

Landscape Issues

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# LANDSCAPE ISSUES

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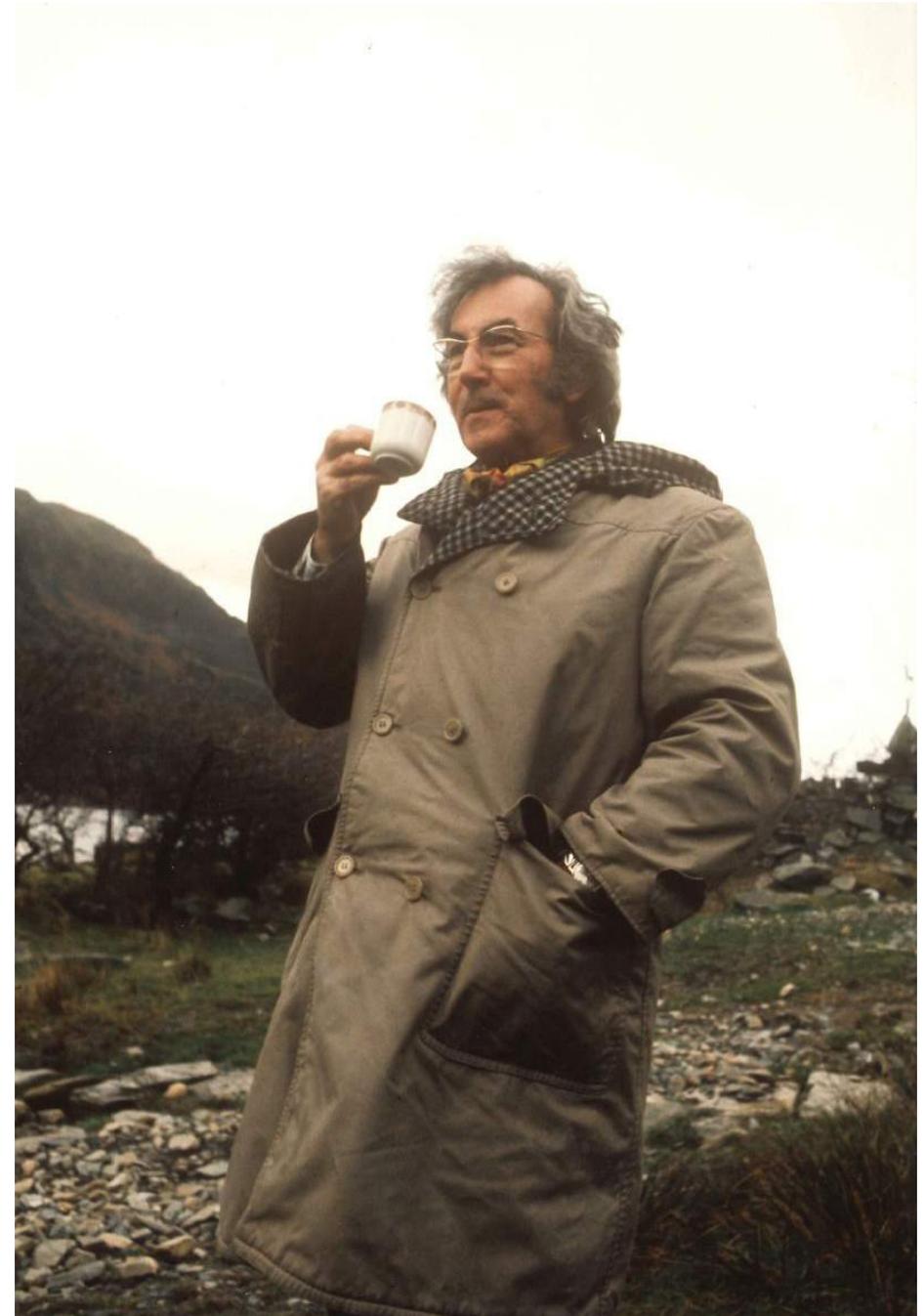
## BODFAN GRUFFYDD: A LIFE IN LANDSCAPE

*We are publishing in this issue another extract of Bodfan Gruffydd's planned autobiography dating from c1995 but never appearing in print (for a transcript of his early years see Landscape Issues vol 17 2018 p55). The extract herewith (p31) describes his philosophy of landscape architecture and is essentially the result of his many years' experience in the profession. In it he has analysed the fundamental ideas which guided the broad concepts of his landscape teaching and practice. His was a pragmatic approach to landscape design, based on respect for the genius loci and the art of the possible; it postulates that landscape architecture is an all-embracing profession, whose principles apply to every kind of job, whether it be a national park, a city space, a town park or a small garden. Once those principles are mastered a landscape graduate, he argues, is competent to tackle and solve every type of associated problem, any one of which in itself becomes a matter of detailed application, so guided by fundamentals to assured success. Today's undergraduates may well be interested to read about the concepts underlying their curriculum first developed many decades ago by the founder of the Cheltenham course. Indeed, it may be salutary to speculate whether the same principles obtain in the 21st century.*

*Searching for Bodfan Gruffydd in Wikipedia takes you to a single page of limited information and in general there is not much written about him. Having at my disposal much material of Bodfan's writings and projects, a collection of letters, reports and drawings previously in the possession of John Simpson, a former partner to Bodfan's practice and on the landscape teaching staff at Cheltenham, it is my intention to catalogue and ultimately donate it to the Landscape Institute archive and library at the Museum of Rural Britain in Reading. But as an interim and somewhat abbreviated biography of his life and works I have assembled the following.*

John St Bodfan Gruffydd was born on 5th April 1910 in Caernarfonshire, North Wales, and educated at Friars School, Bangor, Uppingham School, Rutland, and at the University College of North Wales in Bangor (where he undertook a three year course in agriculture).

Training in landscape design was as an articled pupil with the firm of Thomas H Manson & Sons in Lancaster, then in horticulture at the RHS Gardens at Wisley in 1928 and for one year at the Agricultural College of Sweden, Uppsala, doing soil research. For two years he was assistant to the Director of Town Planning for the Government of New Zealand in Wellington and during this time attended courses in economics, sociology



*Bodfan on site at Llanberis, Snowdonia, 1973*



*Visualisation studies for the Llanberis pump storage project.*

*Bodfan devised the ingenious technique of tethering meteorological balloons at surveyed points along the line of the proposed dam. Strategic photographs were taken then overlaid with drawn montages to show accurately and to scale the actual location of the dam when built [from notes accompanying the report, dated 3rd May 1973].*

and statistical method as well as in library cataloguing at the Library of the House of Representatives. Altogether he spent four years in the antipodes.

Experience in landscape design began in private practice in 1946 in Wales with a memorial garden to Dame Margaret Lloyd George at Coed Morg, Abersoch, and then later many other Welsh gardens, housing estates (with Colwyn Foulkes, which won bronze medals, and Clough Williams-Ellis) and industrial premises, including land reclamation.

Subsequently in 1953 Bodfan was employed as landscape architect to the development corporations in the new towns of Harlow and Crawley, for four years, before resuming private practice in the late 1950s.

During his work in the new towns he recalled he had first to fight to establish an atmosphere in which the landscape architect's work could be useful and effective. This involved recognition by engineers, contractors and even architects of the value of expert landscape advice through all the stages of design and construction. This led to the formulation of a Code of Practice for the guidance of architects and engineers in the course of their own designs. Later, as living densities were increased, use and wear of the landscape by the public increased. This imposed problems peculiar to horticulture and arboriculture in towns and led to very relevant investigations into human behaviour and the allowance that must be made for it at the design stage if the resultant landscape scheme is to 'work' and last.

Following an invitation to teach 'landscape' to architectural students at the Gloucestershire College of Art in Cheltenham in 1960, he and the head of architecture, Stuart Sutcliffe, developed ideas for a full-time course in landscape architecture. Working with the architecture course (situated in the Pittville Park Pump Room) and the Pershore College of Horticulture, the four-year course started in 1961 and quickly gained exemption from the intermediate examination of the Institute of Landscape Architects (and later in 1972, the full written examination).

With an initial intake of 14 students, the first year consisted of joint studies with the architectural students. The second year was to be spent at Pershore integrating horticultural aspects into the design projects; the third year would be more projects collaborating with the architects and the final year would comprise the development of professional skills and a thesis. A course had been conceived that had a uniqueness that grew from Cheltenham's surroundings and local resources: the art college, the technical college, local skills and offices, and most of all the local environment of the Cotswolds.

While Bodfan was content to have a general overview of the new curriculum, he recommended Gordon Patterson then employed as landscape architect at Stevenage New Town to head the day-to-day running of the landscape course, but with Graham Powell managing an all-embracing faculty of environmental studies to which a town planning course would subsequently

join. Later John Ingleby, a landscape architect in private practice near Bristol, was appointed to strengthen the design teaching.

In 1963 Bodfan was invited to and accepted Junior and Senior Harvard Fellowships in landscape design at Dumbarton Oaks, USA. When he took this sabbatical year, he gave lectures and travelled extensively across the continent studying in depth the American landscapes and the various institutions teaching landscape and urban design. This pioneering evidence reinforced his awareness of the need for a structured educational programme in landscape architecture back in Britain. His report on these experiences sadly was never published but it is clear he benefitted greatly from his voyage of discovery to most of the 50 states, an acquaintance which informed his nascent thinking of the importance of natural beauty, *genius loci*, wildernesses and national parks, subjects which continued to be at the forefront of his thinking for the rest of his life. Possibly because of his grand tour of America he saw the importance of travelling and first-hand observation in the education of landscape architects and quickly introduced foreign field trips to the Cheltenham course, the first being a visit to the Vienna International Garden Festival in 1964, led by Gordon Patterson, Tom Wright (ex Pershore and Wye Colleges) and Bodfan himself.

From the 1960s on, Bodfan maintained his private practice with an office in London and a 'practice office' attached to the college course (initially in Malvern Hill House, Cheltenham, later at the Oxstalls campus in Gloucester) to which students were directed for observation and experience of professional working conditions. (The office was later replaced by Cheltenham Landscape Design, part of FCH Consultants, a college business initiative using in-house expertise to better develop the new campus landscapes as well as other landscape commissions. It also figured in course publicity by inviting prospective students to "learn in a practice environment".)

From 1965 he undertook three years of research into landscape architecture for new hospitals sponsored by the King Edward's Hospital Fund for London; it embraced the problems of rural and urban landscape and also involved Cheltenham landscape students who helped with the baseline surveys of the hospital sites throughout the capital.

At the end of the decade Bodfan was honoured by becoming the president of the Institute of Landscape Architects (1969-71). His work commissions continued apace (see examples following) and additionally he was often called to public enquiries and the House of Lords to give evidence as an expert witness. Examples of the former include proposals concerning the Green Belt around Bristol and a visual impact assessment of the Llanberis pumped storage hydro-electric scheme (see accompanying photographs).

Later Bodfan completed studies for a long term landscape development plan for the Esso Refinery on Southampton Water, and a Leverhulme Research

Study on Protecting Historic Landscapes. His consultancy involved a variety of commissions including country park proposals at Sandringham, Beaulieu and Stratfield Saye among others, a new computer centre for the Department of the Environment at Swansea, a campus landscape at Robinson College, Cambridge, urban and out-of-town shopping centres, biological corridors for London, flood relief schemes for the Rivers Mole and Wey and a number of housing and garden projects large and small.

For many years he served as independent member on the Secretary of State for Transport's Landscape Advisory Committee for Motorways and Trunk Roads and as the representative of the Landscape Institute on the Council of the International Federation of Landscape Architects (IFLA). He was the Institute representative on the Council of the National Trust.

Then came the post of landscape consultant to the Ebbw Vale Council for the development of their Civic Centre (on top of a coal tip, he amusingly recalls) and for the Fort George development in Guernsey.

Regarding publications, he was responsible (over a number of years) for the Landscape Section of the Specification published annually by the Architectural Press, and the following research reports: Landscape Architecture for New Hospitals, 1967; Dawley and Telford Landscape Reports, 1965/66; Esso, Fawley, Landscape Report, 1970; there were also two books, *Protecting Historic Landscapes*, the Stanley Smith Horticultural Trust, 1977, and *Tree Form, Size and Colour – a design guide*, E & F N Spon, 1987.

While he took on fewer projects in the 1990s he was still very active helping local groups fight what he believed as insensitive proposals often by developers and planners. Indeed I saw him speak learnedly and passionately at a public enquiry when well into his 80s. He continued to read the landscape and garden literature, particularly when confined to his house due to illness at the turn of the millennium, and when I visited him he invariably interrogated me about the 'design abilities' of the current students on the course. He clearly still felt a close affinity to what he had created some 40 years earlier, particularly regarding what he perceived as the centrality of art and design in the profession.

He died on 25th November 2004.

Robert Moore

# HUMANE STREETS

## Robert Sewell

*“Streets have been seriously neglected over the last few decades, and many have become cluttered, traffic dominated, and are poor-quality, polluted environments; a no-man’s-land that no one wants to take ownership of” – Armour, Luebke and Hargrave, 2014, p101.*

### What is mobility?

Mobility, according to the Oxford English Dictionary (2017), is the “ability to move, or be moved, freely and easily”. Ease of movement has been vital for increasing trade, defence, religion and migration etc since the beginning of civilisation. Metalled roads reduce energy expenditure and increase speeds of travel. Mobility has, as a result, become synonymous with speed. Aldous Huxley described speed, in his 1932 novel *Brave New World*, as being the “only truly modern sensation” (Gabbatt, 2010). New infrastructure projects still aim at increasing travel speeds; for example, HS2 will reduce journey times to Birmingham from London by 23 minutes (HS2, 2011).

### How has mobility changed?

Mobility has changed rapidly in the last two hundred years. Prior to the Industrial Revolution humanity was primarily dependent on walking and the use of animals. Old towns were well within a day’s walk from one another. The Industrial Revolution began to transform traditional models of mobility and private investors financed railways to transport freight over longer distances; moving people only came later when it was realised money could also be made in this way. Eventually, with the rise of affordable personal mobility, the once popular steam trains were supplanted by private cars and buses. The increase in automobile-based transport led to the development of the UK’s modern hierarchical road network in 1936, when the Trunk Roads Act was passed, eventually leading to the M1 opening in 1959. Our roads have remained largely unchanged since then (Crittall, 1959, p266) and cars are now the principal mode of transport with 47 million licensed drivers across the UK (DVLA, 2016).

The 1930s created the ‘great outward expansion’ with new garden cities and suburbs readily being built across the UK. The objective of early British regional plans “was to decentralise the population from the overcrowded, unhealthy nineteenth-century industrial cities into more balanced regional development patterns” (Wheeler, 2004, p134). The incentive for home-owners and tenants was “to move away from inner city, grotty neighbourhoods with families living in crowded lodgings and rooming houses” (Holden, 2016,

p22). You could argue that new forms of mobility allowed masses to move to new suburbanised developments or that private transport was required due to the nature of these low-density, dispersed settlements. Regardless, the private car allowed many a family to move away from city cores and into lower density, dispersed settlements. Unfortunately, early town planners and garden-city advocates designed before the era of mass car ownership and did not foresee how cars would allow extreme decentralisation to occur (Wheeler, 2004, p134).

### Travelling to work today

According to the 2011 census nearly 70% of commuters in Milton Keynes drive to work, compared to the national average of 59%. Given the nature of Milton Keynes’s road structure it’s not unexpected and may explain why commuters there are 40% less likely to use public transport. Whilst car use across the UK has decreased by 2.4% since 2001, this has been negated by an increasing number of cars on the road, possibly attributable to population and household increases (DfT, 2016 A, p13). In 1952 42% of all GB travel was by bus or coach, with car and van travel only accounting for 27%. Car and van travel increased to 84% in 2007 with bus and coach travel declining to 6% (Office for National Statistics, 2010, p170). Whilst the percentage of car journeys increased, the number of young drivers (aged 17-20) has decreased from 43% in the 1990s to 36% in 2012, correlating with inflating driving costs (DVLA, 2016; Harriss and Hobbs, 2013, p3). Walking trips have decreased by almost one third between 1995 and 2012 which is perturbing from a health point of view. There has been a recent increase in walking of 5.8% since 2012/13 potentially linked to health-related concerns (DfT, 2016 B). In relation to this, the number of cycling trips has remained broadly constant in recent years, yet average trip distance has increased by 36% since 1995/97 (DfT, 2016 A, p16). Could this be an indicator of reduced access?

Between 1969 and 2001, the average annual vehicle miles travelled (VMT) per household increased from 12,400 to 21,500 (while average household size fell from 3.2 to 2.6 persons, and the average number of vehicles per household grew from 1.2 to 1.9) – Douglas Farr: *US statistics (2008, p205)*

### Why do people commute?

There are various reasons why people commute: cheaper housing on the urban fringes, lifestyle changes, quieter areas, zoning, land-use separations, improved transport infrastructure and free parking. The Office for National Statistics (ONS) says 3.7 million workers travel for two hours or longer, every weekday, and the average 2015 commute lasted 57 minutes (BBC, 2016 B). There are even instances of ‘super-commuters’ who travel hundreds of miles to work each day. Employers should attempt to reduce long commutes as they eat into family time and can be bad for working lives (Budden, 2014; BBC, 2016 B). Commuters have lower life satisfaction, lower levels of happiness, higher anxiety levels, experience higher blood pressure, have more headaches and tend to be grumpier when they arrive at their destination (ONS, 2014; Montgomery, 2015, pp84-5).

Walking and cycling contribute more to commuter satisfaction than driving or using public transit, though satisfaction with any commute decreases with distance; a long bicycle commute may still be stressful (Olsson et al, 2012). Frey and Stutzer (working as economists in the University of Zurich) found workers with a one-hour commute must earn 40% more money to feel as satisfied as someone who can walk to work (Montgomery, 2015, pp84-5). The average ideal one-way commute, according to a 2001 study by Redmond and Mokhtarian (2001) is said to be 16 minutes; less than 2% of interviewees reported an ideal commute under 4 minutes (Jaffe, 2014). “If commutes are short, as walking and cycling commutes usually are, they may be appreciated as a buffer between the work and private spheres” – this may explain why 16-minute commutes were the most preferred (Olsson et al, 2012).

### **The cost of private transport**

Parking imposes other issues on cities including increased run-off, greater ‘first-flush’ pollution levels, decreased urban density, diminished ‘walkability’ and increasing urban sprawl. Cars are often the second most expensive asset people own, yet are driven less than an hour a day, spending 90-96% of their lives parked; little wonder why so much parking space is required. Cars, regardless of how fuel efficient they are, still fill a 2.5 x 5m bay and cost £6,000 per year (Shoup, 2005, p6; Zimmer, 2016; Llewellyn, 2017; Seba, 2016; Sustrans et al, 2009, p51).

### **What about pollution?**

We know cars produce pollution but according to the Department for Transport “cars account for almost two thirds of road transport greenhouse gas emissions” which isn’t surprising with 31 million cars registered on GB roads (DfT, 2016 A, p38; DfT & DVLA, 2017). The “key pollutants in outdoor air are generally regarded to be particles (measured as PM10 and PM2.5), oxides of nitrogen (principally NO<sub>2</sub>) and ozone (O<sub>3</sub>), with sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO), hydrocarbons and metals also significant from a health perspective” (Royal College of Physicians, 2016, ppvii & 18). Polluted air is a major concern for public health with studies linking it to cancer, asthma, stroke and heart disease, diabetes, obesity and changes linked to dementia (Bauer, Tsigaridis and Miller, 2016; Royal College of Physicians, 2016, pxii). A study following two million people in Canada, conducted over 11 years, that investigated the association between residential proximity to major roadways and the incidence of dementia, Parkinson’s and multiple sclerosis found “people who live near major roads have higher rates of dementia”. The researchers reported air pollution and noisy traffic could be contributing to the brain’s decline (Gallagher, 2017). “Children living in highly polluted areas are four times more likely to have reduced lung function in adulthood. Improving air quality for children has been shown to halt and reverse this effect. For older people, living near a busy road speeds up the rate of lung function decline usually associated with ageing” (Royal College of Physicians, 2016, p68).

### **Solving the problem of pollution**

The UK Government has proposed five clean-air zones for English cities for 2020. These are intended to encourage drivers to choose ULEVs (ultra-low emission vehicles) and there will be restrictions on older polluting vehicles. A £35m plan to increase the use of electric vehicles was also launched by the Department for Transport (DfT), offering thousands more EV charging points across the country (BBC, 2016 A). Government legislation may drive people to purchase ULEVs, and the DfT reported in 2016 that new registrations of ULEVs have rapidly grown over the last two years (DfT, 2016 C, p1). Other countries across Europe including Holland, Norway and Germany are banning the sales of new cars with petrol engines in the near future as part of a wider emission reduction scheme by the European Union. Then there is the recent *diesel scrappage scheme*, a UK government initiative to incentivise drivers of such cars to switch to low-emission equivalents and receiving £2000 for their old cars.

