy. It also means the scheme is not considered as a whole even though the associated development provides key benefits and mitigation which should influence the planning balance of the scheme. In the future, it would be useful to consider how assessment of the value and quality of associated development might be better integrated in the DCO process.

Consultation and cooperation with the key consultees, including on design and the natural environment, is crucial. This has potential for most effect in the DCO pre-application phase and time and resources should be allowed to fully investigate and discuss fundamental design issues at this stage. DCFW has an important role to play here, alongside NRW and local authorities.

If well-designed and assessed, future energy projects have the potential to become positive additions to Wales' landscapes and seascapes whilst providing much needed renewable energy.

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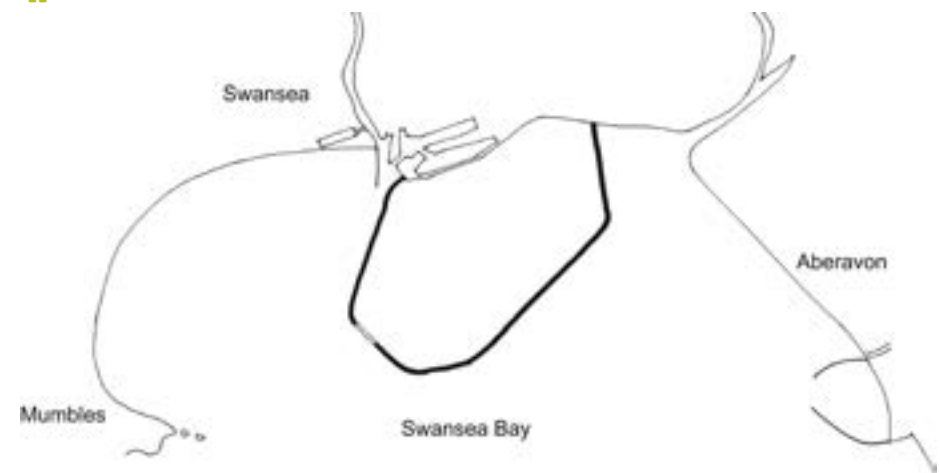


IMAGE CAPTIONS

- 1 Hirwaun proposed windfarm- the nearest turbines dominated the scarp slopes

- 2 Map of Strategic Search Area F in South Wales showing wind farms (source. Neath Port Talbot CBC, Crown Copyright 100023392)

- 3 Pen y Cymoedd wind farm- removal of prominent turbine to create gap at the head of the Rhondda Fawr

- 4 Pen y Cymoedd wind farm - the two turbines removed above Craig y Llyn to create a gap between arrays (source. ©Vattenfall)

- 5 Mynydd y Gelli wind farm- wind farm grouped in several small clusters

- 6 Maerdy wind farm- a coherent group of turbines on upland plateau although some stacking of turbines is apparent from this viewpoint (source. ©Renewable Energy Partnerships)

- 7 Mixed development including turbines north west of Milford Haven creates visual conflict

- 8 Wern Ddu wind farm- turbine with green rings

- 9 Swansea Bay from Blackpill showing beaches and Swansea docks wall

- 10 Swansea Bay Tidal Lagoon-first land attached option A

- 11 Swansea Bay Tidal Lagoon- final lagoon form

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- 8 White Consultants for Pembrokeshire Coast National Park Authority and Natural Resources Wales, *Pembrokeshire Coast National Park Seascape Character Assessment*, (2013)
- 9 DCFW's reports can be viewed at www.dcfw.org
- 10 Welsh Government, *Planning Policy Wales*, Edition 7, (July 2014), p. 59.
- 11 *Ibid*, p. 43.

BIOGRAPHY

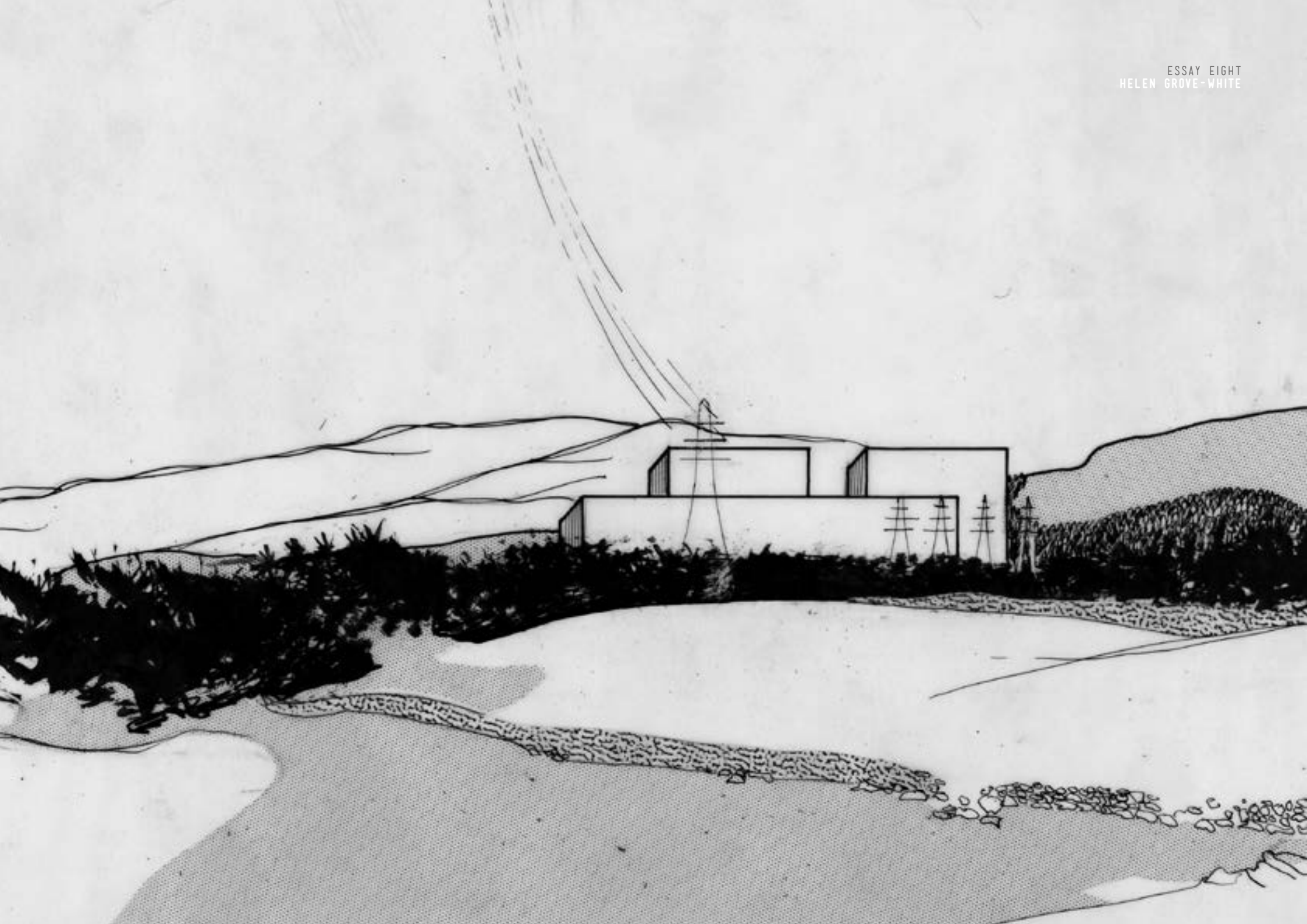
Simon White is a landscape architect/landscape planner who has worked on TAN 8 and the evaluation of onshore and offshore energy projects and their LVIAs/SVIAs. He has produced the Wales and Pembrokeshire seascape assessments below. He advised the City and County of Swansea on the Swansea Bay Tidal Lagoon and contributed to the Local Impact Report in respect of seascape and visual impact. He also assesses other types of renewable energy development including solar farms, and other types of development including housing, employment and leisure uses. The opinions expressed in this article are his own and not necessarily those of any other party.



8

THE LANDSCAPE OF POWER, SYLVIA CROWE AT WYLFA

HELEN GROVE - WHITE



Nuclear power stations are by their very nature sited in rural areas, usually by the sea for cooling water. Their scale and uncompromising physical requirements, their sprawling ancillary buildings and car parks, and their need for high levels of security mean that they are likely to stick out like sore thumbs in the landscape. I live within a couple of miles of one and have been fascinated by the site for years, an ambivalent relationship which has developed into a bit of an obsession. The imminent decommissioning of Wylfa A has provided the catalyst for a new visual arts project *Power in the Land*, bringing nine other artists to work with me in response to this potent place. Probing into the site and its history with these artists and other professionals has greatly illuminated the landscape for me and led to this study of the work of Sylvia Crowe in helping to shape it.¹

Wylfa nuclear power station in north Wales, built between 1963-1971 for the CEBG and due to close in December

<1>



2015, is the last working nuclear power station in Wales and the last and largest of a generation of Magnox power stations. <1> Situated on the remote coastline of Anglesey, it is close to the pretty seaside village of Cemaes and is surrounded by land designated as an Area of Outstanding Natural Beauty (AONB). At a time when the new wave of privatised nuclear power is on the drawing board, and indeed the ground is being prepared for a new adjacent plant, it is worth looking back at the landscaping and design issues of the 1960s. This essay will make the case for recognising the success of the work done there by Sylvia Crowe in managing the visual effect of a large industrial complex in such a sensitive area. I will also suggest the need for new imagination, creativity and passion in relation to design problems of the future.

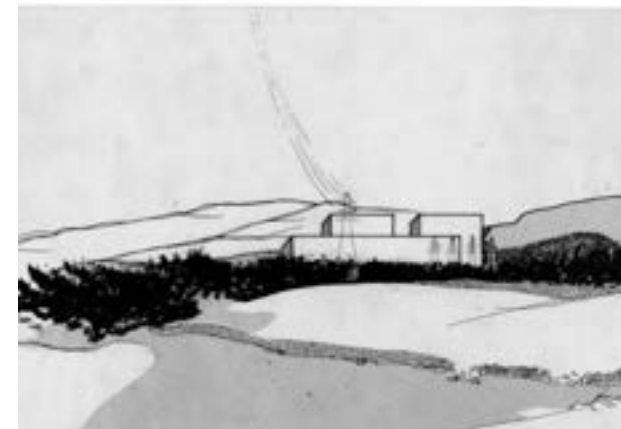
Dame Sylvia Crowe, 1901 - 1997², was ahead of the curve in her approach. She trained in horticulture and

<2>



garden design and worked pre-war as a garden designer, becoming involved as a landscape architect for the post war New Towns, Harlow and Basildon in the 1940s. As one of the leading landscape designers of her time, she was a founder member of the Institute of Landscape Architects, working alongside Brenda Colvin and Geoffrey Jellicoe, and she became its President in 1957. Whilst she embraced new technological advances in the spirit of the day she increasingly expressed her concern at the landscapes being designed by default through negligence and lack of visual awareness. Her role became one of promoting, through her writings and by example, careful concern for the specifics of a site; composing large installations with the land forms through attention to scale, mass, line and the details that add up to thoughtful design. She insisted on undertaking a landscape characterisation study prior to any other work, so that she fully understood the existing landscape context in advance of preparation of new designs. She went on to

<3>



work on reservoirs, transmission lines, hydro electric schemes and power stations as well as the Forestry Commission work for which she became best known. As a forward thinking woman of her time she was excited by modern art and the new opportunities for both siting art within the land and by the opening up of human experience that was offered by such artists as Henry Moore, Ben Nicholson and Paul Nash.

BRADWELL

Before her commission for the landscaping at Wylfa in 1962, Crowe had already written her influential book, *The Landscape of Power*, 1958³, which details her approach to the new challenges, specifically for power stations and transmission lines, within the landscape at a time of fast expansion of energy infrastructure. She had already provided landscape designs for Bradwell nuclear power station in Essex which features in the book. <2> Here, situated on the flat, bare landscape of Essex, Crowe was confronted with the impossibility of hiding or screening such a large installation. Rather she adopted a positive and pragmatic approach, writing in the *JILA* in November 1960, during its construction, that a nuclear power station, 'may be a focal point, over-towering everything else in sight and yet still having an affinity with it. I think Bradwell achieves this, huge, clean, light and floating, almost like one of the clouds over the estuary'.⁴

The aim of the landscape design here was to accept the vast bulk of the reactor core building but to keep the ancillary buildings in check, behind earth mounds or indigenous

vegetation wherever possible, so that the buildings themselves achieved a kind of grandeur, both reflecting the watery mud flats and reflected in them. Working as part of a team with both engineers and the architects Farmer and Dark, Crowe appears to have had some influence over architectural design, recommending, for example, encasing the complex machinery in a glass box to accentuate the simplicity of the natural surroundings, 'in scale with the sky rather than with the earth'.⁵

Those unaware of the role of Sylvia Crowe here would be forgiven for seeing Bradwell as something of a blot on the landscape, but it is important to recognise how much worse it could have been without her.

TRAWSFYNYDD

At Trawsfynydd, the first nuclear power plant in Wales, built 1959-65, Crowe also demonstrated her acute awareness of context - each project being unique to its setting- and of the value of working in an interdisciplinary way with the team of engineers, and the architect Sir Basil Spence. <3> Once again, there is no hiding this vast complex, now undergoing decommissioning (as is Bradwell), but here the buildings could be more closely integrated with the rugged mountain scenery, 'the tumbled dark landscape of rocks and bogs'.⁶

Crowe's drawings show just how carefully lines and angles were considered and in relation to the very widest scale of landscape, not just the immediate forms. She wrote, 'any treatment of the ground immediately around the reactors

should link up with the outer landscape, picking up and continuing its pattern in toward the reactor, and serving to bind building and landscape together'.⁷ This 'interlocking', as she came to call it, became her strongest design principle.

At Trawsfynydd, Crowe was able to make use of the valley situation to conceal the ugliest elements, such as the electricity substation, by subtle use of countersinking and screening. The boundaries were carefully considered and concealed wherever possible, often by tree planting which extended well beyond those boundaries. She insisted on the approach road being curved as any straight line would jar with the forms within the land, and on minimising unnecessary kerbs and lighting. Crowe's landscaping at Trawsfynydd is now designated as Grade 2* in the Register of Landscapes Parks and Gardens of Special Historic Interest in Wales registered garden as recognition of the success and significance of this work.