The EU agreed to reduce emissions by 40% by 2030 which will drive car manufacturers to release more ULEVs in the future (Stone, 2016). A draft EU directive, expected to come into effect by 2019, will require every new or refurbished house in Europe to be equipped with an electric vehicle recharging point (Neslen, 2016). With air pollution contributing to 40,000 premature deaths per annum, mainly through particulates and NO<sub>2</sub>, the National Institute for Health and Care Excellence (NICE, 2016) recommends

- \* Increasing the number of 20mph zones in residential areas.
- \* The re-design of speed bumps to stop cars speeding up and slowing down between them.
- \* Restrictions on engine idling during short stops (outside schools and hospitals).
- \* More charging points for electric cars in residential areas.
- \* Placing the most commonly-used rooms in new houses away from polluting roads.
- \* Training drivers to be more fuel efficient by driving more smoothly.

### **Making roads safer**

Traffic-calming measures fall into two main categories: those that seek primarily to reduce vehicle speed, and those that focus on lowering traffic volumes – *Stephen Wheeler (2004, p202)*

Traffic calming has become an irreplaceable tool for urban designers and traffic engineers. It began largely in the 1960s as a response to accidents in which children were killed or injured by speeding drivers and includes basic tools such as ramps, speed restrictions and road narrowing, as drivers speed up in wider lanes (Sorrell, 2016). “Cities in Germany and the Netherlands adopted particularly active programmes to reduce vehicle speeds” (Wheeler, 2004, p202). The Netherlands developed the *woonerf*, a ‘living street’ which includes shared space and traffic calming techniques designed to turn local streets into pedestrian-priority areas. Measures include “trees or planters

within the road area, a lack of differentiation between pedestrian and automobile space, and special paving treatments to designate certain street areas as part of the living area associated with housing” (Wheeler, 2004, p202). In these *woonerf* areas automobiles are permitted to drive right up to the front door. However, the streets are clearly demarcated as pedestrian areas and cars are forced to proceed at low speeds: the cars are guests in the pedestrian domain (Gehl, 2011, p111). The required speed is known as *Stapvoets Rijden* which harks back to the times of the horse and cart (Stegmann, 2016) and means ‘walking-pace driving’, that is no more than 5-10 km/h.

Residential streets should be more than traffic channels. Primarily, they should be the place for community interaction and neighbourhood development. Streets, particularly in residential areas, provide a visual setting, a meeting place for neighbours, a play area, an entry to and from each house and a pedestrian circulation system. Ideally, their design requires an understanding not just of traffic patterns and capabilities, but of multiple users, social behaviour, architecture, and urban design – *Eran Ben-Joseph: The Code of the City (2005, p43)*

### Is bikeshare healthier?

A large proportion of the people in the UK have selected a lifestyle that is leading to a serious deterioration in public health. They’ve become a sedentary population, deprived of exercise, walking as little as four minutes per day, resulting in rising incidences of obesity (Lawton 2007, cited in Farr, 2008, p19). According to the Centre for Disease Control and Prevention an “estimated 200,000 to 300,000 premature deaths occur each year in the United States due to physical inactivity”, and whilst exercise related campaigns are driving people to lead healthier lives, it is arguable that our cities are no longer built for it (Farr, 2008, p148). People should not *have* to go out of their way to exercise: it should be built into everyday life. If most errands could be completed by walking and cycling, as is the case in many Dutch towns and cities, then regular exercise becomes commonplace. Robert Llewellyn (2017) believes that walking and cycling, depending on the environment and the weather, are by far the preferable method of getting around – “I really appreciate a car when it’s cold, wet, dark, and windy, but the rest of the time, given the choice I’d always use a bike”.

When health complications and NHS costs associated with inactivity and unhealthy lifestyles are compared against the cost of bike lanes, which are relatively cheap, they become a worthwhile financial investment. Furthermore “biking causes far less wear and tear on streets than cars do, meaning that as users shift from driving to biking, they lower maintenance costs for the municipality. Of course, biking is also better for the environment and an excellent form of exercise” (Quednau, 2016). Bikes start first time, even on frosty mornings, you’re guaranteed a seat, and they can do nearly 1,600 miles per gallon (mpg) (Sustrans et al, 2009, p24). A 2014 report from the NYC Department of Transportation (DoT) found when some traffic lanes were converted to protected bike lanes travel times for car traffic remained steady or improved; Eighth Avenue was 14% faster for example, so bike lanes need not be detrimental to car traffic (David, 2016).

Bikeshare and cycle-hire schemes have become popular recently and Milton Keynes saw the implementation of the Santander scheme with three-hundred bikes being brought in June 2016. However, after having a conversation with the mechanics (Cycle Saviours, a local social enterprise) who repair the bikes, I found that within six weeks of the scheme beginning over a third of the fleet were too damaged to be used. For the service to run efficiently that number needs to be reduced to 10% inoperable and have circa 500 bikes (Boffey and Lloyd, 2016). “Bikeshare programs work best at scale and density, and are a low-tech, low-cost solution that’s available right now” (Lindsey, 2016). “Not only are bikeshares achieving statistically measurable improvements in traffic congestion and public health, they’re doing so at negligible cost to taxpayers” (David, 2016). A report on London’s ‘Boris-bike’ scheme found injury rates for bikeshare users to be lower than those for regular cyclists (David, 2016). Maybe this is due to the ‘official’ nature of the bikeshare scheme, or because the weighty bikes used cannot nip in between traffic, or simply down to users being casual riders and not wearing helmets. A 2007 study conducted by Ian Walker (2007) from the University of Bath, appropriately titled *Drivers overtaking bicyclists* demonstrated drivers giving wider berths to cyclists not wearing helmets.

According to Helen Pidd (2018) £500m is to be spent to fund safe cycling and walking networks in Greater Manchester. The mayor Andy Burnham has allocated a substantial proportion of the government’s *Transforming Cities fund* to the project’s first four years, bringing the total spend on cycling and walking in Greater Manchester to around £15 per head which matches the funding seen in cycling meccas such as Copenhagen and Amsterdam, according to the project’s cycling commissioner Chris Boardman.

### Electric Vehicles

Electric vehicles (EVs) are the future, that much is certain, due to the rapidly increasing market share they hold. When electric motors, which operate at 90-95% efficiency, are compared with conventional petrol motors running between 17 to 21% efficiency, and with lithium-ion battery costs reducing by 16% per year, it makes pure economic sense to back electric cars. There are approximately 2000 moving parts for internal combustion engines and only 18 moving parts in EV cars. Fewer moving parts means less maintenance, less wear and less cost to the driver (Seba, 2016). However, new EVs are still being released to the market with sub-200 mile range (320km), supposedly the threshold at which ‘range-anxiety’ ceases to be an issue. This may change as more companies fight to compete in the growing EV market and as Tesla releases its model 3 – an affordable, mass-produced electric car. There seems to be more happening behind the scenes as cities aim to reduce pollution figures across Europe, mentioned previously: “Regulations due to be published before the end of the year state that by 2023, 10% of parking spaces in new buildings in the EU zone will need recharging facilities. The EU initiative is intended to lay the infrastructure for the sort of electric car boom envisaged by Norway and the Netherlands, which both plan to completely phase out vehicles with diesel engines by 2025” (Neslen, 2016).

When regulations regarding emissions start to bite, ultimately all cars will become electric. In France, all electricity is low carbon and therefore 'green' but Britain still has a way to go in this respect. On-board computers are improving all the time and vehicles are becoming more intelligent, in terms of reading road signs and markings and satnav technology is becoming more accurate: global positioning systems (GPS) do suffer from local obstacles such as street canyons where satellite signals are distorted. But even here the future looks secure when the satellite 'constellation' expands to improve resolution ten-fold (European Commission, 2016). Software upgrades will also ensure this intelligence improves driving safety.

### Autonomous Vehicles (AVs)

The International Society of Automotive Engineers (SAE, 2014) categorised the six levels of automation widely used today:

- \* Level 0 – No automation at all.
- \* Levels 1 & 2 – Partially-automated features; steering assistance, automated braking crash prevention etc.
- \* Level 3 – The car is actively monitoring its surroundings but a driver is still necessary.
- \* Level 4 – Technically fully autonomous but may require some intervention from the driver in specific situations.
- \* Level 5 – Autonomy expects performance that is equal to, if not better than, that of a human driver, "including extreme environments like dirt roads" (Reese, 2017).

As of October 2016 all Tesla cars coming off the production line have level 5 capable hardware built in (Tesla, 2016). This means Tesla can run the autonomous software in 'shadow' mode evaluating what the car would have done in a given situation, versus the driver. They can then issue over-the-air firmware updates to turn the autonomous features on. In my opinion there are three variations of the autonomous mobility model:

- 1) Buy a Tesla and send it out to make money during the day – privately-owned car-sharing.
- 2) A private car company runs a fleet of autonomous car 'taxis' similar to today's Uber, Lyft etc.
- 3) A transport company, awarded a contract by the council, runs a fleet of driverless pods and buses.

Model 1 is perhaps the easiest route for the implementation of car-sharing and AVs as the traditional notion of private car ownership does not change. Elon Musk, Tesla CEO, believes the transition to autonomous vehicles will happen "through a network of private car owners renting their vehicles to others". However, John Zimmer (2016), co-founder and president of Lyft, believes "it will be both more practical and appealing to access autonomous vehicles when they are part of Lyft's networked fleet". If model 1 were used then the overall car fleet may decrease, but not to the same extent as models 2 and 3. If these models are adopted then the UK may see the overall

number of cars shrink by about 80%, emissions decrease by about 80%, and there should be 90% fewer road accidents (Seba, 2016; BCG, 2016).

Social trends, as much as technological ones, point the way to a future that is not only driverless, but potentially ownerless as well. The rise of ride-sharing apps such as Uber and Lyft, and the fact that car ownership is no longer seen as a rite of passage, all point to radically different types of road use. These trends are already underpinning the rise of new on-demand transport models such as Mobility-as-a-Service (MaaS) – *MaaS (Atkins, 2016)*

"Technology has redefined entire industries around a simple reality: you no longer need to own a product to enjoy its benefits" – viz Netflix, Spotify, Apple music, Lyft, Uber – and eventually, we'll look at car ownership in much the same way (Zimmer, 2016). The principal reasons are reduced cost and ease-of-use. When EVs, self-driving technology and car sharing platforms come together we have the potential to decrease costs whilst retaining the same level of service (Seba, 2016).

### Potential secondary benefits of AVs

The principal knock-on effect, if mobility models 2 and 3 become the commonplace, is the acquisition of space. If cars go from being parked for over 90% of the time to driving an equivalent amount of time, as Tony Seba (2016) predicts, then we could end up with an inordinate amount of free space within our cities. A study in the Hague showed AVs and MaaS could create ± 210 square kms of free space, mostly from decreases in parking areas. However, freeing up this space could require an initial investment of around €125 million (Tauber, 2017, p6).

Eventually, we'll be able to turn parking lots back into parks. We'll be able to shrink streets, expand sidewalks, and make room for more pedestrians. That means more local shops and small businesses, more shared spaces, and more vibrant communities. This translates to better cities – and better lives – for people all over the world – *John Zimmer, President of Lyft (2016)*

To summarise, streets could be narrowed, car-parking reduced, land redeveloped, bike lanes added, and car-sharing could induce higher vehicle occupancy rates. The largest benefit brought on by MaaS would be urban density changes. "Transport will be hit by a tsunami wave of change on a par with the digital revolution in communications. Soon, commuters will be able to purchase mobility plans, as they would a cellphone service, at rates according to their needs" – Sampo Hietanen, CEO MaaS Finland (TSC, 2016 B, p3). Fig. 1 shows some visualisations from a Dutch national TV programme *Onzichtbaar Nederland* (VPRO, 2016) revealing potential changes in transport infrastructure if AVs were to become commonplace. Notice the reduced carriage width, swarming vehicles bumper-to-bumper, reduced parking, road markings, noise shields, traffic lights; increased green infrastructure and wider bike lanes.

### What sort of vehicle will we see?

There are three distinct forms of AV transport, the first being most similar to a bus and featured in fig. 2. In fig. 3 (a) the vehicle can carry up to 12

passengers, and features 'IBM Watson', a voice interface that will "allow passengers to interact conversationally" with the bus (IBM, 2016). The designers say "as long as you have a smartphone, wherever you are is a bus stop. And wherever you're going is the next stop" (LM, 2016). The bus is currently being tested on public roads in Las Vegas and there are similar vehicle tests being conducted in France, UAE, Malaysia and Australia (Beall, 2017). In order to keep 'buses' as a relevant mode of transport they must be fundamentally redesigned allowing smaller, self-driving buses to arrive every minute instead of every half an hour (Van Der Poel, 2017).

The second most distinct form is that of the driverless pod. The one shown in



▲  
Onzichtbaar Nederland  
VPRO screen-shots

Fig. 1 Potential infrastructure changes

fig 3 (b) is currently being tested in Milton Keynes with similar tests around the UK. They are equivalent to Google's two-person autonomous car but are designed for much slower speeds and a maximum of 15 mph. They are designed principally for pedestrian areas but can be used elsewhere around the city as part of 'last mile' services (TSC, 2017). The third form is the driverless car. Fig. 3 (c) is the Mercedes-Benz F105 autonomous concept car, featuring a heavily-swept back windscreen and seats which rotate round to provide more convivial journeys. In theory, with all three transport forms, crashes are far less likely to occur. Previous crash safety requirements could be relaxed, including crumple-zones, air-bags and seat belts, thus providing more space within the vehicle. This reality would only come true



▲  
Onzichtbaar Nederland  
VPRO screen-shots

Fig. 2 Autonomous bus transport

Olli Bus with IBM Watson



Driverless pods in front of Milton Keynes station



Mercedes-Benz F105 autonomous 2015 concept car



Mercedes-Benz F105 interior with swivel seats



if all the cars on the road were autonomous, or running on their own closed network. Whilst new forms of transport are technologically exciting Michèl Annink (2017) believes all forms of transport, walking, buses and bicycles, will continue to exist in parallel as they serve different uses and different audiences. Björn Siesjö postulates that “the future city will need diversified mobility with high-capacity rail, trunk road transit, autonomous vehicles of different sizes, and sufficient space for attractive pedestrian and bicycle mobility” (Siesjö, 2017). So whilst new attractive forms of technology are being developed the new city may not be so radical after all.

### What about density?

A report by the Commission for Architecture and the Built Environment (CABE, 2007) suggested densities should be between 50 to 100 DPH (dwellings per hectare) in the town centre, and between 50 to 65 DPH along transport corridors for new eco-towns (RUDI, nd). The UK charity Friends of the Earth proposes 69 DPH as a sustainable urban density (Layard et al (eds), 2001, cited in Wheeler, 2004, p192). The idea is simple; increasing density reduces walking distances, reduces car ownership/use, and can shift car journeys to walking ones, sometimes drastically (Farr, 2008, p44).

The previously stated statistic that Milton Keynes commuters are 40% less likely to use mass-transit shows how post-war and 80s/90s developments, often built at approximately 20 DPH, limit the provision for public transport in Milton Keynes, and to some extent the rest of the UK (RIBA, 2009, p9; PST, nd). Naturally due to the road structure of Milton Keynes a car would be preferable, but residents with limited incomes, and those wishing to lead more sustainable, healthier lives, are limited by the low density developments.

The basic point is that you need density to support public transit. In all cities, once you get above a certain density two things happen. First, you get less travel by mechanical means, which is another way of saying you get more people walking and biking; and second, you get a decrease in trips by auto and an increase in trips by transit – *Jeffrey Zupan senior fellow for transportation at Regional Plan Association, US (Owen, D. 2004 cited in Thwaites et al, 2007, p89)*

Density can often be seen as a dirty word. Perhaps people think their garden city suburbs are under attack from central government and greedy developers. Trendy terms like *new urbanism*, *walkability* and *smart growth* have become widely used by designers and planners as a result. It is true uncontrolled density creates issues. However, Jane Jacobs (1992, p205) separates density from overcrowding: “high densities means large numbers of dwellings per acre and overcrowding means too many people in a dwelling for the number of rooms it contains”. It can be easy to see Victorian slums and 1900s council flats as being the vision of what high-density proposals entail, but this is simply not true. Advances in clean technology, people’s desire for privacy and planning laws should all help mitigate against poorly designed, uncontrolled densification. The inability to get away from people, noise and pollution is the very antithesis of the Garden City movement.

Fig. 3 (a,b,c and d) Driverless buses, cars and pods

“We need to connect, but we also need to retreat. We benefit from the conveniences of proximity, but these conveniences can come with the price of overstimulation and crowding”. However, “crowding is a problem of perception, and it is a problem of design that can be addressed, at least in part by understanding the subtle physics of sociability ... We like open views, but we also like to feel safe – prospect and refuge” (Montgomery, 2015, pp108, 114, 129).

As land values increase it makes economic sense to develop land efficiently and with a variety of income sources: retail, office and residential. AV cars, as we have seen earlier, have the potential to free up expensive, in-demand plots of land. Redundant car parks, garages and driveways could all be developed into new homes, business, parks and retail space theoretically solving the housing crises.

“There is constant pressure on further urbanisation and as cars flee the streets, a lot of public space opens up for all sorts of use” (Van Der Poel, 2017). The flow-chart in fig. 4 gives a best case scenario of how AV cars could kick-start changes in cities. Not only do walkable neighbourhoods provide financial incentives with decreased mobility costs, they can provide us with more disposable time. With the right planning policies (increased density, live-work units, mixed-use developments, home-working and local employment policies) commutes could be reduced too. This would decrease

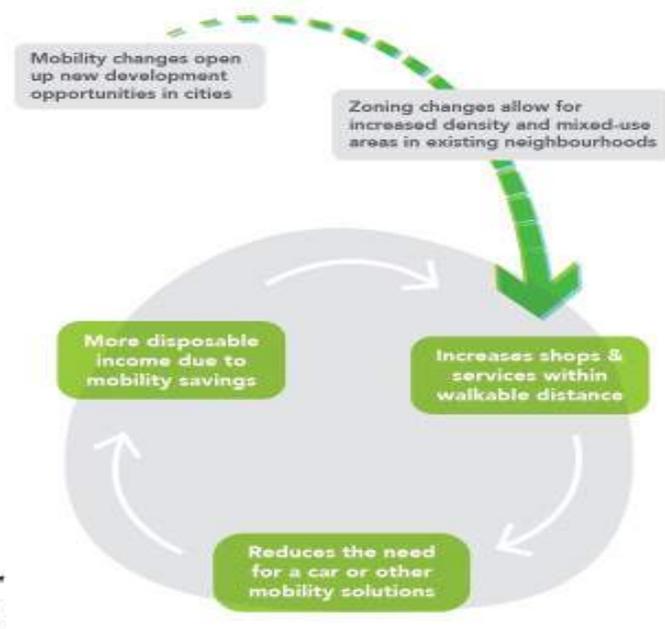


Fig. 4 AV kickstarting city changes

mobility requirements, infrastructure costs, associated pollutants and health-related issues. A study in Portland, USA, found customers arriving by modes other than cars are more competitive consumers, spending similar amounts or more, on average, than their counterparts using automobiles. They are also more frequent patrons (Clifton et al, 2012, p2). MaaS can kickstart walkable neighbourhood changes since...

...Most analysts believe this type of scenario will be implemented in urban environments first, and looking at the developments at the moment, I wouldn't be surprised if it would happen in places like China and India first (ie at scale within the next 10 years), followed by other urban environments in both Western and developing worlds within the next 20 years – *Michèl Annink (2017)*.

### Problems with AV mobility

The first issue is cost; even a small fleet of 100,000 vehicles at £40,000 per unit amounts to £4 billion, which has to be paid by someone (Keller, 2016). Mobility model 1 (p14) would initially help with a transfer to AVs by integrating private AVs into ride-share services. A secondary issue involves the estimated 1.2 billion people around the world who earn a living by driving; what are they going to do? (Llewellyn, 2017). Naturally jobs in the autonomous sector (AV manufacturing, servicing etc.) will grow, but the fundamental reason autonomy exists is to reduce costs. Those reductions come from reducing the human workforce, and human error.

Cab, tube and bus drivers will only be at the frontline of the transport industry purge. Driverless technologies will also decimate any industries that rely on the human element in transportation. With human error removed, driverless cars will require less maintenance – meaning fewer mechanics. Like the factories that built them, driverless trucks will run cheaper with no human at the wheel, meaning an end to truckers. Rubbish collection will be automated. Fewer cars mean fewer roads, lowering the need for construction workers. And if the public makes the switch from owning to effectively renting cars, what would be the point of car showrooms or expensive marketing campaigns? If we no longer drive for fun or see cars as status symbols, what would be the point of designing sleek new models at all? – *Rich Wordsworth (2016)*

Second, where do AV cars charge? Any AV ride-share service will see charging as downtime, which must be reduced if cars are going to be driving all day long. If we increase solar capacity and introduce new solar panel covered roads, AV cars could charge during solar peak. They could, in theory, charge directly from roads whilst driving, using induction loops placed beneath the surface, but these technologies have yet to be tested. If cheap electricity at solar peak couldn't be used then AVs will need to use less prolific and potentially polluting forms of energy.

The increase in mobility and decrease in cost will result in more driving, more sprawl and less urbanity unless governments take a leading role in stopping that (Speck, 2017). According to Litman (2017, p3) “traffic congestion tends to maintain a self-limiting equilibrium: once congestion becomes a problem it discourages further growth in peak-period travel”. As AV cars can increase road-use efficiencies by swarming (bumper-to-bumper) and prevent rolling roadblocks, they essentially provide the same benefits as road widening projects. This increases throughput, potentially generating

and inducing increasing journeys until the congestion equilibrium is restored. “The tendency in this case will be towards *more* driving lanes being needed, which means that governments will be dangerously tempted to re-dedicate parking lanes to additional driving lanes rather than to other modes or uses” (Speck, 2017).