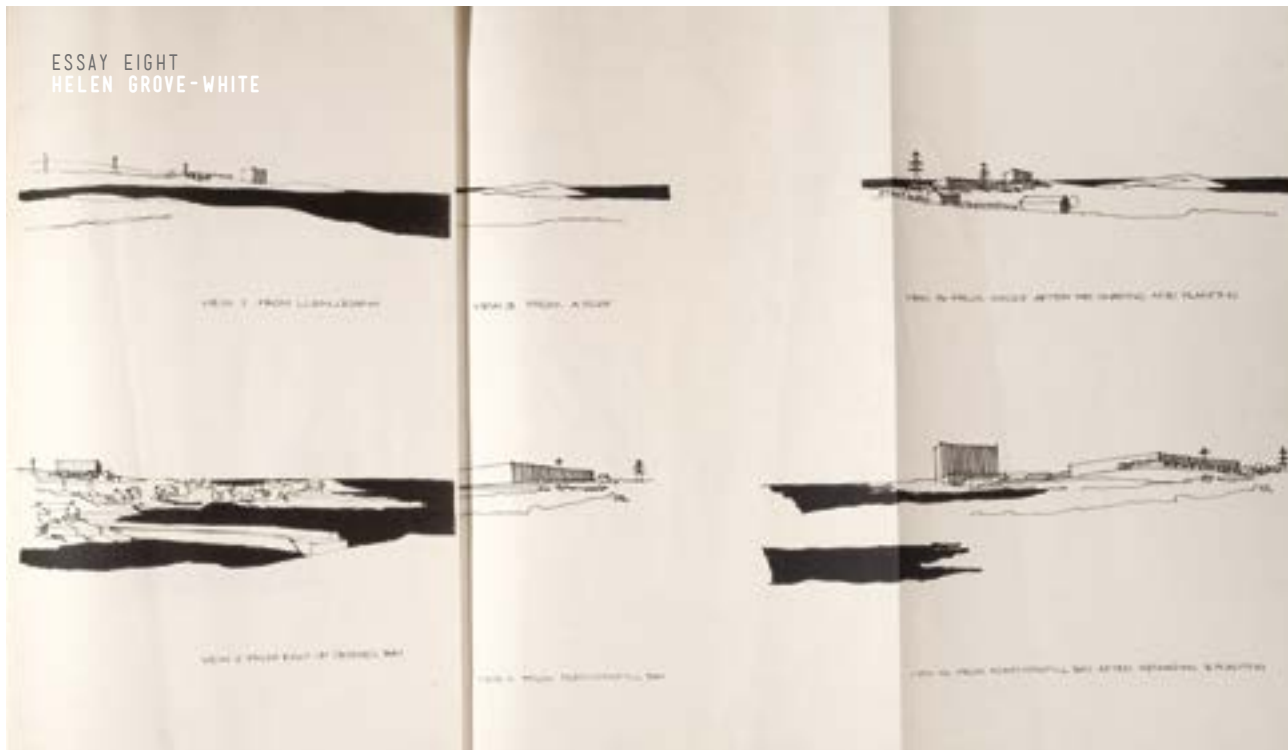
WYLFA

The integration between landscape and power plant at Wylfa, the interlocking she insisted upon, is arguably more successful than at the other two power plants. The building is equally prominent in the landscape but the colours, the disposition of building blocks within the land formations and the mounds planted with trees all add up to a better loved ensemble.

As at Bradwell, the architects were Farmer and Dark, and once again there appears to have been a close cooperation



ESSAY EIGHT
HELEN GROVE-WHITE



<4>

between the different members of the design team – Sylvia Crowe working to influence both the forms within the landscape and the colours chosen. She became known for her steely determination to prevail in case of dispute within the team and was well respected if sometimes feared amongst her colleagues. Here at Wylfa, a more complex group of forms express their separate functions, twinned reactor cores showing their round shapes are balanced by a turbine block and a long, low transformer building in a modernist harmony, each with a carefully chosen colour drawn from the surrounding landscape of rock, sea and farmland.

The earliest documentation of the work is a Landscape Report, dated January 1962 predating the architectural designs and engineering layout. <4> What it does show

is Crowe's attention to the wider view and the sketches it contains are worth showing here for the pragmatic way Crowe accepts the domination of the reactors' bulk within the land forms as a positive contribution to the environment. In her scoping text she wrote:

The reactors will dominate their surroundings and must be recognised as a new focal element in the landscape... good colour relationships will be important... I do not advocate any partial sinking of the reactor towers as this might only destroy their drama and proportion, without concealing them from any relevant point.⁸

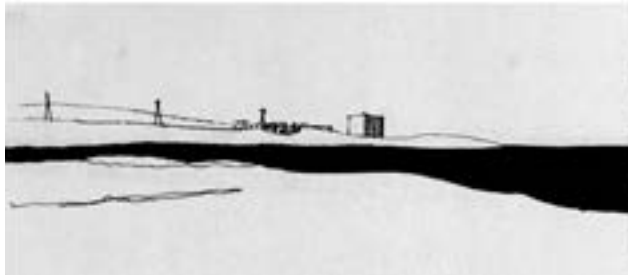
Rather than trying to hide the forms, there was a role here for screening, for blending heights, lines, mass and colour

and for interlocking, knitting the forms into the surrounding shapes within the land.

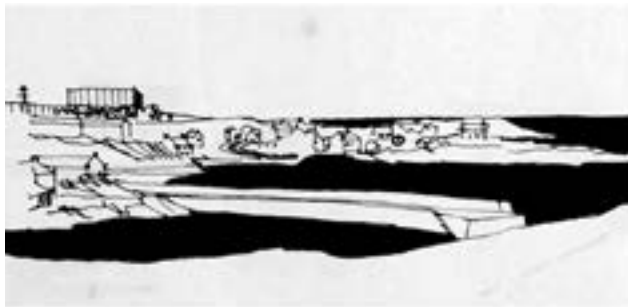
Two examples from the notebook will serve to show Crowe's approach. This very sketchy drawing from Llanbadrig headland shows the bank of trees designed to screen the lower buildings including the transformer hall. <5> The photograph shows a more complex group of buildings designed later, but to the left of the skyline here it can clearly be seen how well the raised banks of trees do their job of concealing ancillary buildings.

From Cemaes, due East, the buildings are accepted as rising above the rooflines of the village but with careful consideration of scale and relationships. <6> Notice how, from this angle, the large forms are broken. Once down in the village itself, the building is invisible, while halfway down it appears just above the roofs in an acceptable continuation of multiple forms.

Elsewhere in the document Crowe advocated the retention of existing coastal formation and inlets and the omission of the boundary line on the seaward frontage, which was to be taken out to terminate below tide line. For security reasons there is in fact a wire fence which surrounds the whole complex but the rocky coast was disturbed as little as possible. Crowe's principle of keeping the security fence as close to the main buildings as possible on the landward side also helps to control the impact it makes. The photograph <7> shows a handsome stone wall running right down to the beach on the south west side, and viewed



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<7>

from this angle it forms the dominant boundary – behind it can be seen a 2m high bank which further conceals the wire security fence inside it.