“If you think about it, the current generation of driverless cars is trying to earn its way into a traffic grid made by, and for, humans. But what would happen when whole cities become driverless? Would we need traffic lights? Would we need lanes? How about speed limits? When all cars are driverless and connected, everything is predictable” (Kabbaj, 2016). How will AV traffic interact with pedestrians and bicycle traffic, and will we need to separate these types of traffic to make mobility more efficient and safer? Speck argues that “autonomous vehicles are the right answer to the wrong question”, and when you consider bicycles can do nearly 1,600 miles per gallon, take up less space, promote healthier lifestyles and reduce the burden on health services, why are we still trying to solve mobility with untried technologies? (Sustrans et al, 2009, p24). We know bikes work, so why not make better use of them?

### Accessibility vs mobility?

We have this strange fixation that fast movement always equals progress – *David Engwicht cited in Walljasper & Fried (2007, p55)*

It is safe to say our obsession with speed has crippled true mobility today. People wish to travel faster and farther, but to do so requires machinery and extortionate infrastructure costs. This infrastructure in turn gets in the way of everyday living by separating neighbourhoods from each other, decreasing walkability and increasing travel times for day-to-day living. It's these new forms of faster transport that cause such problems. Cars themselves are not an issue, but when we demand that they do 30/40/50 mph in urban areas then we begin to have problems. After all, a bypass was never needed when traffic was on horse and foot.

### Outcomes: what should you take away from this article?

*Current mobility* – Driving is the most pervading form of transport today with almost 70% of commuters in Milton Keynes travelling by car, compared to just over 7% undertaking the journey by walking. The number of trips made on foot has fallen by almost one third since 1995/97. The average 2015 UK commute lasted 57 minutes, a far cry from the 16 minutes said to be the optimum commute duration and 3.7 million workers across the UK now travel for two hours, or longer, every weekday. Commuters have lower life satisfaction, lower levels of happiness, higher anxiety levels, experience higher blood pressure, have more headaches and tend to be grumpier when they arrive at their destination. The cars we drive are expensive and cost us around £6000 per annum, not including all the other subsidies that we all have to pay for – the 168,209 road accident casualties in 2015, the cost

of police, fire, ambulance, maintenance and NHS services, as well as the indirect cost of parking through the hidden costs of food and merchandise, the environmental costs including air pollution and associated health implications, road transit greenhouse emissions (of which cars produce a third), and finally the carbon emissions from the 31 million cars we drive in the first place, which spend roughly 90% of their lives parked. Then we build and widen roads, triggering *more* traffic and creating increasing supplementary car-orientated, sprawl-development in an endless cycle. This is why our current model of mobility is broken.

Automobiles are conveniently tagged as the villains responsible for the ills of cities and the disappointments and futilities of city planning. But the destructive effects of automobiles are much less the cause than a symptom of our incompetence at city building – *Jane Jacobs, The Death and Life of Great American Cities (1992, p7)*

*Future mobility* – With clean air zones being enacted across the country, the EU imposing restrictions of 40% on greenhouse gas emissions by 2030 and some countries banning the outright sale of diesel cars in the near future, we are seeing companies racing to develop EV and AV cars. Level 5 autonomous cars are coming and we *must* plan for them today. Due to AV efficiencies road capacity will increase. However, AVs fundamentally reduce mobility costs which could induce demand and generate traffic. If the efficiencies do not nullify the increased/induced demand then we could end up with more traffic on UK roads.

Trillions of dollars are being invested directly, and indirectly, into EV and AV markets across the world and change will be inevitable. Developers could argue that car parks will become redundant, as better use of land could be made if it were not required. As a by-product this forces the uptake of AVs or ride-share schemes to be quicker and reduces private car ownership. Higher density neighbourhoods could be created in this way potentially limiting negative effects of AVs. However, this would only happen if planning policies and mixed-use/fine-grain zoning policies are relaxed or modified prior to AV uptake.

Bikeshare schemes should be rolled out across cities, with a suitable number of bikes and stations to make them a viable last mile alternative, with payment systems standardised to promote ease of use. Cyclists are proven to spend the same or more money than those who travel by car; they will also visit more often. Bike lanes are cheap and create less wear and tear on the roads, compared to vehicular traffic. This saves money for councils and can even speed up traffic. The most important reason for developing safe and integrated cycle and walking infrastructure is to promote independence and freedom; it can help with social mobility as a social leveller and can eliminate sedentary lifestyles if combined with mixed-use zoning. Further it reduces NHS costs associated with such sedentary, unhealthy lifestyles.

*Conclusion* – Automated vehicles have the potential to radically alter our cities, but not necessarily for the better. If AV cars reduce the need for car

parks then mixed-use sustainable developments, built on fine-grain zoning, can allow walkable, bike-able neighbourhoods with enough principal access that AVs are no longer required. If the transition is not managed correctly then AVs will induce demand, and we may see a secondary mass exodus from the city with intensifying sprawl development. It is imperative that access and density are at the heart of all retrofits and future plans, followed closely by walking and biking initiatives.

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# **MY PHILOSOPHY AND PRACTICE OF LANDSCAPE ARCHITECTURE**

## **Bodfan Gruffydd**

### **What is landscape architecture?**

‘...a proper adaptation of the several parts to the whole; and that whole to the character, situation and circumstance of the place’

‘...that disposition of objects, which, by a partial concealment, excites and nourishes curiosity’

‘...to lead the eye to each object by easy gradation without flutter, confusion or perplexity’

These sources of pleasure in landscape gardening are among those offered by Humphrey Repton in his *Sketches and Hints* (1795). They summarise the chief criteria which have determined the art of landscape design following the work of William Kent and the poets of the eighteenth century.

### **THE ETHOS OF LANDSCAPE DESIGN**

Earth, air, fire and water, birds, beasts, flowers and man combine in the holistic approach to landscape architecture.

In writing this section I find myself referring to the definition of pragmatism in the Oxford English Dictionary: “a method of treating history in which the phenomena are considered with special reference to their causes, antecedent conditions, and results and their practical lessons.”

This is exactly how a landscape architect’s mind should work, always seeking cause and effect in landscape problems and looking for practical solutions. These are the functional aspects which must be considered for the lasting effect of landscape design to be evident; but they are no more than the permanent and solid base on which the beauty of a scheme is built up, for beauty must combine with use for the full aesthetic and therapeutic values to be effective.

### **I THE CONCEPT**

*Visual delight is but part, though a very important part, of the art of landscape design.*

It is the final visual result which emerges from the synthesis of natural

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elements, organic (plants) and inorganic (rocks, minerals, water), with the functional needs of the birds, beasts and flowers and including man, whose delight it is to share; but because most of the constituents of landscape are components of nature, constantly changing, not only seasonally but in themselves, and because the denizens of landscape are also part of nature and also changing and developing, a broad appreciation of nature's wildlife and man's more sophisticated living ways is called for in the designer.

#### **a) The evolutionary basis of landscape development**

Landscape architecture, of which designing is part, concerns land forms, water and flora and fauna; it embraces a knowledge of the shapes which the earth assumes, the rocks, soils, and waters that cover it, the plants and animals, including man, that inhabit it. These colonists – plants and animals – mutually evolve towards a biological balance by the development of species over aeons of time as a result of natural selection and survival of the fittest. It is a continuous and relentless process in the formation of new forms of life each of which must win a place, and keep it, in the natural balance to survive.

In this natural evolution of the world, man is the great interferer, for he has the power to devastate, even to obliterate, significant areas of the earth's surface as well as its surrounding atmosphere. Until the advent of steam and the internal combustion engine man's activities were limited to what could be done with hand tools and the muscular power of horses, elephants and the like and the destructive use of fire; his living conditions were determined by whatever raw materials might be available in his own district; before the advent of Board Schools in 1870, formal education was limited to a lucky few and most people lived out their lives and died in the parish of their birth; beyond those boundaries few ventured.

In the circumstances men and women fitted into the natural biological balance; even in numbers mankind did not overwhelm the world around, as population growth was limited by the same natural processes as applied also to the other denizens of the open lands and forests. Even the feudal lords, who could exercise great influence in the matter of mediaeval land enclosures, clearance of forest for charcoal and shipbuilding etc, could only act within the same limits of capacity of man and horse power.

Man's social development also was limited by disease – plagues and the Black Death – and by lack of schooling and communicated knowledge, even his nature and ways of thought were conditioned by the climate and physical factors of the place of his birth; but this condition of man as part of nature quickly changed as discoveries of the nineteenth century, coupled with land reclamation, forest clearance, further enclosure, and increasing population resulting from improved health and living standards, outpaced the rhythm of the evolutionary process.

Swiftly, the discoveries of modern science and accompanying inventions made the wider world one's parish. People began to move about very quickly and to herd into industrial communities often into squalid conditions; to lose contact with their friends and their familiar ambience and to be prey to the promoters of modern materialism. This is the shock men and women, whose nature has taken thousands of years to form, now have to face, barely 200 years after the industrial revolution which precipitated their movement from the land. I am reminded of a drawing in William Hendrik Van Loon's *Story of Mankind* (1921) of a great granite mountain to which a little bird came every year to sharpen its beak with the caption "when the mountain has thus been worn away, one day of eternity will have passed". Now the bird is replaced by the bulldozer. As the inheritors of this marvellous world we live in it behoves us to be humble, to understand properly the power we now have to disrupt the evolution of nature's balance and even to destroy our environment.

#### **b) The interlocking of earth, plants, animals and man**

People and animals are also part of the ecology, and here we come to the functional aspects of landscape design. The natural vegetation of Britain is grass and trees, known as the climax vegetation, that is to say trees wherever soil and climate allow their growth and grass elsewhere – on heath and downland, where grazing animals or exposure above the tree line on mountains or on the sea coast inhibit the growth of trees; but where bushes may survive.

This covering of wood and grass land has, of course, been modified by man's activities in clearing forest for agriculture, charcoal and timber, in the past; though the natural balance was coincidentally assisted by the planting of hedgerows to shelter and contain stock and to provide hedgerow timber for farm and domestic use. Woods and copses were also planted for the preservation of game, with coppice as a rotation to provide farm hurdles and faggots for cooking in the open hearths of the houses. The pattern of woods, shelter belts and hedges, which spread over the land, created the rural aesthetic we so much admire and wish to preserve today. The more recent destruction of these features, in the scramble to extract more from the land by using ever larger machines by ever fewer men, must be arrested if Britain is to retain its traditional rural beauty. We must be careful to avoid the tragedy of those lost villages and people turned off the land.

While the higher land in upland Britain has been largely abandoned, reverting now to grass and bracken, the use of more powerful farm machinery elsewhere has allowed the cultivation of ever steeper slopes, resulting in the erosion of topsoil, washed down by rain. This is particularly noticeable on downland where but a thin layer of top-soil overlies the chalk, which can now be seen exposed to the air. With the development of chemical fertilisers, moreover, it has been possible for corn and other arable crops to be grown on land more naturally suited to grazing. This is serious because the resulting loss of topsoil inevitably leads to sterility requiring perhaps

a millennium for its restoration. The practice of converting every possible acre to arable crops dates from the Second World War when the country faced starvation; in such circumstances no doubt justifiable as a temporary expedient to be discontinued as soon as the crisis passed. Topsoil is the most valuable asset of the land, at all times to be protected and conserved.

Soil structure and fertility depends on ploughing back bulky organic matter, like farmyard manure, well composted with straw, turf or a green crop (green manuring) on a regular basis. These constituents rot to form humus which helps the soil to retain moisture, and were the basis of crop rotations, worked out since the eighteenth century to maintain the health and viability of farm land. Animals used to be bedded on straw during the colder months of the year; the practice was labour intensive; now the animals are housed instead in covered yards, much reducing the use of urine-absorbent straw, and their manure spread on the fields in the form of slurry, which does not replace the humus lost through the sale of crops of the land. Now chemical fertilisers are used to provide higher yields. The fertilisers dissolve in the soil water which quickly drains away because of the lack of humus to hold them (like a sponge). Slow-release fertilisers are available and generally satisfactory but these are expensive. The result is excessive nitrates and phosphates (plant foods) draining off the land, polluting rivers and underground aquifers and, in turn, our drinking water – we even suffer similar pollution from human sewage, notably in inland waters, like the Broads.

The ecological relationships are extremely important. Man has had to work within the limitations imposed by earth, climate, the soil and flora and fauna in the process of subjugating the wild places to his requirements, and, having achieved his will, must constantly and continuously curb the vigorous re-assertion of nature. This is particularly noticeable in the British Isles where abundant rainfall coupled with a temperate climate favour plant growth at all seasons of the year.

Man's activities in disciplining nature are discernible since early mediaeval times, when woodland was felled and clearings opened up for grazing animals and for cultivation, accelerated by the enclosure of open fields in the 16th century, and again in the 18th and 19th centuries. Hedgerows with hedgerow trees were planted and tree clumps and shelter belts of trees later brought into use, leading to the parkland aesthetic so much admired in our countryside today; but the trees and bushes used were all indigenous, native to the place. With the exception of the limited introduction of exotics since the 16th century only native species of trees and bushes were available for planting and replanting so that suitable ecological choice was ensured with beneficial results in establishment and growth. This achieved a homogenous unity with the land in visual comprehensiveness, echoed in the vernacular of buildings in estate, farm and village before the costs of transport became cheap and easy, allowing the movement of plants and building materials across local and regional boundaries. For man it ensured continuity of his

thoughts, habits and way of life, a familiarity with his ambience, a set of known factors in which and with which he would, albeit subconsciously, be influenced in his judgements and actions – an umbilical cord uniting his persona in the surroundings of his life – man still part of nature; albeit with continuing poverty and starvation in hard winters, high infant mortality and low life expectancy.

We are now witnessing a sudden break in the evolutionary cycle of man with nature which has important morphological and physiological implications for mankind and for the natural world, which, increasingly alas, we should refrain from considering as separate components. What we must accept, however, is that with the increasing sophistication of man's ways must go recognition of the vital necessity to allow the evolution of the biological balance of the natural world to pursue its way without avoidable interference. Only in this way can mankind justify and even ensure its existence on earth.

### **c) The botanical factor – ecological and visual relationships**

During the last 100 years or so the country has been flooded with exotics from all over the world; many of these trees and shrubs may thrive to the extent of suppressing the native flora (*Rhododentron ponticum*, for example) or the more tender ones may almost thrive in our kind climate with the ever-present danger of ruining the naturally wild beauty of the countryside. Mistakes have been made in blanket-planting forests of conifers in monoculture; that is to say in large areas of a single species of tree, which tends to suppress undergrowth and consequently wildlife. In due course areas are clear-felled; because there is no undergrowth topsoil is washed away down the hillsides, causing flooding and the site becomes a sterile eyesore until new planting is re-established, as witness considerable areas of our National Forests, planted between the wars, with the ubiquitous Sitka spruce and other unwelcome foreigners. Only since the war are our foresters realising the advantages of cultivating mixed woodland with selective felling and natural regeneration, coincidentally saving the cost of expensive replanting and in this way restoring the natural ecology of plant succession with returning wildlife.

After a lifetime of familiarity, we still abhor the regimented blocks of foreign conifers, planted in line, their boundaries drawn without regard to the contours or form of the land. They are visually alien to our inherited culture which gives point to their ecological unsuitability; they create a landscape of their own, which may be all very well as such in areas lacking topographical distinction; but totally unacceptable in districts of inherent natural beauty, where their foreignness can only jar on the eye.

So we find visual disharmony matching ecological unsuitability in the constituents of landscape design. It is a sobering lesson for all concerned with forestry and planting in open country. With the best intentions, planning approvals to new development – buildings, gravel pits etc – in the

countryside may be accompanied by conditions to plant trees as a screen. All too often, *Cupressocyparis leylandii* (Leyland cypress) is chosen for its rapid growth, evergreen foliage and comparative hardiness, which draws attention by its sheer unsuitable 'foreignness' to the very development it is desired to conceal; whereas the same developments, properly sited and well designed, with planting in character with the site, could even add distinction to the rural scene. The Ministry of Agriculture, the grant-aider of many farm improvements, should pay a great deal more attention to the accepted good principles of landscape design and so make some contribution to the beauty of the countryside, as it spends taxpayers' money, as the Forestry Commission has done by the appointment of Dame Sylvia Crowe and her successors as consultants (on the design of forests).

As has been observed, the vegetation of Britain has slowly and naturally evolved according to climate and soil type and the biological influences accompanying fauna and, later, man – bare mountain tops, open heathland, forests and grassland and sea coasts. These are the categories of landscape we wish to protect for today and for the future not only for their aesthetic and recreational value but, also for their functions as reservoirs of wildlife from which the biological controls can continue to exercise their influence in the evolutionary process. So we designate National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs) for this special purpose. In doing so, however, wider visual, topographical ambiances are not commonly observed. Failure in this respect misses the opportunity to 'make the best of the site' in that the beauty and ecological importance of the landscape surrounding it are not coincidentally protected. This is of critical importance to the health of the Nature Reserve in question because its surroundings compose the immediate catchment area for the welfare of its denizens, which can be critically affected by changes in micro-climate which could result, for example, from the removal or planting of hedges, trees or shelter belts; while the visual ambience is a vital part of accompanying landscape character. This would be less likely to occur if topographical definition were included in the original assessment of site advantage, thus bringing in the visual element of excellence and ensuring continuity of the ecological/visual character of the ambience concerned.

#### **d) Ambience or landscape locality**

The elements of landscape group themselves within the ambience of vision of the unaided human eye, within defined skylines as *cwms* (combes), valleys, estuaries, lakes, lochs, hills, or more or less flat areas of seemingly infinite extent. Within these areas there would, normally and naturally, be vegetative congruity and coherence, a factor second only to topographical distinction in securing the unique beauty and appropriateness of the ambience concerned. It is, therefore, doubly important to recognise and to respect topographical features together with the ecological relationships of any site being considered for protection or designed change.

This unity, this spirit of the place, this *genius loci* (cf Uvedale Price and

his 18th century friends) as it was termed before biological factors as such were recognised, is of the essence of satisfactory landscape conservation. Ideally it should form the basis of definition of National Parks, Areas of Outstanding Natural Beauty (AONBs) and Conservation Areas etc, just as it does for gardens, parks and urban conservation areas; in landscape terms, these would be areas where the biological balance would have the best opportunity to continue to evolve its natural, or as near natural, way as possible. For example, in the Highlands of Scotland, deer, freed of natural predators, are over-multiplying to the extent of destroying vegetation, with its concomitant wildlife, to the prejudice of natural beauty. Man must step in to control deer numbers by culling them – applying management methods to assist the natural regeneration of heather for the return of wild life – golden eagles, pine martens, grouse – in the restoration of the natural biological balance in these areas. In Wales goats and in parts of Africa elephants are coming in for the same treatment; while man, with his undisciplined dogs, must also be controlled on downs and upland farms, where the viability of sheep farming is now threatened along with the loss of native flowers and wildlife. It must be clearly understood that it is because of man's past and present over-exploitation of the natural resource that such conservation measures are now essential.

Recent understanding of the inter-relationship of animals, plants and insects in their natural environment suggests the need for radical change in the choice, delineation and management of specific areas, needed for their healthy growth and continuation. Once the ecological syndrome is recognised, the importance of linking the former with the latter becomes paramount – natural beauty linked with biological health becomes the watchword. New meaning is attached to the consideration of National Parks, AONBs, Nature Reserves, SSSIs, Conservation Areas and so on. No longer should the boundaries of these areas be decided subjectively and arbitrarily along local authority or constituency boundaries; but rather as the delineation of areas of comprehensive merit, according to specific biological advantage within ambiances of natural beauty.

In these areas, the protection of natural beauty would go hand in hand with schemes for the conservation of wildlife and the essential wellbeing of the farming community, on which successful management of the whole joint resource ultimately depends. Areas of special landscape beauty and historical significance, with supporting wildlife, would be identified within their own visual ambience which would incorporate the economic farming element, advised and grant-aided, to develop the same methods which have been traditionally employed to build up the local vernacular – the farmer being a vital tool in the management of his own area of outstanding landscape beauty.

Rationalisation of boundaries is essential for all these special areas of beauty and wildlife conservation. This would not necessarily involve general interference with the whole land area of National Parks; for example it

could mean the separate definition of areas for special attention within them. These would be areas within their defined visual ambience which would receive the benefit of the selected management policies mentioned – Historic Areas within the National Park.

It would be more satisfactory to have fewer limited areas of unique natural beauty (as defined in earlier paragraphs) carefully nursed for their individual merit, as budgets could allow, than to continue with the disastrous sporadic spread of twentieth century suburban building through the National Parks, which so utterly destroy their natural beauty. Obviously it is labour intensive and expensive to build in the local vernacular style; but this is essential in order to preserve the integrity of landscape beauty, especially when it can be done in ways to allow rural life and skills to continue in harmony, to the economic benefit of the country.

All the areas of natural beauty and those for the conservation of wildlife should come under one authority, as National Parks and National Monuments etc do in North America. The land need not be owned by the State (as there); but it would be very much easier to coordinate management and food production in what are, almost without exception, areas of secondary agricultural importance but also of great recreational value. In all such cases vegetation should complement the ecology of that particular place.

Moving from the wilder areas of the country to those conditioned by man, we come to estate and farmland influenced by the functional requirements of agriculture, almost wherever the land is cultivable, with the hedgerows and shelter belts referred to earlier and with woods clothing the steeper slopes. Geomorphological features have determined the basic character of the various localities, further influenced by differing farming practice; but before the 17th century the vegetation would have been indigenous, with the exception of a few species introduced by the Romans or by birds, and established so long ago as now to be accepted as native. This is an extremely important fact to regard in the choice of tree species in agricultural and estate landscapes, as well as in pre-19th century parkland; in fact, in any area stamped with the quality of good and interesting landscape it is the shape of the land and the native trees and bushes which clothe it that has determined the unique character of the rural landscape of Britain and it is the continuing use and re-use of the same indigenous species that form the chain linking the past with the present with the future. New planting should always be sited to reflect and enhance the visual character of that particular ambience. Especially is this so in the case of motorways, which are extra large, continuous features in this country and usually out-of-scale with the landscape through which they pass. Motorways should not only be designed to match the changing topography but planted far beyond their boundaries if necessary, to complement the pattern of the topographical features in the surrounding landscape.

#### **e) Behaviour – sociological and psychological factors**

Nature's elements are tough, thriving as they do, where they do, by having won their ecological place in their habitat; but fatally vulnerable to foreign invaders – steel and bulldozers and predators – elm bark beetle disease, grey squirrels and man.

The predations of man may be unintentional; they are usually born of ignorance of the life processes of plants and their vulnerability, which is not surprising when it is remembered that thousands of city dwellers are still born and grow up in a world devoid of grass or trees; their behaviour is conditioned by their environment of stone, brick and hard surfaces. This leads to aspects of behaviour which must be taken into consideration, especially in the design of urban landscape.

Urban dwellers do not always understand nature's ways – that if left alone a rose will blossom again and again in successive years. They do not realise that if they trample shrubs they will probably be destroyed, or that playing continually on the same area of grass will wear it out. Living landscape elements are treated as if they were hard and indestructable. So the urban landscape must be designed primarily for use, to meet the inhabitants' behaviour and special provision made to protect fragile organic elements, so necessary to the balanced beauty of urban places.

Then there are sociological and psychological aspects which can be even more important in the formulation of satisfactory design solutions. Fundamentally man's feelings and habits have changed remarkably little over the centuries; in country towns and villages, the inhabitants frequently still live in mediaeval houses, albeit brought up to date with sanitation and services, and wish to continue to live in the same cosy and friendly way. When they are forced to leave by unimaginative economic change, they miss their round-the-corner shops, their church and pub, and are actually psychologically ill-equipped to cope with the relentless conformity and restlessness of modern cities – they have no village green for sport and leisure, no garden and no country walks at their back door, and perhaps, most important of all, few if any older friends or relatives beyond the generation gap, to whom to confide their troubles. They have lost the sense of identity with the place in which they live; the signposts have vanished and they have not been able to pick up happy occupations for their spare time or hobbies as counter-attractions to too-frequent boredom and the monotony of their work. This, again, is not surprising when one considers the lack of comprehensive thought in the planning and replanning of urban living areas and of work-place amenities.

In designing Harlow, its architect-planner, Frederick Gibberd, conceived the New Town as being composed of a series of villages (Housing Areas) each with corner shops, a community hall for social functions, allotments and play space for the children. He grouped several Housing Areas together to form a Neighbourhood with a Centre having two of each kind of shop (for

competition) , post office , bank , library, church, infant and junior schools, restaurants and service industries, all within walking distance of 'the village', in order to provide the opportunity for the new colonists to follow traditional patterns of life and behaviour in communities of human scale and size. I think the New Towns in Britain are a great success; when asked how I judge it, I say "surely by the happiness of the people who live in them". It is unfortunate that later governments halted this enlightened policy with the designation of Milton Keynes and instead has allowed un-coordinated, even sporadic development of housing *per se*, beyond comfortable distances of the social advantages of the connected town, thus exacerbating the difficulties of living and the problems of transport. Government should be tough with the developers of housing estates and insist on minimal facilities for social intercourse and economic living, less dependent on the use of motor cars to pursue their daily needs.

The weakness lies not in our planning laws but in the lack of resolve in their application. The underlying urge of all development is private profit, disciplined by what the purchaser, ie the public, will accept and competition is the control. Developing policy under the planning laws provides for direction and control of development; this gives local planning authorities the power to encourage growth in the best interest of the community. The developer needs planning approval and the planning committee has the power to lay down conditions to secure the desired result without expense to the community – but there must be support from Government Headquarters.

Psychiatrists and sociologists have, perforce, been studying the problems accompanying urban living in congested areas, and their advice as members of the teams planning the new and replanning the old is invaluable. These urban problems are extremely important to the role of the landscape architects for they, of all the design professions, are taught to consider every aspect of the ambience of the area they are working on. Architects design buildings, engineers design the roads and bridges, the drainage and water systems and other services, and planners co-ordinate demographic requirements in the planning infrastructure (the skeletal framework of planning requirements – birth, death, illness, education, transport, etc). All these disciplines affect landscape and townscape and the landscape architect's role is to consider each as it affects the sister disciplines and as they combine to compose the human environment and to prepare designs for landscapes for living in. The quality of life depends on securing the sort of environment in which people can do their work in comfort, without wasting time travelling, and spend their leisure hours in repose or play, free of the polluting noise and the restlessness of traffic; where they can be near friends to pursue shared interests and do not have to rush out into the wider countryside for regular exercise. We should be building more new towns and villages to free space in the old cities in order to redress the balance between man and nature, on which, ultimately, his sanity depends. Much undeveloped land or land awaiting reclamation in our old towns should be turned into parks and open spaces, instead of being built over.

#### f) Birds, beasts, flowers and man

As communities haphazardly developed beyond the scale of village life, the organic needs of the inhabitants have been neglected. The therapeutic importance of nearby nature is not generally understood so that towns have become sophisticated in the least desirable way. This has resulted in sociological and psychological problems for citizens; problems still not overcome by the passing of more recent planning laws. The need for rare open air in towns was recognised in the Garden City movement when imaginative industrialists built Bournville and Port Sunlight to provide good housing and healthy open-air conditions for their workers and Ebenezer Howard initiated Letchworth Garden City to create pleasant and practically convenient communities for human living, where there are parks and recreation grounds and trees, planted along the streets. One is reminded of flying over the prairies of North America where the human settlements come up like woods – urban areas – in the bare landscape, for the comfort of summer living depends very much on the welcome shade of trees.

In the hard urban environment of sophisticated artificiality, of tarmac-surfaced roads with coarse concrete kerbs and flimsily-built houses, which create something of their own unattractive vernacular, it is the organic elements in incidental spaces with grass, trees and shrubs and climbers, that humanise the environment. The trees give scale to the human habitations, act as a foil to the buildings and provide flowers in spring and shade in summer, cooling and humidifying the air. Every house should have its garden if British householders had their way, where native enthusiasm for gay flowers and all the latest horticultural hybrids can respond to loving care.

It is in the built-up areas and in the gardens that exotics rightfully come into their own; collected by plant hunters, who still comb the world for our horticultural pleasure, so that now we draw heavily on the infinitely varied choice of trees and shrubs available as a result of their expeditions. This is entirely appropriate for the man-made and artificialised urban landscape where there would not otherwise be a sufficiency of native species of ecologically suitable trees and shrubs available for what are often difficult conditions, hostile to plant growth; difficulties arising from disturbance of the soil profile during the construction period of putting up the buildings and laying down the underground service, however well specified and supervised on site these operations may be.

These activities can result in a change in soil structure if not of the soil itself, creating new and potentially different conditions for ecological re-establishment of plants. Conditions may be so changed as to require dry-soil plants, where moisture-lovers grew before the soil conditions were so altered.

The area may have become subjected to atmospheric pollution, which,

however mild, contributes a factor which will severely limit choice of plant species – the inevitable increase in local emissions of carbon dioxide from motor traffic, sulphur dioxide from nearby power stations and domestic boilers, the unnecessarily large quantities of salt the highway authorities put on roads, when there are other less polluting agents available; airborne salt in coastal areas, leaking gas mains etc; one whiff of ethylene is enough to kill a tree.

Such technical problems may not be unwelcome to landscape architects for they provide them with an extra challenge in pursuit of a design solution. It might concern an oil refinery. Oil refineries inevitably emit sulphur dioxide and there are few trees, especially evergreen trees native to Britain, except for holly, with any significant tolerance of this gas, in fact the most tolerant evergreen trees are Leyland's cypress and evergreen oak, both exotics. However if such vast and alien construction as an oil refinery is acceptable in planning terms, it is arguable that the inclusion of some alien trees could also be acceptable in the open countryside and this would undoubtedly ease the designer's problems.

Most trees and shrubs from abroad look what they are – exotic – alien in the British countryside, as indeed do most modern buildings which rarely complement the rural vernacular. Whereas the foreigners do not look so out of place in the built environment foreign plants complementing sophisticated architecture in the formation of urban character, as opposed to the analogy of vegetation matching topography, matching architectural vernacular in the aesthetic of the countryside.

#### **g) In open country**

We have considered the aesthetic unity of character in traditional British landscape, resting as it does on the geomorphological factors that determine ecological plant relationships, and we have touched on the outlandish effects of planting exotics in mediaeval landscapes, essentially pre-17th century, when they began to be introduced to Britain. Foreign trees may be seen from miles away in the open countryside – in Hampshire/Berkshire for example where the Duke planted his Wellingtonia avenue at Stratfield Saye, or in the wilds of Snowdonia where Victorian plantings stand up like a sore thumb in the mediaeval oak woods of Nant Gwynant. Upland farmsteads with ash, beech or Scots pine or sycamore trees sheltering the buildings fit happily into the landscape, indeed form part of its character; but where foreign conifers – Leyland's cypress or spruce for example – have been substituted, the foreign note they introduce is at marked variance with the natural character of the place.

The same may be said of many British parks where planting has gone on using an admixture of exotics, during the last few centuries, and even more so in more recently created parks where the indiscriminate use of these foreigners quite destroys the rural aesthetic. Fortunately, however, it became the custom to plant a peripheral belt of native trees round parks, for

shelter and privacy, and these have continued to be so planted, in the interest of sense and economy, providing, so to speak, a *cordon naturel* hiding the exotics from views outside the park. As a result of public objection to the extent of conifer planting and its effect on the more natural landscapes of the country, large scale foresters have planted bands of deciduous or native trees round the perimeter of their woods in much the same way; but they tend to look contrived and ridiculous especially when viewed from higher ground. Much better to use native trees or to dispose the groups of blocks of forest planting so as to be sympathetic to the contours, and modified by the dictates of ground conditions.

New development should be fitted carefully into the landscape, to look comfortable in its setting; almost as if it were already part of the existing topography. In this way empathy is built up between the new and the old. This is greatly helped by planting the same species of trees already growing around the site, and by the use of local types of fencing to surround new development. Similarly gardens at the fringe or surrounded by farmland should be sheltered and protected by the same type of boundary as the surrounding fields – hedges or vernacular fencing – and trees near the boundaries should complement those of the surrounding landscape; for underlying the art of landscape design is the synthesis of new requirements with existing features of the site, to effect a happy marriage of the new with the old and so contribute to the evolutionary processes of traditional development.

## **II EXECUTION**

*Or the synthesis of earth elements with biological and visual factors and functional requirements.*

In order to understand what is involved in the technical process of landscape design, it will be helpful to go through the various stages of developing a proposal, the basic requirements for which are all much the same whether it be a small garden, a large park, open countryside or built-up urban areas.

In considering the actual design of a land- or townscape, it is necessary to synthesise all the factors set out in the following subsections in a balanced way, in order to ensure a happy marriage of beauty with function. So long as this is carefully and thoroughly done, with an accompanying report and plan for subsequent maintenance and management, there is no reason why functionally the landscape should not endure; its beauty, however, will depend on the artistry of the designer.

### **THE MYSTERY OF DESIGN**

The Oxford English Dictionary definition of design is adopted here: "The combination of details which go to make up a work of art", the way this is done – the art of it – reposes in the mind of the designer. It is indeed

a mystery which is only revealed in the finished work be it a painting, a sculpture, a musical composition, a poem, a building or a landscape garden. In the case of landscape design, initially it involves scale and the disposition of objects: earth elements – rocks, land form and water, botanical elements – plants and trees and built artefacts – buildings, roads, bridges, etc.

Scale depends on topography – “the accurate and detailed delineation of the features of a locality” (OED again); which also defines a visual ambience. If it is level, a plain or extensive area of water, it may stretch as far as the eye can see, in which case built artefacts – atomic power stations, coal tips, silos – can be extremely large and also in scale with the landscape. More finite ambiances are of limited extent, defined by land form or, in urban areas by buildings which vary in scale from a broad valley to a town square and the objects contained therein would have to be reduced in scale to look comfortable in their surroundings.

The placing of any object in any ambience automatically affects the scale of that area; this is because ambience is a visual concern and the eye adjusts to the focus of the objects in view. So the smaller the scale of an ambience, the smaller the objects in it must be, again to look comfortable, and by comfortable I mean a nice place to walk about in, to loiter, to sit down and feel cosy in and enjoy what one sees; an exaggerated example is Bourton-on-the-Water in Gloucestershire, where narrow canals interlace the village and the buildings look  $\frac{2}{3}$  of normal size, presumably to match the smaller size of the men who built them. Scale is dramatically demonstrated by a comparison of views of Manhattan which are magnificent from Staten Island, with those in the canyons of the city itself, where human interest can only be created at ground level by elevating the buildings’ pillars when looking across the spaces between and beneath the buildings.

A very good beginning would be to look at the River Severn in the Worcestershire plain with its concomitant Avon valley, downstream of Worcester, contained by the Cotswolds to the southeast and by the Malvern Hills to the northwest. This is a terraced river valley and flood plain but with round and oval conical shaped hills, mostly covered with trees scattered incidentally about; they give distinctive character to the valley. Large and small woodlands and incidental hills and ridges also rise from the flood plain and the river meanders between. It is a domestic landscape of farms, villages and occasional towns which would be unremarkable but for the small hills and river terraces, some wooded, which are the secret of its great beauty. The ambience includes remarkable outliers Bredon Hill and May Hill, with its top-knot of pine trees, visually bounded by the Cotswold scarp and the Malvern Hills respectively.

Bird’s eye views from the Malvern Hills reveal the towns of Worcester, Cheltenham and Gloucester at the foot of the Cotswold scarp. These urban areas of considerable size are visually acceptable, for they are in scale with the broad flood plain and the rising ground of the encompassing hills;

and in consequence they do not detract from the attractive field pattern of hedgerow trees, scattered farmsteads and villages which make up the embroidery of the valley floor; the great expanse of flood plain with the conspicuous small hills guards the viability of this beauty.

If one then looks about and imagines what the result of building more large towns or factories in the area would be, it is possible that one could think “well perhaps something could fit in happily with the hillocks here or there, but not somewhere else” – very much like disposing pieces of furniture in a room, where they would look best and ‘go’ with one another, or arranging the items for a still life picture.

In assembling the elements of the design of any area of landscape, consideration must constantly be given to the way each new element might affect the character of the ambience as a whole. Each element introduced into the new design should fit in – should look comfortable – with its neighbours and so be acceptably absorbed into the existing ambience. There should be congruity of all the parts; that is to say the introduced elements may be of striking new design and still enhance the general picture by being respectful of their neighbours and compatible with the scale of the place. Congruity should be the watchword in the synthesis of design to avoid diminution of the existing ethos of the place. Here much thought must be given to consideration of the trees, shrubs and plants and flowers and to built artefacts which go to make up the framework of the proposal.

The final design is what looks right to the composing artist and is pursued in the following way. All the requirements, listed below as (i) – (ix), have been assembled. The question of what is to go where has been determined; the size, shape and bulk of the required items is apparent, and the decision has to be made about the placing of each individual object. It is rather like playing a game of chess, when there are possible alternative dispositions of the pieces and, like a music composition or chess, there is the final arrangement of the ‘pieces’ which may or not satisfy the artistic or winning goal. If it does not look right or sound right three-dimensionally or quadratically, shuffle and start again.

The importance of showing the whole proposal, that is including provision for future requirements – building extensions, roads etc – at this stage cannot be over-emphasised. They can be shown notionally on plan or model. They should also be provided for in the built scheme; a good way to do this is to block plant the area which would later be covered by the proposed development with quick-growing trees; these would quickly grow not only to secure the site for the purpose intended but also fill the void in the design in the meantime – it is necessary to think of what a layman, in his ignorance, might do with the unoccupied space.

The various objects to be disposed in a design may be organic or inorganic – landforms, water, trees, buildings – it matters not in principle which; it is

the size, bulk and mass of the objects which is important in achieving the framework of good design. The principle is the same, no matter what material – a wood or a factory of similar size, a church spire or a Wellingtonia, a town square or lake. The important thing is to get the various elements into scale with their ambience and with one another. In this way it is possible to ensure integrity of the design as a whole; without it the design will be a failure.

Then just as one secures the fitness of the various elements one with another, so must eye-sight lines across and through the site link up its various features to direct the eye of the beholder to move smoothly from one object to the next and so stimulate a running appreciation of the continuing beauty of the design.

## **DESIGN STAGES**

### **(i) Plans**

The basis is a topographical plan showing contours of the landform, water, vegetation and built artefacts – a convenient base map is the Ordnance Survey 1:25,000 scale which would identify visual ambience, including important views (by reference to the contours), roads, footpaths, electricity lines and other features, by symbols as shown on the Ordnance map. Transparent overlays would be drawn to identify archaeological sites, listed buildings, National Trust and other sites enjoying statutory protection, surface geology, climate and prevailing wind direction and projected local plan developments, appropriately. This would be the scale at which to consider National Parks and Nature Reserves, Areas of Outstanding Natural Beauty, motorways, and projects of similar scale. Larger 1:2500 scale OS maps would be needed for Parks, Country Parks, Sites of Special Scientific Interest, Golf Courses, etc. Contours might well have to be added for these larger scales. The vitally important starting point is contoured plans showing the chief topographical features to enable those unfamiliar with the site, its nature, and to appreciate the implications of the proposal under consideration.

### **(ii) Landscape survey and appreciation**

This stage is then required to identify important trees, watercourses, lakes and other natural or man-made features, together with a soil survey. These important items are best shown on sheets of transparent material which can be placed over other plans, of the same scale, in order to enable the designer to adjust the requirements of the proposal to the various features of the site; hence the name overlay, frequently and less accurately referred to as sieves.

### **(iii) Client's requirements**

These requirements must be considered in conjunction with those of the likely activities of the users of the development, so as to make suitable provision for them, together with any ancillary requirements, again on

overlays. These various overlays enable the designer to identify the various requirements of the brief, which can then be fitted to the plan of the site according to their size and topographical requirement. It is only at this stage that the actual design begins to take shape.

### **(iv) Design-draft outline and proposals**

Working still at the smallest scale at which it is possible to express the main requirements of the scheme, on one plan of manageable size and, if necessary using a *minimising glass* (in order to see the picture as a whole), cross and long sections should be drawn to test the viability of the various design ideas – the extent to which large features could actually be seen on the ground in the surrounding ambience, the effectiveness of proposed screening, etc. Long sections are more effective when accompanied by photographs taken from the viewing ends, with sketches on transparent sheets to show the effect of the various proposals, like Humphrey Repton's 'before and after' drawings; but even more legally provable are photographs (which were not available in his day) with overlays which eliminate possible artist's licence. Flying balloons on the actual site will usually clinch any doubts on these scores.

Models are extremely helpful at this stage and have the advantage of allowing the various features of the design to be capable of rearrangement as the plan proposals proceed, as well as more readily explaining the design proposals to the client. Origin and destination studies should also be undertaken to assess the likely movement of pedestrians and vehicles for appropriate provision on the plan.

The likely effect of the design proposals on the subsequent maintenance and management of the landscape should be carefully considered at this stage and duly provided for. Always it should be remembered that the designer's ideas must be presented in a way to be intelligible to the layman, in both graphic and written form.

### **(v) The landscape development plan**

Now is the time, having drafted outline proposals, to consult widely; this is extremely important in negotiations leading up to public acceptance of any scheme in the landscape/townscape. Immediate neighbours, area neighbours, public bodies with concerned interests, right up to county and national authorities, should be consulted. If this is done, fairly and honestly, at each stage of the preparatory drafts, and appropriate modifications made to the design where fully justified, it is difficult for critics to turn round at the end of the day and object; when they have already had ample opportunity to do so before the proposals 'gelled' in the final plan.

### **(vi) Management policies and plan**

Policies for the future management of the landscape to ensure the intended maturity of the executed scheme should accompany the final submission. These policies may depend on the execution of capital proposals over an

extended period, especially where long-term forestry or reclamation schemes form part. The policies would be detailed in the Management Plan with accompanying schedules, which would ensure continuity of the design ideas over the years of changing personnel on the site.