From the north, the outfall into Porth Wnal, combined with the sewage works, forms a less pleasant aspect though few people will see it. The intention had been to plan a, 'drama of scale... all worrying detail to be eliminated'. Perhaps from certain angles this is the case, but the outfall itself is the one place where it was necessary to break the shoreline. From Wylfa Head, to the north east, there is indeed a drama of scale. <8>

PLANTING

Crowe was meticulous about returning the site to as close as possible to its natural state, removing native species and propagating them in large numbers to repopulate the site after surface disturbance. Her site plans show sheep grazing right up to the buildings in places, specific planting with



<8>

Armaria Maritima and native fescue grasses, and a note that any existing rock should be left in situ, which helps explain the curious erratic boulders dotted around the transformer hall. <9>

Trees specified on the plans were Monterey Pine, Leylandii, Alder, Sycamore, Hawthorn and Sea Buckthorn but as with any similar project of this scale and complexity there were the inevitable compromises. The trees used by the local Forestry Commission in 1970 were not those chosen by Crowe – Corsican and Lodgepole pines were substituted for Monterey and Leylandii.⁹ Arguably they make an unusually dark mass for this part of the world where trees are sparse and slow growing in the salt winds. The mounds do not look natural though their steep gradients are softened by the planting; they are steeper than originally planned by Crowe owing to the need to create the height of 40m on a smaller base area than first envisaged. Crowe would also have liked to underground the transmission lines at least for the first few hundred yards but the cost was seen as prohibitive. Key ideas for the planting were the continuities between inside and outside the security fences and the irregular shapes of tree masses, all designed to soften the boundaries.

Not shown on Crowe's 1966 plan, but designed for the mounds, is a series of pathways and slate steps leading up to a formally landscaped viewing platform. <10> This offers a vantage point from which to look out over the whole complex and out to sea, a confident statement of the novelty and positive benefit to the community that was seen at the time.

The view from the nearby main road gives an idea of the





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<12>

effect of the mature trees and their contribution to the interlocking of Crowe's design <11> – landscape seen in its broader sense and illustrating her most central principle:

The greatest single step towards assimilating power into the landscape is to preserve, and where necessary remake, the entire surface-cover of the land into one flowing comprehensive pattern, with no ragged holes of dereliction, with full productive land use or undisturbed nature in control of the whole, and with the shape of every construction and enclosure linked and fitted to the general pattern instead of being torn from it in a series of disjointed rectangles.¹⁰

Back in Central Electricity Generating Board (CEGB) days, standards of both design and construction were high and the design team won an award for the Wylfa complex, a genuine collaboration between architects, engineers and landscape architect. It is tempting to assume that the design principles so clearly put forward in Crowe's many publications and widely accepted as good practice would be adopted as standard for the massive new privately funded power station now on the drawing board as Wylfa Newydd. Certainly the

scoping designs put forward for public consultation feature raised mounds planted with trees but how truly creative will the design and landscaping be? <12> They propose a design layout curiously similar to the one put forward in 1958 in *The Landscape of Power* as an example of what to avoid at all costs, an uncompromisingly regular grid of buildings on a flat site with no attempt to knit it into the landscape. <13> One hopes that the design process is still in its early stages.

However it should also be acknowledged that times have changed and perhaps the connotations of nuclear power are different and harder to work with now? We are no longer in the days of Wilson's 'white hot heat of technology' and the overriding principle seems now to minimise the design aspirations given to this controversial power source. For Sylvia Crowe, the intention had been not only to mitigate the negative effects of an industrial complex, but to do something rather more positive and to express what, for her, was the reality of nuclear power, 'its scale is cosmic rather than terrestrial and the idea which its appearance should express is the harnessing of universal forces to the service of the earth'.¹¹

My fear is that future power stations, including Wylfa Newydd,

seem likely to avoid any conscious brief at all, and that neither panache nor subtlety will be the order of the day. It has even been suggested that the dominant issues of safety and security are best expressed through banality of design.¹² What we probably lack is the steely determination of a highly focussed and single minded woman who could work alongside or even override the twin forces of engineering and security priorities and leave her real but subtle mark on the land.

With thanks to the archivists and staff at Llangefni County Archive and at Museum of English Rural Life, Reading University.



<13>

IMAGE CAPTIONS

- 1 Wylfa from the south west
- 2 Bradwell, Essex
- 3 Drawing for Trawsfynydd, Sylvia Crowe. 1959. Reproduced courtesy of Museum of English Rural Life, Reading University and the Landscape Institute.
- 4 Design document for Wylfa, Sylvia Crowe. 1962. Reproduced courtesy of MERL
- 5 1962 drawing with current view from east-north-east, Porthpadrig headland. As above.
- 6 1962 drawing with current view from due east, Cemaes. As above.
- 7 Wylfa from south west
- 8 Wylfa from north east
- 9 Blueprint of Sylvia Crowe plan, dated 1966, reproduced courtesy of Llangefni Archives.
- 10 Viewing platform
- 11 View from A 5025 to the south
- 12 Horizon proposals currently on website.
- 13 Reproduced from Landscape of Power, 1958. p.13

REFERENCES

- 1 The group now known as X-10 is part funded by the Arts Council of Wales and will hold events locally as well as exhibitions in Wales and England through 2016 and 2017
- 2 The only monograph on Sylvia Crowe. ed. by Geoffrey Collins and Wendy Powell, *Sylvia Crowe*, (Reigate, Surrey: Landscape Design Monographs, 1999)
- 3 Sylvia Crowe, *The Landscape of Power*, (London: The Architectural Press, 1958)
- 4 *JILA*, November 1960
- 5 Crowe, p. 43
- 6 Notes on Trawsfynydd, MERL, Reading University, Ref. AR CRO PF/A/11
- 7 Crowe, p. 63
- 8 MERL, Reading University, AR CRO PF/A/14, dated Jan 62
- 9 My knowledge of the planting at Wylfa has been enriched by conversations with Jo Davidson, Welsh Historic Gardens Trust
- 10 Crowe, p. 110
- 11 *Ibid.*, p 12
- 12 The ideas expressed in the final paragraphs are my own but enriched by Edwin Heathcote's article in the *Financial Times*, 11th April 2015

BIOGRAPHY

Helen Grove-White trained as an art historian graduating with a Phd from the Courtauld Institute and taught architectural and design history at Middlesex in the 1980s. Now practising as an artist, she is currently leading the group of ten artists known as X-10 who have come together for a multi-stranded artistic exploration of Wylfa power station, due for decommissioning.

Helen has shown her photographic media and video work widely in Wales and internationally and has been represented at the national Eisteddfod.



JOURNEYS OF RECOVERY

HASSELL

'Walking these routes first began in the late summer and early autumn of 2009. Initially, walking was a practical means of re-building the body following major heart surgery. The length and route of each walk changed over time as the body strengthened. The walks became longer, taking more time, allowing the mind to drift and surreptitiously absorb the landscape.'

It is now well understood that connection with nature and landscape is good for the mind and body.

'People with access to nearby natural settings have been found to be healthier overall than other individuals. The longer-term, indirect impacts (of 'nearby nature') also include increased levels of satisfaction with one's ...life in general.'¹

Through recording a series of walks in a seemingly familiar landscape, a personal journey of recovery* has also become one of discovery, offering a deeper appreciation of a local landscape. Influenced by the imperfect process of healing, each walk or journey varies in distance, time and experience.

Small circular walks become extended, forming a series of irregular but

seemingly concentric routes through a shifting landscape. The body changing and growing stronger with every expanding walk. The distance walked becomes a milestone or landmark, both physical (measurable) and metaphorical (emotional and physiological) along a journey of recovery and wellbeing.

Repetitive walks begin to offer up new vistas; distant views and landmarks, natural and man-made are revealed; the seasons are reflected in changing colours, textures, smells and sounds; patterns emerge, then disappear and repeat again; the landscape and the body changing, growing, healing in rhythm over time.

Each walk is measured in time (seconds, minutes, hours); each extended route a milestone achieved over time (days, weeks, months); the passing of time reflected by the changes in nature and the landscape with the passing of each season; the weathering of materials; the presence of man-made structures and patterns in the landscape (field, hedgerow and woodland). Rivers meander and erode new patterns; the rocks, stones and shifting sands reflect a distant past.

With each walk the experience of the landscape is heightened. Changes in topography reflect height or altitude, causing heart beat to quicken, strengthen. Differing terrains mark moments along a journey; weather changes the feel of

the terrain, alters sounds and smells, bringing its own particular sensations. Through this journey of recovery the intimate patterns of the landscape are revealed.

'Patterns in nature are visible regularities of form found in the natural world. These patterns recur in different contexts and can sometimes be modeled mathematically. Natural patterns include symmetries, trees, spirals, rivers, meanders, waves, foams, tessellations, cracks and stripes... these natural phenomenon are considered to display fractal features, exhibiting repeated patterns that display at every scale'.²

A record of each walk, both physical and physiological (time, distance, altitude and heart rate) can be represented conventionally (recorded sound or the narration of a story; graphic illustration or film). The measurements recorded can also be interpreted by another pattern of nature, the fractal (logarithm).

The fractal forms created are shaped and changed by the nuances of each walk. Informed and inextricably linked to the experienced landscape, the fractals are a physical representation of the mapping of the landscape and a unique record of the journey to recovery.

HASSELL

From a lush green canopy in the bustling heart of Melbourne, to a 4km line of paint linking outdoor games through the streets of Sydney, to the suspended felt hammocks of a Clerkenwell 'sleeperie', and cascading curtains inspired by *The Great Gatsby* in a courtyard in Montpellier; HASSELL has developed a reputation as architects and designers who look beyond traditional discipline boundaries and draw inspiration from vernaculars not normally associated with the field in which we work.

Our award winning and diverse portfolio of temporary installations, pop-up events and immersive experiences draw on broad influences, and our designers are able to pragmatically deal with the diverse needs of a space and narrative. We look to explore, push boundaries and experiment with ideas. Good design should be informed and well-rounded, and this cross-fertilisation between expertise offers us far greater opportunities for explorative design.

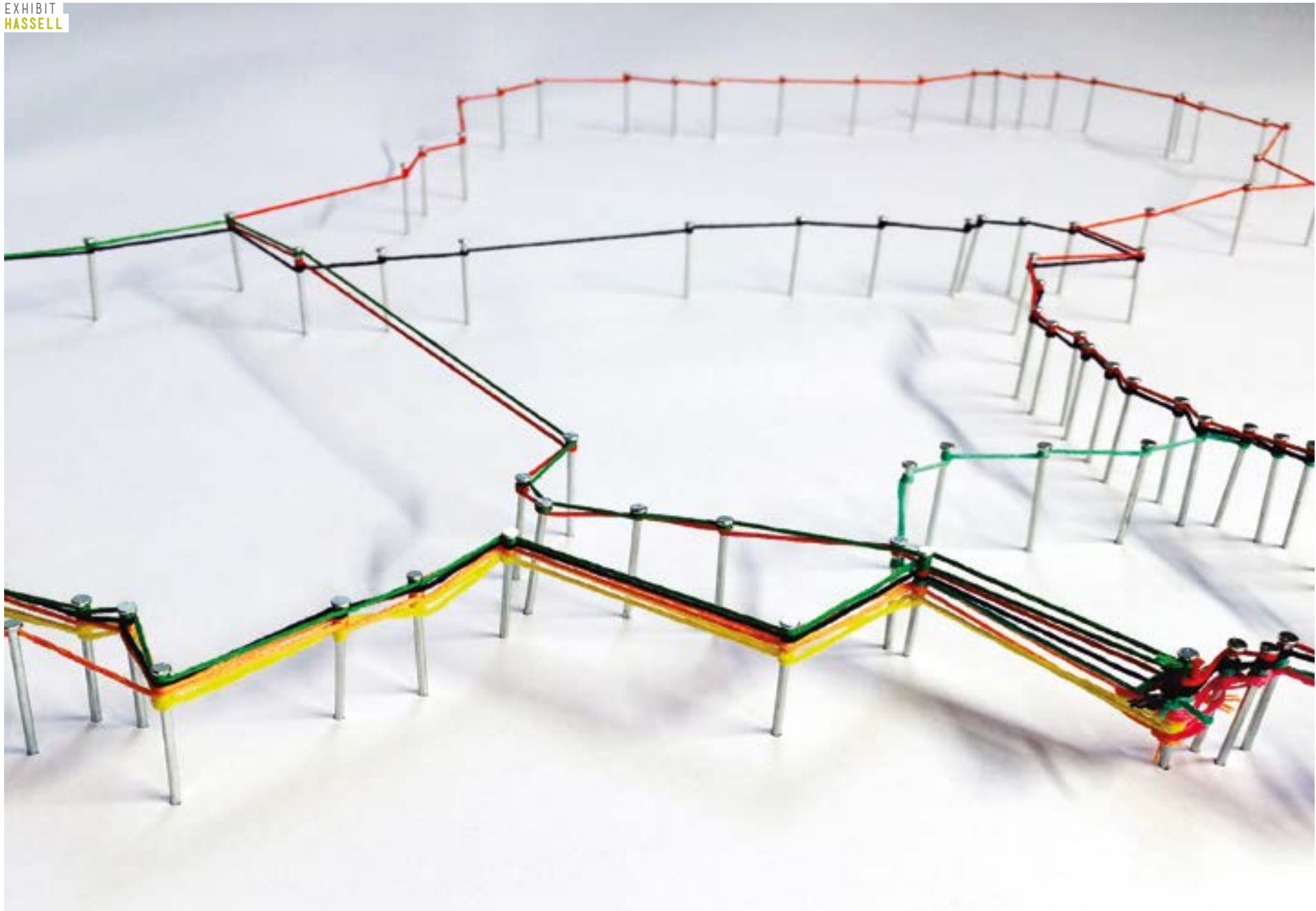
As with all our work, our starting point is always a clear understanding of the client brief, and our approach to installations is the same as our approach to architecture; we make spaces for people. How they tell a story and how they interact with these spaces is what makes them unique. How can we stimulate engagement and interaction, whether the intention is to be playful, inspiring or provocative? High impact temporary projects with substantial design value offer unique and memorable experiences, connecting people with the organisation behind them.