#### **(vii) Details and working drawings for landscape contract**

Larger scale details and working drawings with specifications sufficient to ensure the interpretation of the designer's ideas on the site must then be prepared for the landscape contractor, together with a schedule of his responsibility during the contract maintenance period. The contractor should be appointed in collaboration with the quantity surveyor.

#### **(viii) Contractor's maintenance**

Because plants, shrubs and trees are living and growing, their health and vigour can be affected during transport and planting as well as subsequently by climate and various human factors. The contractor's responsibility should extend at least over the first three years (to ensure the viability of his actions during construction and planting), whilst responsibilities regarding other factors should be provided for initially, under the maintenance clauses of the contract.

#### **(ix) Quantity surveyor and clerk of the works**

On all but the smallest schemes there should be a quantity surveyor and a clerk of works. These invaluable colleagues are the landscape architect's best friends. Ideally the quantity surveyor actually appoints the contractor, assesses or measures the work as it proceeds and arranges payment, on behalf of the client; whilst the clerk of the works supervises the work of the contractor on site. Although the clerk of the works works to the landscape architect, he is appointed and paid by the client. He so becomes a most valuable link in the chain of execution, by his advice to the contractor and direct rapport with the client, with opportunities for valuable mediation in any cases of disagreement.

With the assistance of these two invaluable experts, the designer should feel free to limit visits to his/her sites to fortnightly inspections and consultation. In their absence, twice-weekly visits may prove to be essential; always bearing in mind that the execution of every contract document and specification has to be interpreted on site and that emphasis in interpretation will vary according to the supervisor, whether landscape architect, architect, engineer or surveyor. The subtlety of the executed design may well depend on the emphasis applied to its application; accordingly it is extremely important that supervision of the work is overlooked by either the designer himself or one intimately in accord with his design ideas. In other words and without exception the landscape architect should supervise the execution of his own work.

*[This article is derived from a typescript originally intended for publication as a chapter of an autobiography – see Editorial]*

## **LANDSCAPE AND INFRASTRUCTURE\***

### **Kathryn Moore**

Before I start talking about landscape and infrastructure I would like you to think about where you grew up and how that shapes who you are, your values, your culture, your identity. So this is where I grew up right near the sea on the South Wales coast. I was just used to being able to know what type of day it was by the position of the sun on the horizon, to know what kind of weather we were going to get. If it came from that direction it was going to be wet and windy, and if it came from that direction it was going to be dry and sunny. And if it came from that direction I could hear the noise of the funfair and smell the candy floss. From this side it was just fresh air from the Atlantic. Because of that I grew up having a really strong sense of identity through landscape. To the extent that when I moved to Birmingham I set out the paths in my garden on a north, south, east, west direction like a sundial just so I could tell where the clouds were coming from to give me some sense of orientation.

But that knowledge of landscape, that sense of identity that you have is very rarely mentioned in the development processes, very rarely taught in terms of landscape architecture or articulated as some part of the design process. Really that is what I am talking about: that is my starting point.

My background: I started in art college then I went for a degree in geography. Then I did a masters in landscape architecture. Because I'd never heard about it and I saw this thing that if you did geography and you liked drawing then landscape architecture is for you. That is exactly what I wanted even though I had no idea what it was. I started work in Salford Quays. There was the boss and me and the dog. By the time I left, there were 26 of us working. It was called a reclamation team because there was so much derelict land in Salford. It was like a job for life. You'd always be there.

I have from that a very strong background in habitat creation and river management but when I moved to Birmingham City University I didn't mention that because I didn't want to teach horticulture. I didn't want to teach ecology. I wanted to know about design. (In Salford) the team I had were lacking in confidence about the quality of the design that they were trying to do. They were fine on the technical stuff. I asked them what they were trying to achieve. It was just a question of trying to get the money spent before the end of the year. So a job came up in Birmingham and I decided to put my money where my mouth was and I tried to find a book that tells me how to teach design, but there wasn't one so I decided maybe

*\* Transcript of the John Simpson Memorial Lecture, 25<sup>th</sup> October 2018*

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I've got the right idea and I started to write one. The first article I wrote I got a letter from Sir Geoffrey Jellicoe saying Dear Kathryn Moore, Thank you for your article on landscape design. I would very much like to come and see you and to see the work of your students. That was extraordinary. I have just found all 15 letters from him saying things like you are going into deep water, be careful to make sure you keep land in sight and telling me off about various things. He was just amazing.

So eventually I got some money to undertake research. Actually it took 15 years of research because it started to get more philosophical. And I realised that one of the reasons why we thought we couldn't teach design was because a lot of the problems in landscape architecture and lots of other areas all come down to theories of perception. So had I had more confidence when in 2010 I published the book I would have called *The Greeks Got It Wrong* but I didn't. I called it *Demystifying the Art of Design*. And it all comes down to a hidden layer. We call it lots of different things: we call it creativity, intuition, sub culture, the black box, the sensory, the haptic. You know the idea: you feel something and something structures or crystallises or sorts it out in order to serve intelligence. And through all this work I realised that the idea that it exists is actually a philosophical misconception which was pretty dreadful to realise because it meant my whole proposal was based on a flawed conception. But the fact that we think that there are divides between different types of truths, between real truth and mere opinion, between objective and subjective, between facts and values, a whole list of dichotomies, that are so common in our culture that we take them for granted. We think it is a starting point of course. And it is just the way things are. And actually it leads to the sort of thing such as the Manchester method of landscape evaluation that was devised around 1975 just at the point when they thought they realised that the quantitative method is cheap and that it is not all that it is cracked up to be. But this underpins the idea that if you apply the equation and you did whatever it says there, you would actually get a measure of how valuable the landscape was.

Also in Christopher Alexander's work, he thought that you could somehow strip out all of the values from the decisions that you make and come up with an algebraic equation to tell you how to design. That is on one side. And then on the other side you have the idea that you go out and sense things, sense the *genius loci*, you go and sense the essence of things. You close your eyes and feel the texture of things and this is somehow supposed to inform design. And although those are opposites, they are actually two sides of the same coin, and they all come from that idea that there are different modes of thinking, different types of truth, different starting points. What I am suggesting from all the things I have done since my work is that we need to think not that perception is close to intelligence but that perception is the same as intelligence. There is no difference.

You make sense of what you see through what you know. And the only way you make sense of what you know is through the concepts that you have

at your disposal. And the only way you can make sense of what you see is through language. So this is what led me to simplify it so now I try to work across all of these dichotomies. So across the silos and the disciplines, you have the really hard and important things on one side – the sciences, law, mathematics – and all the soft things on the other side – the humanities, the arts etc. Let us work across that and let's not even take any notice of any of those dualities. To not work with the idea that there are facts and there are values, so if a student says to me this is my intuition, I'll say OK what does it look like? And if they say my concept is – hands me a drawing – and says this is my concept and I say So what does it mean? Always working through images and words, words and images, so you actually explain what it is that you're talking about visually, spatially and conceptually. To work with ideas and vision to have a new look at landscape to discover what a landscape could be. To reacquaint people with the materiality of the discipline, the stuff which is out there, not just the stuff you are putting in but the materiality of the discipline of geology, hydrology, geomorphology, biodiversity, a whole range of things including experience which is materiality.

### **National Park for the West Midlands**

So the context I am now going to look at is the creation of a national park for the West Midlands. We had a conference in June this year which introduced this and we have been talking about it for some time. Since then, there was the Inside Out programme on BBC One. It actually came out on the 1st October 2018. We set up the National Park WM Twitter account and we have already had 35500 impressions which is quite good actually. And at the conference we decided the way to go ahead with this proposal. The problem is places like the West Midlands are not as beautiful as it is here (in the Cotswolds) which I have been seeing this afternoon. But in any metropolitan landscape – this comes from a book called *Blind Spot*, a book from the Netherlands – the landscape is a blind spot in any regional economic strategies. In other words, people just don't even think about the landscape. They think about the economic argument and the technical argument and then it is all systems go on just those items. So what I am proposing is that it is not just an economic proposal, it's not just anything to do with the soft stuff but it's to put health and wellbeing front and centre on the political agenda. And it's a way of engaging people with place, location and the environment. The reason why it is so apt is that we have got the imminent arrival of the high speed railway (HS2) in 2026 – still some time off but it's galloping closer and closer. We've got Coventry, now the city of Culture 2021. Birmingham is hosting the Commonwealth Games in 2022. The Black Country in Birmingham is setting a proposal for a global *geopark*: there is an application to UNESCO for a globally recognised geopark. We have the youngest fastest growing, most diverse population in the UK. These are really significant drivers for why this proposal is important at the moment. There is a range of people who are really interested in helping this proposal come forward, including the Arts Council, the Environment Agency, the River and Canal Trust, many local MPs, the Ordnance Survey who came to the exhibition we had at the conference and I am going to see

them on Friday. They said whatever you want in terms of mapping they will help me. Just tell us what you want.

So it's based on a new look at landscape. If you look at a typical map now of Birmingham – there is no way that that can look pretty. What it is is that it is focused entirely on the roads and the buildings. And if you look really closely you might be able to find skinny little blue lines which are the rivers and streams. Then you have got reservoirs. If you look even closer you might be able to see the contours. But it is really difficult to see them. It is almost as though the landscape is invisible. I work in the School of Architecture and I am sure if I said to my colleagues to look out of the window over where the new HS2 station is going where there is a large cleared area and I'd say What's out there? They'd say Oh there is nothing because there are no buildings there. This is the problem. Look at Ashford in Kent or outside Ashford where there is pressure to develop, to build lots of houses. Two planners were asked to show me round because I didn't know where I was and they kept pointing out all these grass verges that were damaged by grazing cows and look at that one over there. Why are they showing me these grass verges? So I said what are the main economic drivers in the region? Which way does the river flow? Which way does the wind blow? Where is the sea? Where is Romney Marsh, that place of legends, films and everything? And where are the schools? What are the main economic pressures and what are the main agricultural products? And they just looked at me and they said you are asking questions that we normally don't get from landscape architects. We normally tell the landscape architects we need to plant here and what plants would they put in? So I said well in which case you are talking to the wrong kind of landscape architect. I don't want you, the students (here tonight), to be that kind of landscape architect. You have to have a bigger vision than that.

This is a horrible map isn't it (Fig. 1)? It's a map of HS2 from their website. They're technical maps where they show the profiles and everything. That is the attitude at the moment for the high speed train that is going into Birmingham. It's really about amelioration, hiding the railway, putting in a cutting, putting them all as close as you can and just making sure that nobody can see them. So that is the sort of context I want to look at. A different way is to look at this map (Fig 2) of the West Midlands plateau. I know it might not be very clear but you can see how ripply the whole place is. It is indented with many strange rivers and that's why it is so bizarre that people say to me that it is a good job Birmingham does not have a river. But we can see a huge amount from Lidar data. This is a Lidar data map of the West Midlands plateau. It looks like a brain doesn't it? and all those dark areas are river valleys and the streams that go across the whole plateau. And that large area up there is the Tame Valley. So we can see in incredible detail but it is not just a question of being able to see that. The point I was saying before is what sense do you make of it? What relevance does it have given where you want to get to and the opportunities that you have?

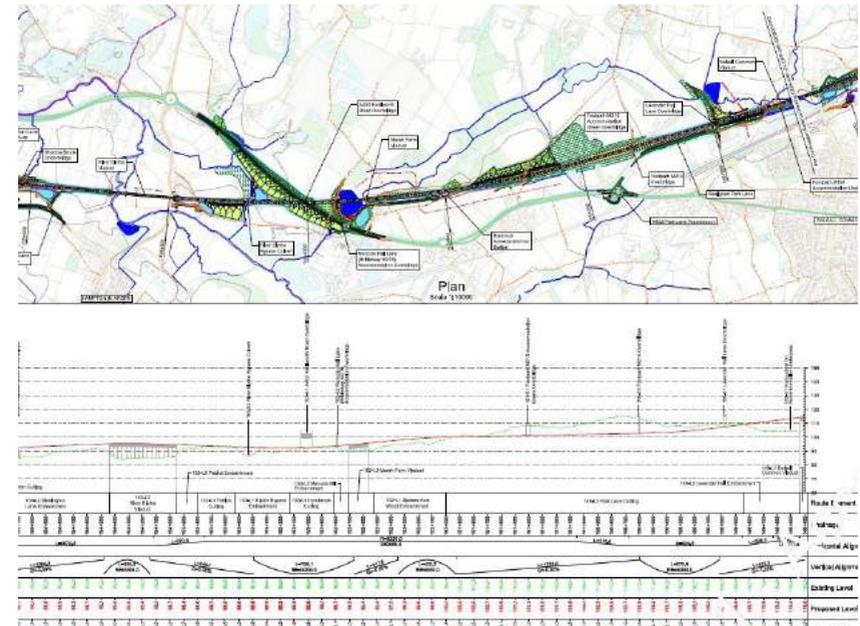


Fig. 1 HS2 progression: route passes at Hampton-in-Arden

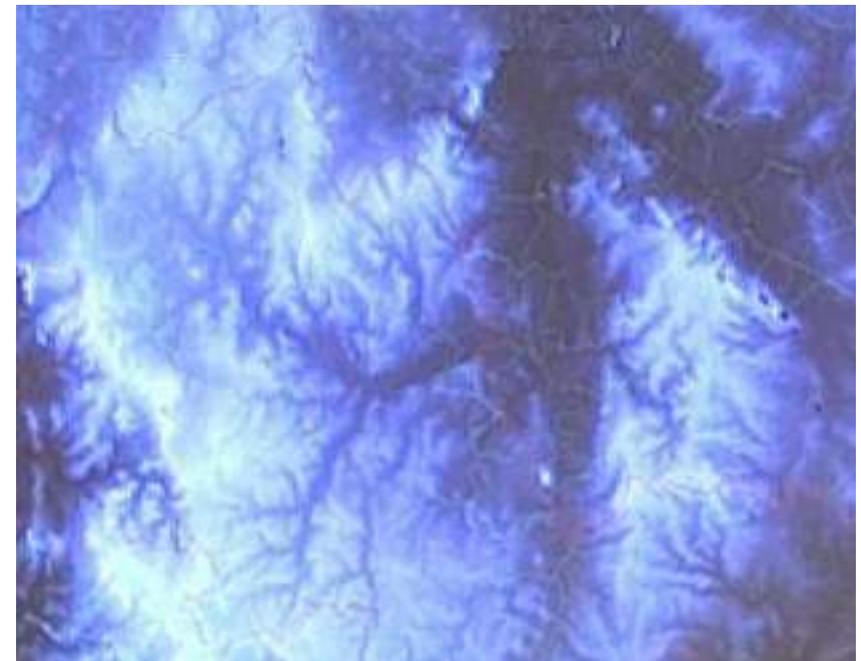


Fig. 2 West Midlands plateau from Lidar survey

## Global problems

In a larger context landscape is a really hot topic around the world. What can I say? I have just finished being president of the world, not for everything only for landscape architecture. I finished in July this year and I am so relieved: I shouldn't say that! But landscape architecture is such a huge thing. In May I went to Beijing where there were 240 courses offering landscape architecture which is quite astonishing. I have just come back from the biennale in Barcelona. The biennale is where people from all around the world send in their projects. I was on the jury panel for 2018. And so you have these most extraordinary projects from the Netherlands and creating a new island in Australia (costing 250 million Australian dollars which is astonishing). And the project in Bangkok which the government had commissioned: not for people just for wildlife. But what happened was they put the walkway in and people started to come and see it. It was so popular that these are now going on all over the place, because actually people really like it. Especially from China you have these extraordinary projects that look at flood-adapted landscapes so the landscape design allows you to get across the river from one side of the city to the other. So this year was a different crop of finalists. And so to Tel Aviv where the waterfront has been completely renewed. In Mexico City there is a community-based project to try to create a forest along a disused railway line. In Venice there is a renewed island, a really expensive development, and in Beijing an Open Air Museum. And also the Luxembourg Gardens in Paris. These are all extraordinary projects. The other one is the landscapes of cohabitation looking at how in Greece instead of having a development of white boxes stuck on really prominent places all over the landscape, you can have a symbiotic relationship between the land and the buildings. And this was the winner (Fig 3) which was to create a stairway in Iceland and it won because of the way it's been presented that when you get to the top you can see how the Iceland ice sheet has melted. So it's an observatory of humanity and what we have done to the world.

In a way these projects are exceptional because generally we have lost this connection with the landscape and the way of understanding our relationship; its profound significance of everyday life and culture. There are all these huge global challenges that we need to be aware of. For example, Tewkesbury, not far from here about ten years ago, suffered serious flooding. If you wanted to keep your feet dry you headed to a mediaeval church because the monks knew how to build and where to build and how to keep their feet dry but now because we think we can build anywhere we think we *should* build anywhere and actually that is what's causing all these problems. Why anybody would think it's a good idea to build a nuclear power station on a on a fault line (in Fukushima) I really do not know and then we have issues like industrial agriculture from the United States. We have these oil spills which created huge pollution.

And there is drought and that is not just in Africa but here in the UK and Australia. And we have the depletion of vast areas of forests in Indonesia.



*Fig. 3 Icelandic stairway: observatory of humanity*



*Fig. 4 Addis Ababa: massive urbanisation*

And this massive urbanisation: in Mexico and in Addis Ababa (Fig. 4) where the government is trying to prevent this happening by proposing 8000 small towns. It's actually taking urbanisation out into the countryside to stop people wanting to go to Addis Ababa. We have issues of food security and viewed from the 12th floor of a hotel in Korea there is new development on prime agricultural land: nice flat land to build a new city for 3 million people. The problem is that when you build on flat land where are you going to grow the food? And in the UK as I've said here we have estimated 100 harvests left but I have been told it's more like 50 because the soil is so badly degraded.

With the HS2 proposal, Fig. 5 is one of the images they show of the major interchange station in Solihull which is just outside Birmingham. So when the chair of the environment agency came up, what message does this give to the community about how much do we value air quality in the region if that is what they are proposing? But he reassured us this is not happening anymore. Of course there is a massive issue to do with demographic flux. The convincing example is Detroit whose population plunged by 25 percent over the last decade: dramatic testimony to the crumbling industrial base of the Midwest. Basically it is as though we are playing fast and loose with the landscape as though it doesn't matter: it is just out there, there is nothing on it and we can do whatever we want to it. Take for instance the Boris (Johnson) plan for an airport in the Thames Gateway. And in Thurrock on the River Thames to the east of London, I did some work and drew buffer zones and landfill sites. And all the major power lines, meaning you can't develop in any of those areas. This place has been used as a rubbish dump for all the stuff that wasn't wanted by London. Even when the cemeteries got too full they dug up all the bones took them out dumped them there on the floodplain of Thurrock.

There is development in the Wirral, Cheshire, and not knowing anything about the place or the history it looks I think like a cut and paste of Shanghai under completely different conditions and entirely inappropriate. But it is as though the landscape is becoming too difficult to ignore so I have been working with UNESCO who said: Kathryn, these people in Syria and Lebanon in the Middle East have no sense of identity, no sense of belonging, no sense of history. Surely landscape is something to help change that and one of the things that I think is really significant for you (as students) as you continue with your careers is this: the so-called UN sustainable development goals. They are some things that you can embed in the projects you are working on. You are not going to be able to do it all but you need to be aware of them and work with them. It is like a high level international ambition but the projects you do will have something to do with these things. It is the sort of thing we have started to do in the studio.

### **A New Approach**

While you are thinking about how those might be applied to create a smart city, you've got a really high aspiration internationally. I think we need a



*Fig. 5 HS2 interchange at Solihull*

new look at landscape so it's not just about the green stuff. Of course it is about it but not just that; not just about the physical context of the towns and cities; not just about the forests and the woodlands. The nature reserves or even the constructed public realm. And it's not just about the allotments and places where we watch the world go by. But the landscape reflects our memories and our values, where you grew up, and how that influences who you are. And the landscape is about ideas and it is the expression of those ideas that shapes the quality of the experience that people have in the places that we create.

I think our job as landscape architects is to do just that: shape the quality of the experience. How? Through ideas and the passionate expression of those ideas. And it is also to realise that feeling, that connection between a community and the land is as valuable in ordinary everyday landscapes as it is with the extraordinary places such as Stonehenge. It is as valuable in places like Birmingham, Manchester, Salford as it is in places where it is more acceptable to think it in places such as Australia or New Zealand or with any indigenous communities.

How do we find out about that? It requires investigation looking back over the past century to see what happened a long time ago. The stories that you might have heard in your lessons in geography and history. Did that really happen in that place?

Regarding how we use the landscape through the year, the cycle of the year, what about the landscape and how do we use it? I went to Milton Keynes a while ago – they had a celebration there. A man got up at the end of the lecture and said I cycle to work every day and every day the landscape is different. Thank you so much. And it is because it reflects the changes throughout the year. Every day how do we think about the places and the uses of the landscape every day? Not just the special things. So how do you do this at a regional scale?

For this project somebody said Kathryn, there is a railway coming near you and it needs your scale of thinking. So I went to the local authority to the chief transport planner and said if you want this project to work well then you need to employ me for two years. Well he didn't do that. He took me out for a cup of coffee every two weeks for six months but during that time I persuaded him of a different way to think of how to do the infrastructure. And I need to say for those who don't know that this project is highly controversial and not many people want it but it seems to be happening.

### Colouring in

So the first thing I did was find out about the route. My husband said you've been colouring in for the entire weekend. Just because I was trying to find out what's there. There is this huge valley that I didn't even know existed. Then I tried to find out about the history of the place. I'm sure these are the things that you do as standard in your project work. It's similar to many eastern valleys in cities in the UK: here they put all the unwanted things because the wind tends to come from the south west so the smells will go eastwards. Normally the industrial areas are in the east. And then I had to understand how it works for the city and I realised that just from living there that this valley system with this whole mess of infrastructure, roads and then the proposed railway, divides the city which means you have a population which has less educational choice, less choice for employment; it is under stress from noise pollution and air pollution so you have a more unhealthy population. So that creates great tensions and you have this valley on the east side that nobody knows is there. You can't see it because of all the roads. So what I can say about HS2 is that whatever happens we cannot add to the problem of creating this huge barrier. We have to make it permeable, this whole valley system, and not add to the deprivation in this area. So this was the issue: we've got the technical argument and we've got the economic argument and you keep saying what about the environment, what about the space?

So eventually people began to take notice of this. So my colleague at the City Council said you've got to do one of your drawings. (How did he know I draw?) How do you do a drawing for a region? All I can do is just get out my piece of paper with soft pencils and like at art college try to draw something and see what happens (Fig 6). And that gave us traction and we had workshops. So we invited about 60 people. Even though we were told we would get about 20 when in fact we had over 50 people. And I was asking things like this railway is coming in: What do you think makes a great city? Draw it! And the engineer said draw it? We don't draw – we like bullet points. But try and draw. What makes a great city? What do you want it to look like outside in 15 to 25 years? Are you happy with the way it is or do you want it to look different? And if you wanted to look different, in what way? And the people (in the Black Country) said don't forget us. Don't forget the Black Country. Then we got the people to say how do we achieve it.

So the point is how can this different way of looking at landscape be the

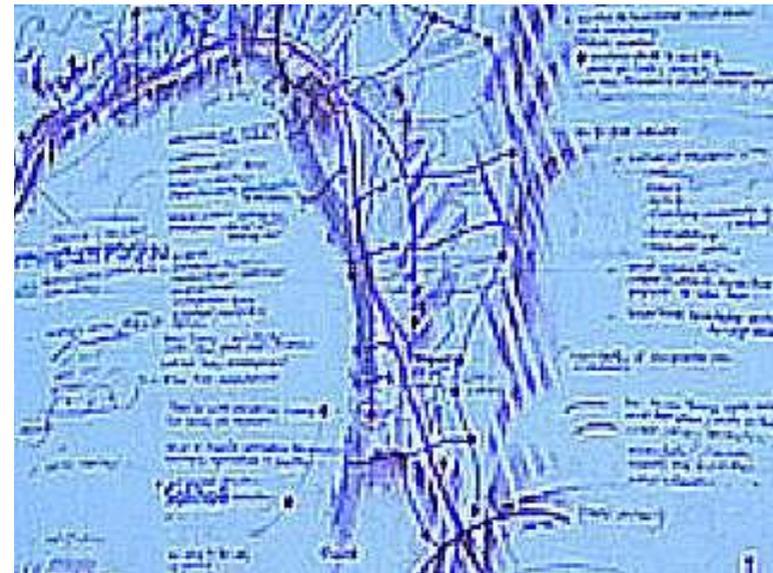


Fig. 6 Sketch and annotate

way to bring together all these different strategies that are going on? And because of that I was then asked to contribute to the HS2 Document: *People, Place and Time*. The issue was that people were saying we are using *People, Place and Time* and then we get right down to the detail and I try to make sure that people are staying with the ideas and I chaired the landscape design approach strategy to try to move it away from “you are going to put these trees here” in a very technical sense. Instead you will investigate “what ideas are appropriate for this place”. I was then asked to carry out a mentoring workshop with all the people connected with the phase 2 part of the HS2 project. And what we did at the end of that was to ban the terms *amelioration* and *remediation*.

This led to another project, this one north of Birmingham, the Tame Valley Partnership because somebody said that whatever you've got we need it here because HS2 is coming here as well. So I am talking about this area here, this valley here, the bit going north and when I went there they said 75000 people moved here last year. We are going to have to try and find 12000 houses over the whole region. But if you look at the area it no longer looks like that. In this valley here people used to get paid in salmon years ago but not anymore because you can smell the river before you can see it almost. The valley is a distraction for sewage works, for infrastructure, for power and domestic landfill. So it is not very pleasant but for many people when you look at it it looks nice and blank. All that map white space where you can just put lots of houses in there very easily and it will be OK. But the people in authority want me to ask how do you try and help them to almost resist that and to think about how that valley might be seen in a

different way. So it is an immense area. I should say that most people travel along these roads as they travel across the Tame valley and they don't even know they are passing through a valley because you can't really see on the outside. It is not steep; it is very gentle but it is huge. So how do we change that perception? It comes back to *drawing*.

So with the environment agency they gave me the contours highlighted here (Fig 7). I reversed the map so all the housing and infrastructure were underneath that map so I brought the contours to the fore. And then I began to realise how hilly Birmingham was, something I didn't appreciate before. And then I realised that when you talk about a river system it is not just a little blue line that you see on the plan – it is all the water that goes under the ground, through the ground. All the water that comes on top of the ground. So in other words the whole conurbation is connected through rivers which I showed to the health director for the West Midlands and he said Ah, it's like discovering the pyramids. And someone else said It's Birmingham's answer to the Lake District but of course it's not because it is not a dramatic landscape.

### Edge landscape

But that is not the point. The point is that that idea that is in that plan immediately changes their perception of what the region is and what it can

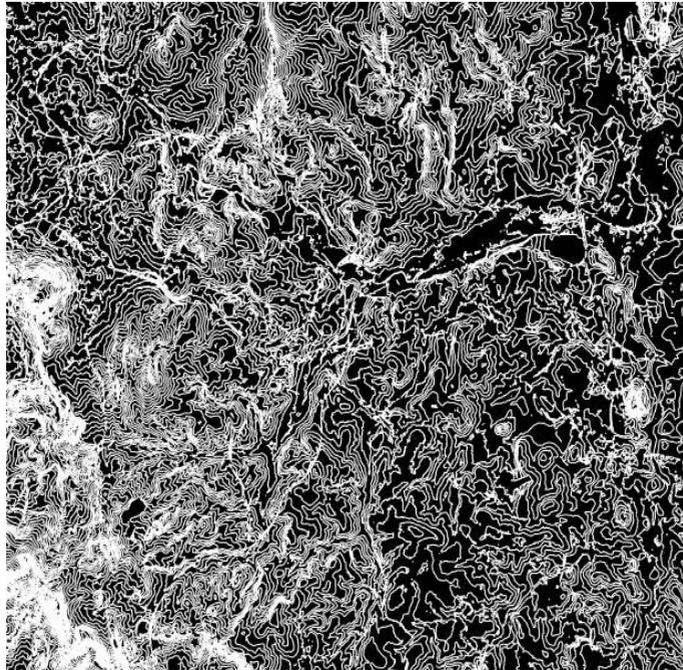


Fig. 7 Contours to the fore

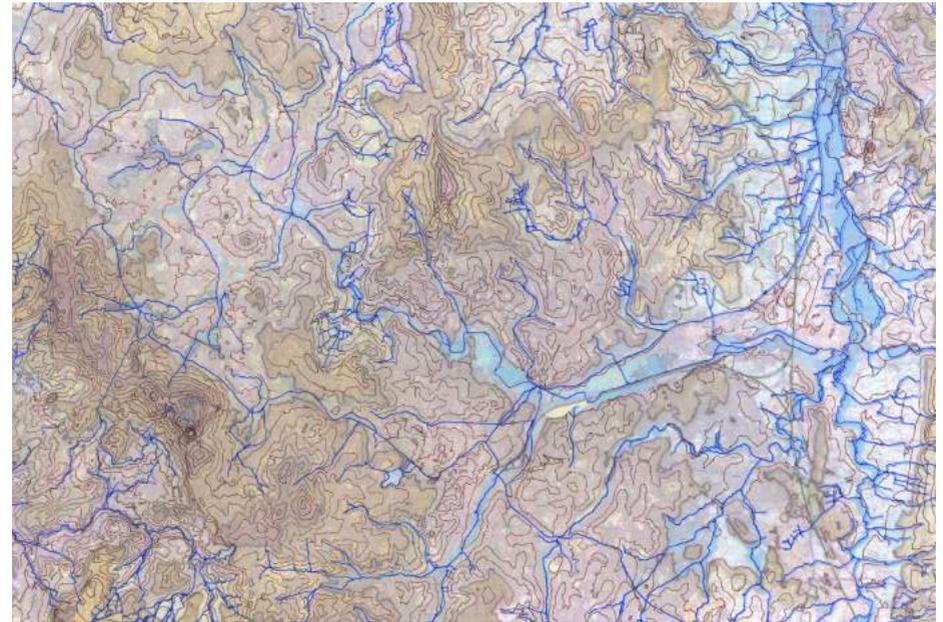


Fig. 8 Drawing to analyse and synthesise

be. That is really significant. And then we began to think about OK, perhaps instead of putting at the edge of the cities great big shed developments like the back of beyond, how about instead of just filling this up with all that development but thinking about the valley system as an ecological resource for the region because you're having to put all these houses in. All the water can't be got rid of within the conurbation. But we have got a valley there that we can actually use. How do we actually use it as part of the West Midlands and actually use it as a health resort? Try and raise the profile of public health and wellbeing.

So that led to me talking to Michael Carrington<sup>1</sup> who said, Kathryn, what you are actually talking about is a new park, a national park for the West Midlands. So here is my drawing. The drawing is expanded (Fig 8) with the Tame valley there, the Stour on that side going down to the Bristol Channel and it is an immense plateau. It is the nexus of the different agricultural regions of the UK. Also clear from this is the Black Country and Birmingham are often considered very separate. They are interconnected with the rivers. It is one of the most diverse areas geologically.

This is the crucible of the Industrial Revolution. This is where you had all the materials for the Industrial Revolution dug up, put on the canals, processed in the Black Country and taken to Birmingham, where it was processed to make knives and guns and everything else in the 'city of 1000 trades'. You have this whole network of canals – so-called canal mania through the late

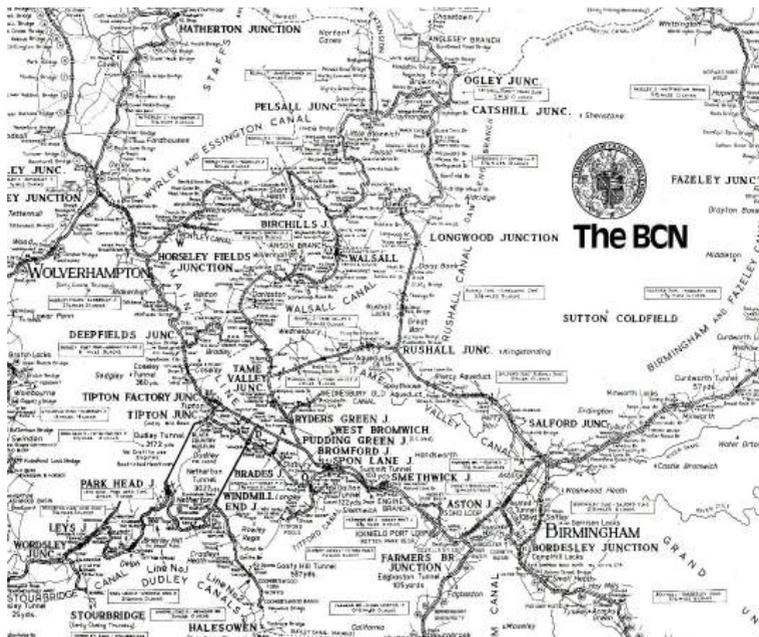


Fig. 9 Canal network

18th to the early 19th centuries. This map (Fig 9) is slightly mistaken but it shows all the existing canals and all the ones that were given permission but not built. All the ones that were built and then decommissioned. It's really quite extraordinary.

And you see we don't know about this stuff because in the West Midlands – you may laugh – we don't think of it as an extraordinary place. And you've got this place here, Galton Bridge, where there's a canal being dug out by Thomas Telford who straightened James Brindley's canal that went round a 450 foot curve. He straightened it out – all of that was dug out by hand and using horses and carts. It was until they dug out the Suez Canal the largest man-made infrastructure in the world. No, I didn't know that and most of the people I speak to don't know that and I think that there is an extraordinary heritage there that should be celebrated.

And so with the geopark proposal in the Black Country: UNESCO said tell us where your sites are and they gave them a list of 2000 sites. That's ridiculous you can't have 2000 sites. That's far too many, reduce it down. So they reduced it down to 100 but that was still too many. So they reduced it down again and they got it down to 47. In the West Midlands these are the key entrepreneurs: James Brindley, Thomas Telford, James Watt, Matthew Boulton, George Cadbury and Joseph Chamberlain. These are the people that made the whole of the West Midlands absolutely connected as a consequence of their imagination and their vision of what they could create.

## Transformation

So the question is What next? What I am talking about is not a traditional national park because it is not just to do with conservation and preservation: it is to do with transformation. It has to work with business not against business. It has to work on a collaborative basis. There are many different initiatives happening as we pull them all together and then connect them into this review which is happening with Michael Gove and Julian Glover<sup>2</sup>. People need to know what it means; in fact you have to be able to show that it's really about valuing the land. And if you heard the news this morning, they were talking about climate change and realising what an extraordinary crisis we are in again. I'm talking about how we might plant more trees for example. How we can be proactive, thinking about in the long term how this place might become the centre for ecotourism in the future. That is so imaginative, so far away from what it is at the moment but nonetheless it gives you something to aim for. I did actually say when I was presenting this a couple of years ago that perhaps (one day) we can drink bottled water out of the Tame.

How does it connect into the political agendas? That's how you get this sort of thing on the radar of government. So how we might use the land there for market gardening, horticulture, ecology? How we might use it to teach the young kids that we've got there the new agricultural skills with traditional agricultural skills? How we encourage innovation: you might not necessarily want to live in the same kind of house that your parents live in. What sort of houses can we have that are affordable? Manufacturing a completely different aspect from what we know. How we can be responsible so we have these systems to store water. We have more water up there than there is down there. We can send more water to the south. We can purify water and cleanse water. So instead of just being a city of 1000 trades it can become a region of lakes right up to Walsall and Wolverhampton at the edge to the depths of the Black Country and all the way down to the Tame to prevent flooding. I don't mean little ditches but really beautiful SuDS systems as seen in New Zealand.

How we can make it a healthier region particularly considering type 2 diabetes. The key thing is to get people active and mobile via a whole network of cycleways, paths and footpaths. Turning things around. Not just putting in a cycle rack at the end. They built bicycle cages next to the Curzon Street station where people might want to walk to and from. Where people might want to cycle to and from. How can we cater for that and encourage it? Everything you do needs to be linked to encouraging people to move or to walk or to cycle. It might then become the city of 1000 parks and squares so you can arrive in Curzon Street and move all the way through the city through a whole network without having to drive everywhere. And the other thing is about a strong identity – the city boundary – I don't know why it is that people think of softening the edges of the city. I don't get that. I think the edges of the city should be really strong. And evident and obvious. But permeable.



Fig. 10 Uninviting pedestrian route

So perhaps the view looking over the city could be one of a replenished valley and the whole system at the edge. So you know where you are through landscape, through the striking context that you are moving through. We should be looking *at* the railway as well as *from* the railway. The station at the moment is horrible but it's not going to be like that but how do we make it so the public realm comes first? How do you make it so the people get a sense of pride as they walk through the place? At the moment this is the walk through from New Street to the university and it's shocking (Fig. 10). It is absolutely shocking. How do we change it?

So I would suggest these are the problems, these are the issues that really create an unpleasant environment. How do we make it so that when the train arrives you get panoramic views of the city? But there is a whole collection of walkways through the city that give you a different series of places to walk to but these spaces should be permeable all the way through not a solid wall. Not 30 metres high and absolutely blank which was what the last proposal was apparently. And does the station even need to be visible? Does it need to be iconic? Could it be hidden in the development and where is there a place for thousands of people to gather? As they have done in Rotterdam to open a square in front of the station. It's all about creating these views, creating these places where people go Ah I never expected it to be so beautiful. And there is really an important point now: because of the legacy if we don't get it right it could be awful. The Norwegian Public Road Authority says that whenever they develop some infrastructure it should always add beauty to the landscape and never detract from it. That makes the authorities go a bit pale.

Because we as landscape architects have such a responsibility, you have to tell people that. So it is a new way of delivering infrastructure. It is multidisciplinary and brings about all these social, spatial, cultural strategies together. It is about increasing aspirations for the area and it is driven by this idea that we have to make this place a better place to live and for our children and our children's children.

I want to mention the role of drawings because they have been absolutely crucial. I asked my PhD student I want you to look at drawings because drawings are so significant. They are not precise drawings. They are deliberately not precise. They are diagrammatic, they are rhetorical tools. They provide something to have a discussion about. They are very political. They are very provocative. They are not neutral. They are not objective but they are stuffed with values. I think you have to be brave and to go back to Thurrock again. I have gone to Brussels: I flew over Thurrock but I couldn't see it because we flew directly over it. So on the way back I said to the air steward Do you mind I've got a strange request? Could you ask the pilot to fly a little bit to the right? So he said Yes OK. The pilot flew a little bit to the right and then I could see there was really a very dark area compared to all the lights that were on the rest of the area. That's perfect, that's the quiet, dark area of Thurrock. There you could have a sky like they have in Northumberland.

The work that we have done carried on from our exploration of the digital-analogue interface which is really important. Looking at how we can use all these different viewsheds gives you a better idea of what you can see and can't see. You need to have a long-term vision as we did in Salford Quays. It doesn't look like that because someone recently decided it was going to be like that because of the strategy 30 years ago which has sort of worked through the system. We know if we want people to want to come and live in the area we have to provide a really good quality of life. It makes economic sense. The winner of the 2016 biennale won not because of the design of the place itself but because of the changes created in the whole of the area of London. And to do that we had to have different economic models which we are beginning to look at with a longer return on the investment which you would expect to get in three or four years time. There are different modes of governance: you don't exactly set up partnerships so you don't try and get the biggest landowner or the tallest building or whatever. You do it for what is best for the city as a whole. So it is all about investing in the future, and in the West Midlands there's never been a better time to do it with all these things happening. The Secretary of State for transport has said to me, Kathryn if you can tell me that the region wants it then we can talk about money and we have to work together. It's a bit like a poisoned chalice in a way because people are busy fighting against each other. But I do think there is a real energy looking at this in more detail so there is this perfect storm of opportunity – the quality of the environment is equal to the quality of our lives – it is as simple as it is compelling.

And so to conclude I've just got back from Singapore: a conference on Green Infrastructure. The idea was to make Singapore the Garden City and then it was the Green City and then it was the City in the Garden. Now it's Biophilic City. I know it is a different political system but it is that idea that drove it, that idea that you can change people's minds and bring people on board. The art of design is working with ideas and knowing how to express them to create places. To develop artistic practice we need to express ideas in space, words, shadow, light and form. So really what I'm talking about in terms of delivering infrastructure is aesthetics – it's *all* about aesthetics – but not necessarily in the traditional sense.

### **Notes and illustration credits**

<sup>1</sup>Michael Carrington (dec), former Director of the Maria Nobrega Foundation

<sup>2</sup> Julian Glover, journalist and speechwriter

Fig. 1 <https://www.gov.uk/government/publications/hs2-plan-and-profile-maps-post-house-of-commons-select-committee-2016-west-midlands>

Fig. 3 Environment Agency Open Source data

Fig. 4 [https://commons.wikimedia.org/wiki/File:Addis\\_Ababa\\_\(16314616596\).jpg](https://commons.wikimedia.org/wiki/File:Addis_Ababa_(16314616596).jpg) Creative Commons Attribution

Fig. 5 <https://www.wmca.org.uk/what-we-do/hs2/interchange-station/>

Fig. 6 Kathryn Moore

Fig. 7 Ordnance Survey Open Source data

Fig. 8 Kathryn Moore

Fig. 9 Birmingham Canal Navigation

Fig. 10 Google Streetview (Accessed 3/3/19)

### **Biographical notes**

*Kathryn Moore, Past President of the International Federation of Landscape Architects (IFLA) and Professor of Landscape Architecture at Birmingham City University has published extensively on design quality, theory, education and practice. Her book Overlooking the Visual: Demystifying the Art of Design (2010) provides the basis for critical, artistic discourse. Her teaching, research and practice, set within landscape architecture have clear implications for architecture, planning, urban design and other art and design disciplines, in addition to philosophy, aesthetics and education more generally. Chair of the pilot High Speed 2 (HS2) landscape guidelines, she has taken a lead role in redefining the relationship between landscape, culture and governance, finance, health and community engagement within the context of the Birmingham region and is a member of the independent National HS2 Ltd Design Panel.*

# **BEYOND THE EYE: HUMAN SENSES AND THE BUILT ENVIRONMENT**

**Melissa Nanang**

Senses could be defined as the “ability to understand, recognize, value, or react to something, especially any of the five physical abilities to see, hear, smell, taste, and feel” (Cambridge English Dictionary, 2018). Our sensory receptors respond to external stimuli which send electrical impulses to our brain. Our brain interprets this information and perceives it as one of the senses. One might say that senses form the basis of our perception. How we effectively engage with the world depends on whether we are consciously aware of the surrounding stimuli. However, we often take this ability for granted. In the rise of the digital age, we live our daily lives stuck to the screen on the palm of our hands whilst consuming boundless information yet not being fully aware or appreciating our surroundings.