REFERENCES

¹ Kaplan and Kaplan, (1989). P. 173.

² Peter Stevens, *Patterns in Nature*, (1974). P. 3.



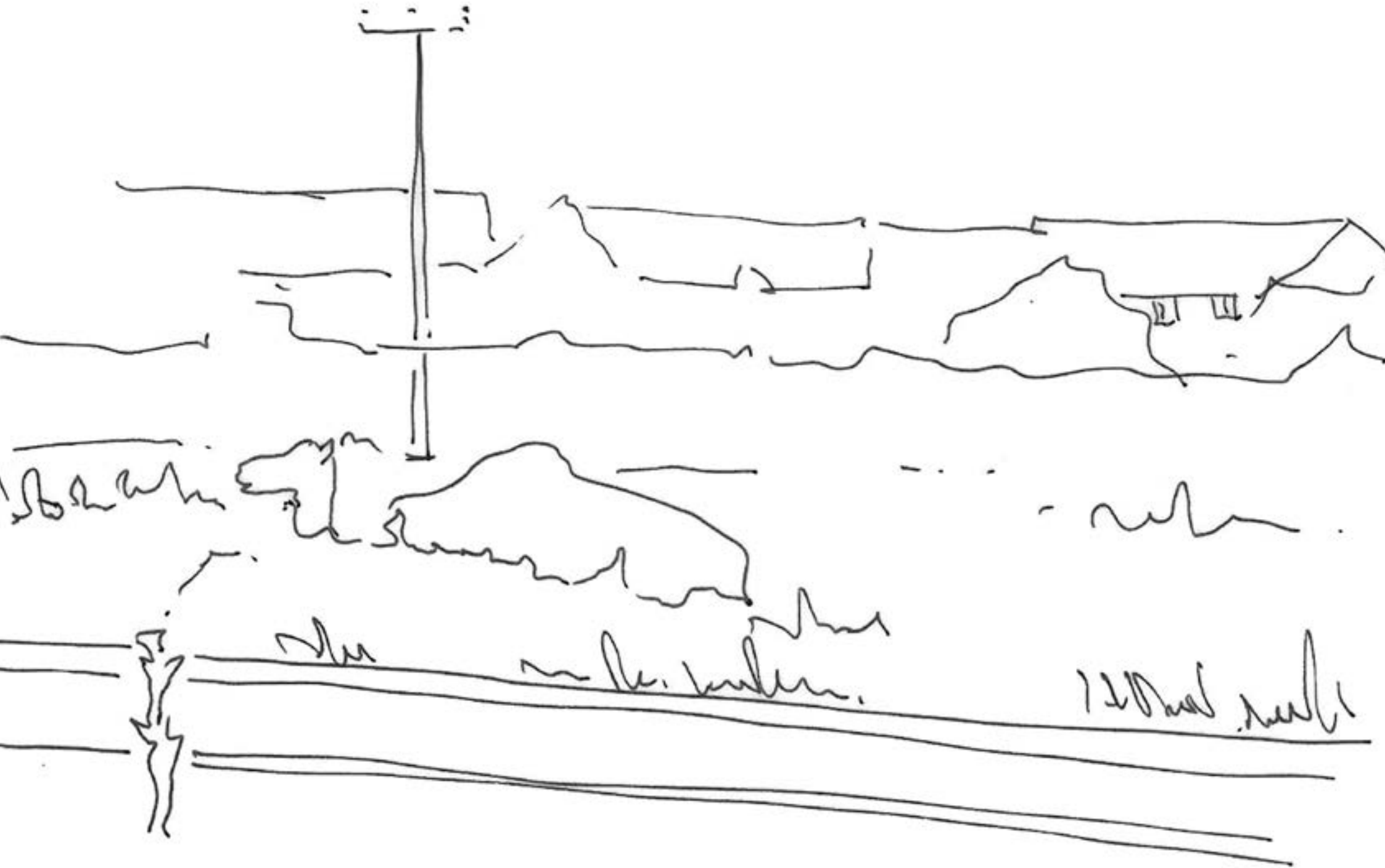




9

HOW WE MADE OUR WAY

MARCELLE NEWBOLD



INTRODUCTION

We navigate our landscape by personal association with objects; present and past, permanent and temporary, planted and accidental. These all add to the rich texture of the journey, and create landmarks to help us find our way. Our memories of place, our values and feelings of belonging stem from being able to identify with and recognise our environment. Whether through the built environment, the first glimpse of the sea, a familiar smell, a remembered event, or a road well-travelled, journeys through the landscape and snapshots in time create memories which enhance the value of a place. Every layer of development – revised field boundaries, redundant buildings, new roads, landmark buildings - adds to the character of the landscape and its uniqueness. Whether natural or manmade, each is as important in creating a feeling of place as the next, and each shapes the Welsh landscape.

Every day we travel through the landscape, though the built environment, through manmade and natural beauty. Some journeys are regular - repetitive and familiar - some are one-off adventures to unknown lands. But each trip, whether imbedded or new, is individual, varying with time of day, season and climate as well as the traveller's mood, aspect and perspective. Each moment of every journey and each experience is completely personal. The same journey will never be physically the same, and will be perceived differently by each traveller. Memories, unconscious preconceptions, gender and age will all play their part in the personalisation.

Journeys through the landscape and snapshots in time create memories which enhance the value of place. What



<1>

is memorable about a journey? The landscape travelled through. What value does that memory have? Does it reflect the quality of the built and the natural environment, or simply the traveller's own transposed values?

Landscape as, 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors,' will always have been altered in some way, over time. It is always changing.

This essay provides a narrative of one family's familiar

journey through the built and natural environment, a recollection of their most favourite memories. A formal journey of motorways, service stations, rolling hills, glimpses of the sea and car parks; as each individual recalls the same journey, with the same physical visual landscape, will the same memories prevail? Will each be taking the same journey?

'What is this life if, full of care, we have no time to stand and stare.'

A JOURNEY

Every year, twice a year, a family travelled by car to the south coast of England from Wales for their holiday. For generations, the same destination, the same journey. When asked about that excursion the parents describe a route; not by motorway junction or road name, but by past events, snapshots in time; a field that is predictably in bloom; or a papier-mâché camel, life size, at the end of a farmer's garden, signalling the start of a journey.

The two daughters recall the journey through the landscape very differently from each other. Asleep for the majority of it, the younger is lucid only for fleeting moments to check an anchor – distinct overhead lights, a building acting as a gateway to the next county or a car park signifying arrival; her memories are disjointed and separate. Her older sister, awake, has a fluid recollection of flowing changes in the landscape and experiences the journey as ribbon of time.



They sit always on the same sides of the car, some of her sibling's memories the younger daughter does not even know exist. She has never seen them, as her aspect, behind the passenger seat, does not permit them.

The daughters' spouses, new to the ritual voyage, do not have the privilege of having their eyes opened to the minute detail of the trip by years of vigilance. The more obvious and static route markers pervade; the obvious, easily recalled.