In this essay, I want to explore the human senses and how they can affect the way we perceive the landscape. Firstly, I look at the dominating role of vision and its disadvantages. I then criticise the flaws of visual representation in landscape architecture. The final paragraphs explore the other senses and how they can be beneficial to how one might interact with a landscape space.

### **Dominance of Vision**

Throughout history, vision has been perceived as the most dominant and influential of all the senses. Evidence dates far back to ancient Greek philosophers, such as Plato who saw vision as “humanity’s greatest gift” (cited in Jay, 1994). Similarly, Aristotle regarded vision as the most superior of the human senses because it aids in understanding. When we enter a space, the things we first notice relate to sight. Around 30% of the human cerebral cortex is exclusively involved with visual processing, compared to 8% for touch and 3% for hearing (Grady, 1993). This shows that, naturally, we are inclined to gain information through our eyes and become visually stimulated. Therefore, this implies that, biologically, the dominance of vision is evident.

A hierarchical system was developed during the Renaissance where sight was regarded as the highest gift and touch was the lowest. During the Picturesque, English painters, gardeners and architects “were united in the

And so to conclude I've just got back from Singapore: a conference on Green Infrastructure. The idea was to make Singapore the Garden City and then it was the Green City and then it was the City in the Garden. Now it's Biophilic City. I know it is a different political system but it is that idea that drove it, that idea that you can change people's minds and bring people on board. The art of design is working with ideas and knowing how to express them to create places. To develop artistic practice we need to express ideas in space, words, shadow, light and form. So really what I'm talking about in terms of delivering infrastructure is aesthetics – it's *all* about aesthetics – but not necessarily in the traditional sense.

### **Notes and illustration credits**

<sup>1</sup>Michael Carrington (dec), former Director of the Maria Nobrega Foundation

<sup>2</sup> Julian Glover, journalist and speechwriter

Fig. 1 <https://www.gov.uk/government/publications/hs2-plan-and-profile-maps-post-house-of-commons-select-committee-2016-west-midlands>

Fig. 3 Environment Agency Open Source data

Fig. 4 [https://commons.wikimedia.org/wiki/File:Addis\\_Ababa\\_\(16314616596\).jpg](https://commons.wikimedia.org/wiki/File:Addis_Ababa_(16314616596).jpg) Creative Commons Attribution

Fig. 5 <https://www.wmca.org.uk/what-we-do/hs2/interchange-station/>

Fig. 6 Kathryn Moore

Fig. 7 Ordnance Survey Open Source data

Fig. 8 Kathryn Moore

Fig. 9 Birmingham Canal Navigation

Fig. 10 Google Streetview (Accessed 3/3/19)

### **Biographical notes**

*Kathryn Moore, Past President of the International Federation of Landscape Architects (IFLA) and Professor of Landscape Architecture at Birmingham City University has published extensively on design quality, theory, education and practice. Her book Overlooking the Visual: Demystifying the Art of Design (2010) provides the basis for critical, artistic discourse. Her teaching, research and practice, set within landscape architecture have clear implications for architecture, planning, urban design and other art and design disciplines, in addition to philosophy, aesthetics and education more generally. Chair of the pilot High Speed 2 (HS2) landscape guidelines, she has taken a lead role in redefining the relationship between landscape, culture and governance, finance, health and community engagement within the context of the Birmingham region and is a member of the independent National HS2 Ltd Design Panel.*

# **BEYOND THE EYE: HUMAN SENSES AND THE BUILT ENVIRONMENT**

**Melissa Nanang**

Senses could be defined as the “ability to understand, recognize, value, or react to something, especially any of the five physical abilities to see, hear, smell, taste, and feel” (Cambridge English Dictionary, 2018). Our sensory receptors respond to external stimuli which send electrical impulses to our brain. Our brain interprets this information and perceives it as one of the senses. One might say that senses form the basis of our perception. How we effectively engage with the world depends on whether we are consciously aware of the surrounding stimuli. However, we often take this ability for granted. In the rise of the digital age, we live our daily lives stuck to the screen on the palm of our hands whilst consuming boundless information yet not being fully aware or appreciating our surroundings.

In this essay, I want to explore the human senses and how they can affect the way we perceive the landscape. Firstly, I look at the dominating role of vision and its disadvantages. I then criticise the flaws of visual representation in landscape architecture. The final paragraphs explore the other senses and how they can be beneficial to how one might interact with a landscape space.

### **Dominance of Vision**

Throughout history, vision has been perceived as the most dominant and influential of all the senses. Evidence dates far back to ancient Greek philosophers, such as Plato who saw vision as “humanity’s greatest gift” (cited in Jay, 1994). Similarly, Aristotle regarded vision as the most superior of the human senses because it aids in understanding. When we enter a space, the things we first notice relate to sight. Around 30% of the human cerebral cortex is exclusively involved with visual processing, compared to 8% for touch and 3% for hearing (Grady, 1993). This shows that, naturally, we are inclined to gain information through our eyes and become visually stimulated. Therefore, this implies that, biologically, the dominance of vision is evident.

A hierarchical system was developed during the Renaissance where sight was regarded as the highest gift and touch was the lowest. During the Picturesque, English painters, gardeners and architects “were united in the

universal mode of vision” (Watkin, 1982). Due to this, much of art and design is inspired by the aesthetically pleasing forms that accommodate the demands of our eyes. We value the landscape through its visual appeal, simply just seeing the outer surface of design. These designs often alienate the users from their surroundings. Therefore, in order to create an environment that is fully interactive, one must create more than just the attractive aesthetics and produce something that stimulates all of our senses presenting something that is meaningful. This in turn would strengthen our sense of consciousness.

Le Corbusier, a key figure of Modernist architecture, stated that “I exist in life only if I can see ... I am and I remain an impenitent visual – everything is in the visual” (Corbusier, 1991). He believed one needs to see clearly in order to understand. Pallasmaa (2012) criticised Le Corbusier’s dismissive statements towards the other senses noting that “the reductive bias becomes devastating in his urbanistic projects”. Le Corbusier’s idea of the utopian city stemmed from his quest of harmony. The design, known as Ville Radieuse, was composed of high-rise buildings that are uniform and based on pure geometry and form. The urban plan highlighted order and symmetry. Although unrealised, his vision for a controlled urban plan influenced so much of how cities are shaped today. Pallasmaa, however, states that “the contemporary city is increasingly the city of the eye, detached from the body by rapid motorised movement” (*op cit*). This depicts that city plans are devised from an aerial view, lacking human scale which prevents human connection with their surroundings. Coincident with the development of the visual-centric city, the dominating role of the eye slowly drifts us away from the present world. We only become a viewer, on a merely mindless journey with our eyes, without any emotional engagement, conscious participation or identification with our surroundings. We view the modern city through the windows, separating our eyes from our bodies. The dominance of vision blinds our other senses.

### **Visual Hegemony in Landscape Architecture**

Due to the primacy of vision, much of the work that we do as landscape architects centres heavily on the technique of visual representation. The exercise of making visual diagrams, axonometric drawings and digital computer renderings is synonymous with the landscape design process. Ideas are normally presented this way, in its core, as a flat imagery. Landscape architecture, however, is not a visual art, but spatial. “If it is true that architecture creates spaces, then to evaluate them one must go inside these spaces. One has to be bodily present” (Böhme, 2017).

This then prompts the question whether we should introduce advanced digital technology such as virtual reality into the field of landscape

architecture. In an article for WIRED magazine, Lubell (2016) states that virtual reality has the “ability to draw designers and their clients into a visceral world of dimension, scale and feeling, removing the unfortunate schism between a built environment that exists in three dimensions and a visualization of it that has until now existed in two”. Later he cites the Vice President of Technology at Iris VR, that the basic actions, such as walking and having a 360° view of a space, as well as interactions such as climbing stairs or changing the position of the sun are all the things impossible to do in two-dimensions. By embracing the technological shift, we can transform the way we design in the future. It has the possibility to become problem solving tools for the spatiality in a landscape design, in a way our traditional techniques are incapable of.

Despite this, one may argue that the virtual reality technology still predominantly relies on interaction from our visual perception. In this virtual realm, it has a deficiency of haptic perceptions. Pallasmaa (*op cit*) explains that our “hands are the sculptor’s eyes”. Our tactile senses determine how we perceive material. He claims that “the skin reads the texture, weight, density and temperature of matter”. This ability is important for landscape architects because materials, in one sense, are our paints. It forms the outer skin to our design. Textural qualities are added to a space through the use of hard and soft landscape materials, to represent and convey the core concept and meaning of a design. It ensures how well the space is perceived both physically and emotionally. Therefore, the lack of haptic sensitivity is a huge drawback to virtual reality because we might not be able to have a full sensory experience in a virtual space. As a result, it can prevent visitors from having an emotional attachment.

Consequently, our reliance on the visual aspect of design could be a disadvantage as it might not fully represent how we want the space to be experienced. A two-dimensional image is not sufficient enough in predicting or showcasing spatial phenomena. It is important for us as designers to understand that there is more than what meets the eye. Landscape architecture has the ability to acknowledge the feelings and emotions of people. Therefore, by understanding human experiences with the built environment, from a phenomenological point of view, we can design more holistically and bring meaning and identity to a place.

### **Touch: an emotive sense**

Touch is powerful sensory tool that is often overlooked. Due to the bias towards vision, we suppress the full capability of our tactile senses. Based on medical evidence, Ashley Montagu states that “the skin is the oldest and the most sensitive of our organs”, and furthermore that the skin is “our first medium of communication” (1986). At a young age, we perceive the



Fig. 1 Sound and vision: Diana Memorial Fountain, Hyde Park

world more through our tactile senses and our curiosity fuels our need to engage and feel the surrounding objects. This perceived experience forms a building block to our knowledge and understanding of the world around us. Our skin recognises textural qualities, mass, density and heat, or the absence of heat. Through this, we learn and produce our own experiential memory. As we encounter similar matter, we know what to associate it with.

Touch has the ability to create strong imagery in our memories. Pallasmaa (*op cit*) notes that “all the senses, including vision, are extensions of the tactile sense”. Our eyes observe and investigate whilst our hands approach and feel. However, touch is more than just a physical engagement. Hapticity has the capacity to integrate the perception of time, emotion and memory. Pallasmaa intelligently describes its potential with the imagery of home. “There is a strong identity between naked skin and the sensation of home”. Through our haptic sense, we are able to understand the concept of intimacy and warmth. The word home evokes our memories of childhood, stirring up all the associative emotion we have, like nostalgia. “Home and the pleasure of the skin turn into a singular sensation” (*op cit*).

The simulation of tactile senses in landscape design constructs a space that is beyond visual seduction. It has the ability to amplify human connection and the sense of meaning. The interaction of materiality within a design allows “inputs from both objective properties of materials and subjective

responses from people” (Zuo, et al, 2013). People would use their previous experiences or associative memories to construct the emotive responses to a place. Therefore, familiarity and association plays a significant role in how a landscape is perceived. This informs us of the importance of collective and personal memory in transforming a space into a sense of place.

### Revival of auditory senses

Sound comprises vibrations that travel through a medium such as air. In contrast to vision, it is omnidirectional. This means that sound is transmitted in different directions. Thus, the ear can receive and perceive sound from all orientations. Pallasmaa (*op cit*) states that “sight isolates, whereas sound incorporates ... sight implies exteriority but sound creates an experience of inferiority”. He also describes the ability for soundwaves to reflect off buildings, returning those waves back to our ears. This implies that sound is around us and is constantly being transmitted. The problem is whether we are aware of the phenomenon happening. Due to the primacy of our visual senses, we become more ignorant about the other senses, such as sound. Princess Diana’s fountain (Fig. 1) contrasts light with sound. Our unconsciousness leads to the declining value of the audible world.

Interestingly, vision has not always been the dominant of the senses. Contrasting with its ancient Greek origins, Lucien Febvre revealed that “the sixteenth century did not see first: it heard and smelled, it sniffed the air and caught sounds” (cited in Jay, 1994). This view is supported by Robert Mandrou’s argument that “The hierarchy [of senses] was not the same [as in the twentieth century] because the eye, which rules today found itself in third place, behind hearing and touch” (cited in Harvey, 1990). This reflects the fairly recent emergence of a visual hegemony. It also denotes that historically, dominance of hearing was present but has been gradually replaced by vision. This could be due to the technological shift in the modern-day world. Regardless of whatever the dominating sense is, change is inevitable. As designers, it is our role to adapt with these changes. By viewing the senses equally, we could build landscape that stimulates all of them, thus consciously uniting ourselves back to the world.

This offers various possibilities for the revival of auditory integrity. Although Pallasmaa argues that “wide, open spaces of contemporary streets do not return sound”, the transmission of sound could be from the materiality. For example, the resonating echo of footsteps on a bare marble lobby floor conveys a hard and cold acoustic sense of arrival. On the other hand, thick carpeting mutes the announcement and communicates softness, warmth and intimacy (Blessner & Salter, 2007). This concept can be applied to landscape design. Potential auditory design components include hard materials such as paving or soft materials like grass. However, one particular element that

could be explored is water. The sound of water cascading down could be perceived as relaxing (Fig. 1). This can be incorporated in therapeutic or healing landscapes. Not only does it invite engagement with the space, it also provides the a soundscape of comfort and serenity. Hence, there is hope for auditory interaction. However, it is important as designers to note the intrinsic auditory character of a site. Even though a bustling street may convey a sense of chaos, it still could be the charm of the place. We must also be mindful of the local perception of a space. As a designer, it is essential to find the beauty in all of its imperfections. As a result, we can provide and create a built environment that is meaningful for you and for the users. “Sound is invisible, but has the power to change the character of the space we occupy” (Schulz-Dornburg, 2000).

### Olfactory and Taste: a collaboration

Smell is another invisible component of landscape architecture. Our ability to smell derives from the olfactory sensory neurons, each having odour receptors, found in a small patch of tissue inside our nose. When microscopic molecules are released by substances, they stimulate the receptors. Once the molecules are detected, the neurons send messages to our brain (NIDCD, 2014). Pallasmaa (*op cit*) states that “the most persistent memory of any space is often its smell”. We sometimes cannot remember the appearance of a particular thing in the past, however, once we smell an associative scent, the image resurfaces to our memory. This is supported by the notion that “the nostrils awaken a forgotten image and we are enticed to enter a vivid daydream. The nose makes the eyes remember” (Pallasmaa, *op cit*).

Additionally, Barbara and Perliss (2006) reveal that our olfactory senses can dive into our deepest recollections and evoke the same emotions of when we first encountered the scent. This means that through the senses we can elicit feelings of pain or pleasure towards our surroundings, depending on our associative memory. This presents our nose as an organ that aids our memory, triggering the sense of familiarity and nostalgia. It has the ability to initiate our journey into the past whilst we experience it mutually with our other senses. This provides another element to be explored in landscape design: the idea that scent can be explored with planting especially in therapeutic landscapes. This would then mean that not only does it make us emotionally connected to the place, it also has the ability to improve our wellbeing. (Gorman, 2017)

Taste is still an abstract concept in landscape architecture. Although we could have associative memories with certain plants such as fruit trees, it is more prominent towards the fruit itself rather than the tree or space. However, as Pallasmaa (*op cit*) mentions, “there is a subtle transference between tactile and taste experiences”. He explains that our visual



Fig. 2 The Scented Garden, Sudeley Castle, Gloucestershire



Fig. 3 Tactile map in Potters Field Park, London

perception can evoke oral sensations. Moreover, Gibson (1968) suggests that our sense of smell and taste work in conjunction with each other, since they both are, in essence, chemicals. This supports the idea that our senses

are the extensions of each other. Bachelard (1971) describes this as “the polyphony of the senses”. Our senses work collaboratively with each other to allow for a full sensory experience and, instead of seeing the senses as individual entities, we avoid creating a sensory hegemony. Therefore, our job is to successfully involve all the aspects of the senses and ensure that they interact with each other. This way, one can truly be aware of one’s surroundings whilst creating a memorable emotional connection with a particular place.

### Conclusion

The dominance of vision has blinded our other senses. Therefore, in landscape architecture the places that we create should allow for sensory experiences that interact and fuse into each other. Consequently, this synthesises and strengthens our existential experience, becoming more consciously present in a space. Additionally, the idea of a multi-sensory design can help increase the interaction and engagement on both a physical and emotional level. Senses can be used as tools that tap into our associative memories allowing further emotional connections. This in turn helps establish place and meaning.

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**Photo credits:** Melissa Nanang (Fig. 1) and Creative Commons Attributions

### Biographical notes

*Melissa Nanang from Sarawak, Malaysia, is completing a degree in landscape architecture at the University of Gloucestershire. This submission for her module Philosophy and Creativity discusses the idea that multi-sensory design can create deeper meaning and a sense of place in the landscape. Her dissertation is exploring the application of bio-photovoltaics towards a sustainable future and better living standards for her ethnic homeland.*

# THE “CLOSED GARDENS” OF HUNGARY\*

Michael Ivory

From the Tupolev Tu 154 of Malev, 30,000 feet above the Danube, no direct evidence is visible of the works and installations marking the frontier between the Hungarian People’s Republic and Austria.

The pattern of the landscape as a whole, however, makes it quite obvious that the observer is crossing the boundary separating two very different social systems. On the Austrian side this pattern is a technical dreamcoat, a rich and complex mixture of mostly small fields carrying a variety of crops, expressive of the widespread individual ownership of a Western democracy. At the invisible frontier the change is dramatic: a countryside of huge, evenly-coloured open fields stretching almost from one village to another, to be measured in square kilometres rather than in hectares, and the obvious result of the collective or State farming practices of a People’s Democracy. The apparent monotony of this landscape is however relieved by the frequent occurrence of another pattern. Bundles of long, narrow strips of land lie scattered across the countryside, sometimes seemingly at random, elsewhere coming together to form larger groupings and displacing the collective prairie altogether. From the air, the crops they carry produce a richness and variety of texture and occasionally almost kaleidoscopic effects of colour. One feels that here is an ancient landscape, a relic of the feudal pact, perhaps, tolerated on the margin of collective farming but no doubt due for eventual “rationalisation”.

In fact, some parts of this landscape of “closed gardens”, as they are known, are quite recent and, as a whole, far from being threatened with conversion to collectivisation, their future as an important element in the social and economic fabric of Hungary is assured.

Although in some ways similar, physically and socially, to British allotments or German Kleingärten, these Hungarian gardens have a longer history. An integral part of the pattern of traditional rural land use, they were sited on steep slopes unsuitable for arable farming, sometimes on the margin of the village but quite often detached from it among the other fields. Divided up among individual owners, they grew a variety of useful plants, above

all vines, frequently fruit trees and vegetables, and also herbs and spices and individual crops. In this variety they reflected the polyculture of the traditional farmyard, although animals were not present. In fact the name “closed gardens” derives from the need to fence off the plots against the depredation of grazing animals. Sometimes small structures were built to house tools and equipment.

In recent years however, the desire of a significant proportion of the Hungarian population for a second home or weekend cottage has led to the colonisation of many closed gardens. The consequences of this movement, in environmental terms, have usually been unfortunate, and in some areas landscape planning measures are being taken in an attempt to adapt the gardens to their new function without losing their special visual qualities and economic role.

Closed gardens exist in most parts of Hungary. One of the most extensive and, in planning terms, one of the most vulnerable areas, is that extending along the north shore of Lake Balaton. Here the same basic pattern repeats itself frequently: a village and its arable land occupies the flat or gently sloping area close to the lake: as the gradient steepens and the land becomes less easily cultivated, vineyards take over, subdivided into closed garden plots traditionally of 3000-5000 square metres, often with the south east orientation ideal for viticulture. The vines extend up the slope as far as physically possible (sometimes up to a gradient of 30%) giving up finally to scrubby Karstic woodland (Figure 2).

Scattered in an apparently haphazard way among these wine-gardens are the buildings housing the vintners’ wine-presses and other equipment and the deep cellars, where the wine is kept at a constant temperature of 10-12°C. The traditional wine house of the Balaton region (and elsewhere in Hungary too) is one of the most pleasing examples of the integration of vernacular building with its landscape. It sits gable-on to its wine-garden at the upper end of the sloping plot, looking out over the vines to the lake. A central door, perhaps flanked by small windows, gives on to a dark interior, from which precipitous steps lead into the cellar. The spoil excavated in the course of digging out the cellar is formed into a long narrow mound above, continuing the line of the steeply-ridged and symmetrical roof and tying the whole structure even more firmly to its surroundings (as well, of course, as giving extra lagging). Roofs may be tiled or thatched while walling materials are either limestone in the Karst area or rendered sun-baked mud and straw blocks elsewhere. Decorative plasterwork of a greater or lesser degree of sophistication on the gable signals the owner’s pretensions and may bring the building into the category of “Peasant Baroque”, but in no case were any of these vernacular buildings conceived of having a

\* *From the Archive: Landscape Issues vol 3 (1987) no 2 pp 7-18*

function beyond the economic one. Grassed areas immediately around the building provide space for essential tasks like barrel caulking and sampling the vintage, while individual fruit trees provide (as well as fruit) essential summer shade.