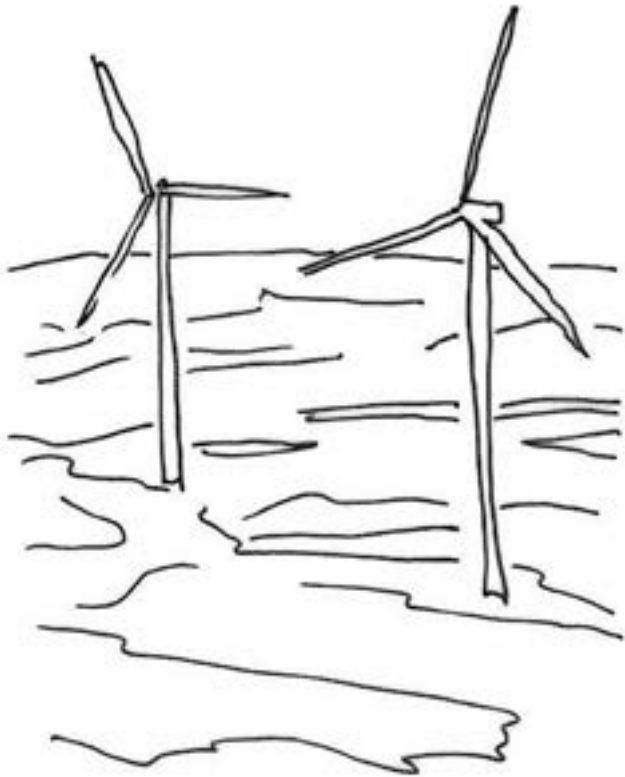
'Landscape is a cultural construct, a mirror of our memories and myths encoded with meanings which can be read and interpreted'.

THE PARENTS' JOURNEY

'When thinking about the journey, we think of the fields of rape seeds, <1> fields as far the eye can see, bright and cheery. We remember the landscape of Bodmin moor as we drive by, desolate, wild and strange, with Jamaica Inn a midway refreshment point. We never do stop there, but if we did, it would be welcoming <2>. We drive through Bodmin itself, where we were married decades ago, and we are bombarded by memory after memory of events, happy times and moments stolen. Some places where we lingered do not physically exist anymore, but they do within us. Through Dartmouth we journey, remembering when we visited for a day trip and saw our daughter on a University study trip, passing through on her coach; when we stood on the pavement and waved, as if she were still four years old not 24.'

These memories are specifically seasonal, anchoring the timing of the journey, geographically locating it. The memories are filled with warmth of event and belonging. The details recalled are not necessarily physical, but event-based; fond memories once upon a time and not reflected in the present reality. The value is an emotional one.





<3>

THE DAUGHTERS' SPOUSES' JOURNEY

'This route is not so precious. No history or emotional attachment, nothing notable to look out for. There is, of course, the camel by the roadside, and as the journey continues further away from home we look for the first glimpse of the sea, significantly marking distance travelled and the journey that still remains. We recognise and recall the route, and places along it, by events that have occurred - a previous visit for business or pleasure, a trip for a day out. The reduction in intensity of street lamps (spacing and lighting levels) is noticeable, as we drive further and further from the city.'

This narrative recalls distance and experience, rather than fond familiarity remembered by symbols in the landscape, or the landscape is itself. The intensity of occupation, insinuated by the street lamps, records the distance from inhabitation. The temporary is as important as the permanent. The everyday as important as the one-off.

THE OLDER DAUGHTER'S JOURNEY

'I remember the changing landscape, from buildings to rolling hills to forests and back again. I remember the wind turbines and the noise of them on a particular hill, their presence reassuring in the middle of nowhere, a man made statement of ownership, of safety and presence <3>. I remember the camel at the side of the road, the friendly and unassuming icon of a thousand journeys to the seaside <4>; the towering telecommunications tower sometimes with an eerie red glow from its hazard lights, always seen on the trip out, not the journey home - wrong side of the car, wrong aspect. And, of course, the strip lighting of the services

junction, a symbol of change and a step closer to holiday.'

These recollections flow into each other as a ribbon of memory, fluid and transitional, from a journey often taken. Manmade 'interventions' are noted as important symbols along the way, some temporary and very small, some permanent and large in scale.

THE YOUNGER DAUGHTER'S JOURNEY

'My memories are all manmade - a ribbon of lights approaching Exeter Services on the M5, the roundabout adjacent to the Darlington glass factory - always a gateway to holiday - a static camel at the side of the road as a halfway marker <5>, and numerous car parks, where I would always wake up in a new and exciting place, with no recollection of the journey itself, but our family, in its tin box, in the car park, ready for whatever the day held <6>. I still now recognise some locations only by their car parks, not by a description of the route or favourite outlook.'

These journey memories are disjointed and time dependent, mere glimpses and snapshots of the environment where possible; some elusively only visible if the journey is at night (the service station lights) or in the day (the camel on the M5). Not the journey itself recalled, only the markers of progression, always manmade. The most significant memory of landscape being the most mundane - the arrival car park, awaking to adventure.

INTERPRETATION

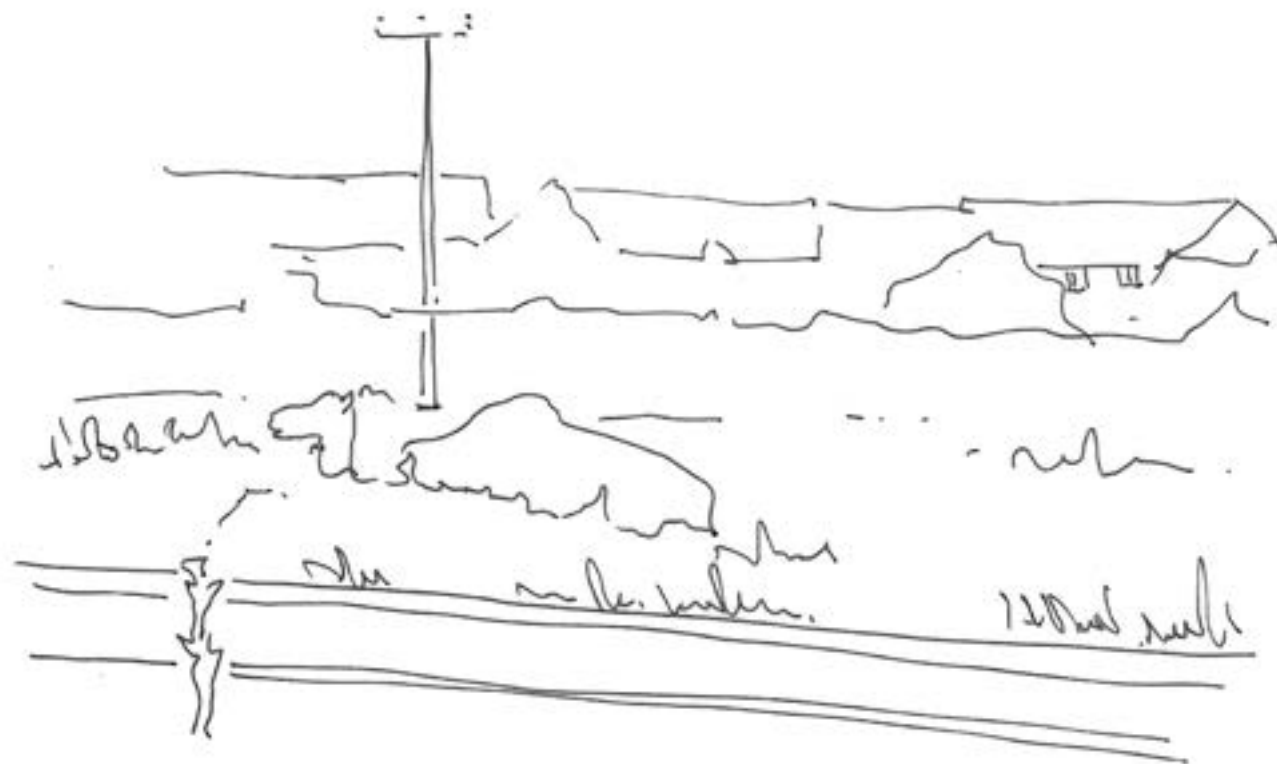
The more frequent the route, the more abstract the remembered journey becomes; specific features of the journey travelled are recalled in an increasingly personal way. Rather than route finding by map and road and junction, it is by increasing detail - specific trees, or where the motorway bank always blooms with primroses, or where a bike fell off the top of a car by the side of the road. Familiarity breeds detail, the macro level fades from importance and the micro prevails. 'Identity of place is comprised of three interrelated components, each irreducible to the other – physical features or appearance, observable activities and functions, and meaning or symbols.

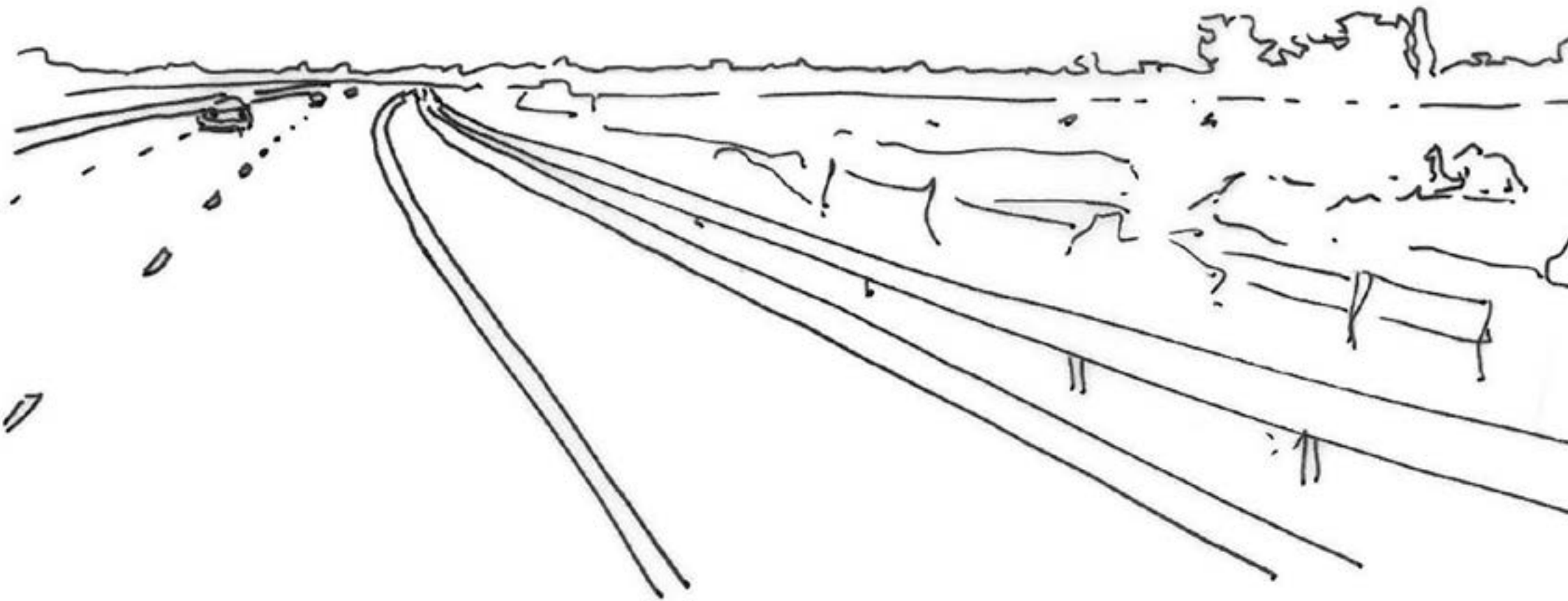
CONCLUSION

If the same physical journey is travelled, but psychologically we are on our own journey, what does this mean for built environment design in the landscape? It surely increases the need for place-making and route-marking objects in the landscape - manmade objects (mundane as well as spectacular) that make a memorable place, objects that can become familiar and our own.

The connections, between landscape and identity, and hence memory, thought, and comprehension are fundamental to our understanding of landscape and human sense of place.

The features of the landscape are always changing. With the seasons, a cottage comes in and out of view; the darkness





reveals a faraway porch light; heavy rain a preferred river route. Nothing is permanent. Significance is dependent upon personal experience and the relevance of the landscape to the traveller. Route marking points may be invisible to some, and obvious to others, depending on their outlook. Some see beauty in wind turbines, their presences and symbolism, whilst some may dislike their aesthetic. But these are symbols in the landscape, marking a place, making a place, a marker to navigate by.

Journeys through the landscape and snapshots in time create memories which enhance the value of place. It could be said that parts of the Welsh landscape lack route markers and memorable moments, even on the well-travelled paths. It is only with development that these signifiers can exist, with permission for memories and significance to grow. Differing opinions about built environment design in the landscape, means that a consensus on what is valuable or acceptable will always be subjective. However, with each moment travelled through the landscape as a unique journey attributed to each individual, route markers, whether man made or natural, are needed to add texture and give memories a place. An abundance of layers of route marking symbols, formed from the richness and diversity of the built and natural landscape, creates value. New development is important in creating texture, adding layers and shaping the Welsh landscape.



BIOGRAPHY

Marcelle Newbold is a Welsh School of Architecture graduate who recently joined Purcell from a small, design-led studio in Penarth. A design advocate, with a straight forward approach, Marcelle has experience in the private as well as public sector, working on historic buildings, community redevelopments, one-off new-build housing and small scale bespoke developments.

In her design work, Marcelle endeavours to be true to concept, striving for simplicity, economy and trueness. She believes in the importance of the spaces between and around buildings, and that these should be an integral part of the design approach. She is particularly interested in exploring spaces for social interaction, and the opportunities they can deliver.



ABOUT THE DESIGN COMMISSION FOR WALES

The Commission is Wales' champion for good design in the built environment: in buildings, places and public realm. We connect the design disciplines of architecture, urban and landscape design with decision makers who shape the countryside, cities, towns and villages of Wales. Through our networks we connect with professional bodies, local authorities, clients and commissioning bodies, in planning, regeneration, energy and infrastructure.

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