Not every plot is built on, since one wine-house may serve several vineyards in one person's ownership. Although the basic structure of this landscape is a simple one, it permits a great range of detailed responses to the changing

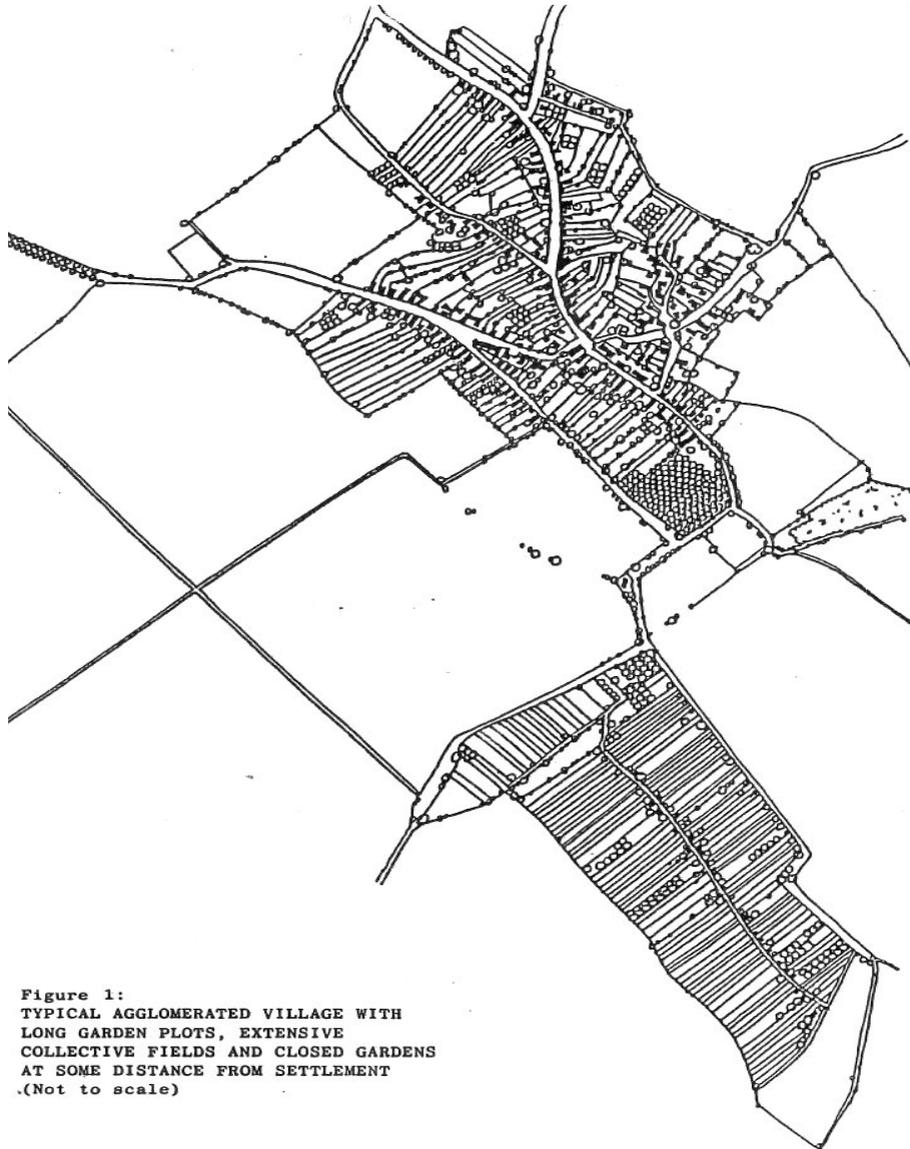
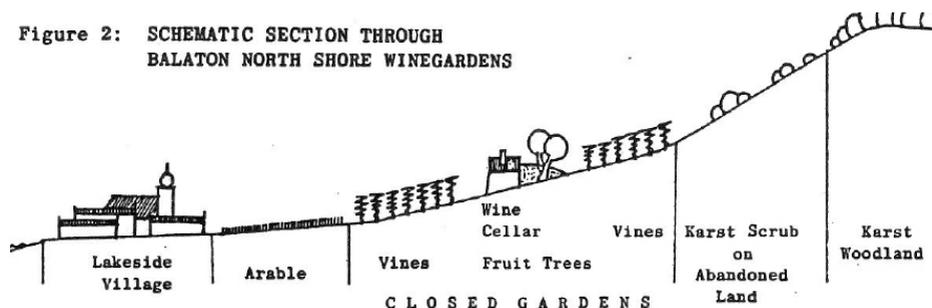


Figure 1:  
TYPICAL AGGLOMERATED VILLAGE WITH  
LONG GARDEN PLOTS, EXTENSIVE  
COLLECTIVE FIELDS AND CLOSED GARDENS  
AT SOME DISTANCE FROM SETTLEMENT  
(Not to scale)

geographical conditions encountered along the lakeshore. It is an exposed landscape in more than one sense. From the lakeside settlements and main road it is very visible, an almost constant background presence, and thus an important element in the identity of this much loved and visited area. But it has also been exposed to strong pressures for change which threaten its stability. These pressures have come in two waves. The first, in the 1950s, collectivisation, has receded, not least because the successful management of these small plots seems to demand the kind of commitment and even knowledge of, and feeling for, individual vines traditionally guaranteed by personal ownership. A much more serious and continuing threat is however that posed by the attractiveness of these wine-gardens as sites for second homes, particularly for Budapesters. Balaton is the most popular of all places in Hungary for second homes, to an extent where the north shore is now almost continuously built up. In the 1960s and early 1970s, as the riparian zone filled up and prices for lakeside plots rose, attention turned to the possibilities of the vineyards. The wealthier discovering the advantages of greater privacy, space and quality of landscape and building began buying wine houses and their attendant plots in the more accessible areas. Late comers and the less affluent contented themselves with the plots alone on which to erect their own "chalets", as funds and availability of materials permitted. This invasion by city dwellers was helped in many cases by the willingness of the local owners to sell off the vineyard plots. Such people tended to be elderly and to have children who preferred the economic opportunities of town life to staying in the countryside and who were therefore not interested in helping to work, and eventually inherit, their parents' land.

Degradation of the landscape followed the change in ownership and the substitution of a recreational for an economic function. Although pleased to think of themselves as part-time countrymen, the newcomers normally lacked both the skills and the time (particularly if they came from far-away Budapest) to manage the vines in the traditional way. If local labour could not be found to carry out the tasks, good husbandry suffered. Inappropriate ways gardening made their appearance, like the planting of exotic trees and shrubs (including that horticultural equivalent of the garden gnome, the blue spruce, without which no suburban garden in Central Europe appears complete.) Perhaps the most serious change of all, however, was the proliferation of low structures, mostly out of sympathy with the landscape and ignoring the precepts of traditional construction. Building regulations have proved largely ineffective in controlling the process. One, limiting floor area to twelve square metres, is intended to prevent anything being built other than functional buildings serving the agricultural needs of the plot. But it is either ignored or, more bizarrely, circumvented by erecting a building on several storeys, none of which exceeds the statutory

Figure 2: SCHEMATIC SECTION THROUGH  
BALATON NORTH SHORE WINEGARDENS



minimum floor area. The result naturally makes a strange contrast with the older single-storeyed wine-houses, as does the sometimes weird variety of materials, obtained from a variety of sources, for walls, roofs, fences and gates. Incongruous flat or asymmetrical roofs appear too. The visual confusion is further accentuated by excessive subdivision of the original plots and the consequent increase in building density.

The final threshold in the process of transformation of a working landscape to a recreational/residential one is crossed when the local authority accedes to pressure from the new owners for the area to be formally designated part of the built-up area, thus making it eligible for public funding for such "improvements" and "amenities" as electricity, sewerage, lighting, surfaced roads etc.. When these have been completed there will be virtually nothing to distinguish such an area from any other assemblage of weekend homes.

For a long time, little positive action has been taken to prevent the quite rapid erosion of the traditional landscape of such closed gardens, whether on Lake Balaton or elsewhere. The reasons for this are manifold. The country's permanent housing crisis, with most urban families living in very cramped conditions, makes it politically difficult for government to resist the claim of hundreds of thousands of individuals for second homes, sites for which have to be found somewhere. In contrast to English town-dwellers, whose centuries-old tradition of countryside worship led, amongst other things, to an early appreciation of the qualities of humble domestic building, most Hungarians are still close to a rural past which is identified with poverty, insecurity and low status. The cult of vernacular building, and still less, of vernacular landscape, is thus still in a very early stage of development and confined largely to architects and other cognoscenti. Most village-dwellers, for example, are busily engaged in transforming both their farmhouses and gardens (of the type shown in Figure 1) into as close an approximation as possible of a suburban villa and its surroundings, with metal rather than wooden windows and lurid annuals instead of ducks. Nor has there been, at an institutional level, an effective body concerned with landscape

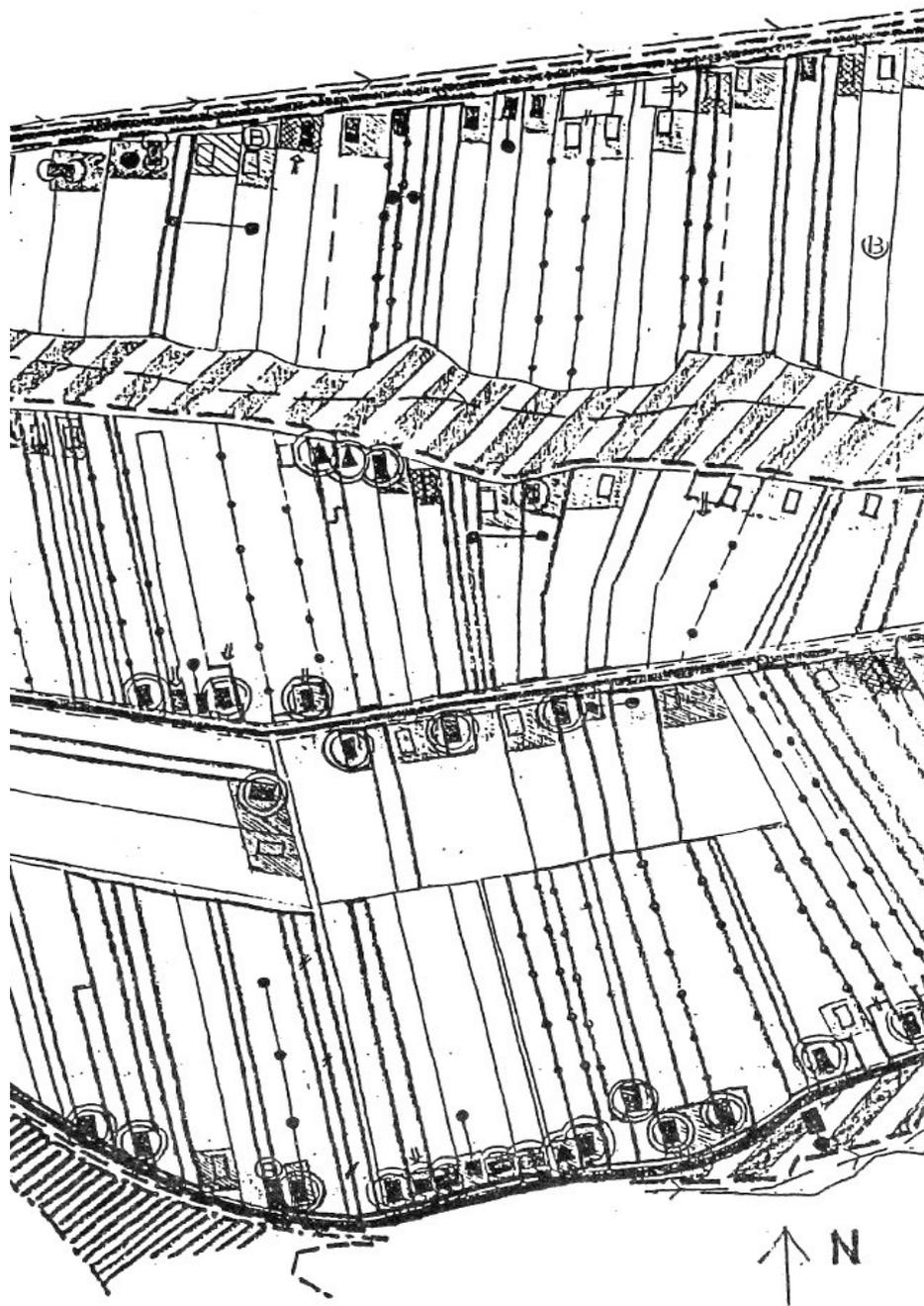
conservation as such. The Ministry of Agriculture looks at closed gardens from the perspective of food production, the Ministry of Construction from a purely building point of view. The perception of closed gardens by local authorities may be influenced by the enhanced land values accruing when the gardens are converted to recreational or residential areas.

Recently, however, the situation has begun to change. In the County of Pest, for example, surrounding Budapest, a landscape plan is being prepared for an area of closed gardens which have become run-down. Here, close to the metropolis, pay in industry and commerce is high and agricultural wage-rates by comparison unattractive. The drift away from the land is not sufficiently compensated for in this case by the prospect of an easily-accessible market for produce and many of the plots have an untended air, while others have been developed in a sporadic way as weekend homes. The prospect is one of further change of this kind until the area becomes indistinguishable from any other "weekend cottage zone" of variegated chalets and ornamental planting. The landscape plan sets out to revive economic viability and in so doing, to restore visual quality. The means proposed are on the one hand, disseminating information about crop management and on the other, strengthening and enforcing planning regulations. Thus a model closed garden would be created and managed to demonstrate both traditional and progressive husbandry techniques: a historic winery would serve as an information and social centre as well as cafe and horticultural equipment shop; and capability maps would be available showing the suitability of the different parts of the site for a variety of crops, particularly fruit trees with their varying susceptibility to frost damage. Other documents show where siting of new buildings would be acceptable (for example, not on the crests of hills), and regulate roof shapes and building materials. The hope is that the original horticultural role of the closed gardens will be revitalised and combined harmoniously with an acceptable level of recreational/ weekend-home use.

In the southern city of Pécs, some loss of the closed gardens which occupy much of the urban fringe is regarded as inevitable in the face of irresistible pressure for second, and sometimes first, homes. Here the approach is one of "damage limitation". Using nationally accepted criteria, three categories of closed garden are defined:

- \* those which are to be formally designated as part of the built-up area and which can therefore be provided with all the normal urban services and facilities,
- \* those to remain in exclusively productive use, and
- \* those where the productive and recreational functions can be combined.

By designating a sufficiently large area in the first category to meet the



LEGEND

- |   |  |   |   |
|---|--|---|---|
|    | Area excluded from closed gardens  |    | Satisfactory building                             |
|    | Closed gardens to be retained  |    | Building requiring alterations                    |
|    | New woodland planting  |    | Building to be screened by planting               |
|    | State/collective vineyards   |    | Derelict building to be restored                  |
|    | Woodland   |    | Building or hut to be demolished                  |
|    | New buildings permitted  |    | Building under construction to be removed         |
|    | New buildings permitted only when particular conditions fulfilled (eg amalgamation of adjoining plots) |    | Possible new building                             |
|    | New buildings permitted provided plot divided  |    | Building to be conserved of local significance    |
|    | Plot boundary  |    | Building to be conserved of regional significance |
|  | Plots to be amalgamated  |  | Proposed track or road                            |
|  | Plots to be considered together with building permission   |  | Drainage channel                                  |
|  | Proposed subdivision of plots of more than 4000m <sup>2</sup>  |  | Building prohibited                               |
|  | Proposed amalgamation of plots of less than 2000m <sup>2</sup>   |   |   |

Figure 3: LANDSCAPE PLANNING PROPOSALS FOR SECTION OF CLOSED GARDEN AREA ON LAKE BALATON NORTH SHORE (Not to scale)

demand for second homes, it is hoped to prevent, temporarily at least, the unregulated and sub-standard building which might affect the other two types of area.

Because of their particular importance, the landscape planning of some wine gardens of Balaton is entrusted to the national and regional planning agency Varosépítési Tudományos és Tervező Intézet (VATI). Individual plans are prepared for those areas where recreational use is to be combined with continued production. These are based on detailed survey and evaluation of all relevant physical and social factors (including for example the distance of plots from their owners' primary residence in order to assess whether time is likely to be available for proper management.)

The landscape plan itself sets out an array of measures, some compulsory, some advisory, designed to reconcile continued production and maintenance of visual quality with a degree of second home ownership and construction. Among the compulsory proposals might be:

- \* designation of areas to be afforested, typically including the marginal land of the steep upper slopes which have often fallen into disuse,
- \* prohibition of building on ridges, and
- \* prohibition of building on small plots (eg less than 1500 square metres).

The recommendations might include the following:

- \* suggestions for acceptable subdivision of existing large plots,
- \* potential sites for new building,
- \* guidelines for the design of new buildings (discouragement of metals and plastic for example, orientation of roof line, general massing and colour to correspond very broadly to the existing building), and
- \* land capability for different crops.

In addition an inventory is made of all plots with the recommended action summarised. In the case of buildings erected without permission – a frequent occurrence – this would stipulate removal.

The erosion of the environmental quality of the traditional agricultural landscapes is an issue in most European countries, concern and controversy having been largely contained within national boundaries. Such landscapes may often be properly described as vernacular in that they were hand-made by their users rather than by experts or specialists, that they employed materials available locally and that they evolved slowly over long periods. Their appeal to us today is a strong one, which can be interpreted in various ways, usually by reference to the contrast they make with contemporary landscapes, by comparison with which they are invariably richer, more varied and complex, both ecologically and visually. But it is at least

possible that it is their expressive qualities that are most interesting, the ways in which they make visible a lost intimacy between the individual, the community and the land which the nature of contemporary modes of production have done away with. The appeal of the closed gardens would appear to fit nicely into this category of a historic landscape expressing the kind of former man – land relationships about which we are pleased to cultivate nostalgia sentiments.

But they are of course more than this, and it is this role as an expressive element of contemporary Hungarian society, rather than simply their status as a historic landscape to be preserved, which is particularly interesting. What seems to be the essential aim of the Hungarian landscape planners involved is the maintenance of a “modern” vernacular landscape, one with historic elements to be sure, but one which fundamentally sets out to ensure the possibility of large numbers of individuals working the land in a productive way, both for profit and for recreation.

The situation is full of paradoxes and contrasts: the combination of work and recreation for one, the promotion by a Communist state of this type of individual land ownership for another. In a paper read to the 1984 IFLA Congress, Dr Laszlo Dalanyi, now of the Ministry of Construction and Town Planning, expressed cautious confidence that the closed garden landscape could be conserved by the type of planning procedures described briefly above. His vision of their future was one of harmonious combination of “active recreation for broad groups of society” with the interests of those continuing to work the land and with the enhancement of national agricultural production. It has to be admitted that the “broad groups” referred to by Dr Dalanyi are in fact likely to consist mostly of relatively moneyed families able both to purchase and travel long distances to their weekend homes among the closed gardens. The virtual absence of a public recreational element in the solution proposed is also striking.

Given the previous relative unawareness and neglect of the value of vernacular building and landscape in Hungary there would seem to be a good opportunity to use the plans now being prepared to promote the closed gardens, particularly the historical ones, and to increase their visibility in the public mind. How this might be done would of course be a matter for debate, but would presumably include encouragement of that public access which seems almost entirely lacking at present. Otherwise it may well be that the landscape planners of VATI of Pest County and elsewhere have found the formula leading to successful synthesis of land, people, work and pleasure, freedom and control, which will ensure the survival of this significant landscape of “closed gardens”.

# REFLECTIONS

## Scott Farlow

Impressions and last words of the module *AD5606 – Contemporary Culture and Landscape*. Margaret Wheatley stated that “seeing with new eyes gives us the capacity to solve problems instead of creating more of them”. In many ways I wanted this module to offer all students a space and a moment in the density of the contemporary world.

Thinking space.

Space in which to be, to listen, to feel,

A moment to wonder.

A lens through which to see afresh.

Or at least differently. With ‘new eyes’.

I desired to make some of the invisible visible and the intangible, tangible.

To bring the remote closer.

To heighten your personal curiosity and awaken a collective consciousness.

To break the rules, to share a lived experience, or two,

To somehow meet an unmet need – unknown or unknowing –

And for you all to feel some thing.

In so doing, to ask ‘why?’ or ‘what on Earth?’ or ‘what is truth?’

To re-frame your understanding of the world.

To give the past validation, a context and credence;

And expose some of its aphorisms, architecture and art,

Its boasts, blunders, borders and barriers, and notions of belonging,

Its catastrophes, crises and conflict,

Its dangers and dignities, disorder and dust,

Embedded ecology, empathy, ethics and equality,

Alongside forgotten friends, famine, fear and freedom,

Girl-power and ghosts,

Histrionics, humanity and hope,

The influence of innovation and inspiration, inequality and identity,

Journeys and justice,

Knowledge and kindness,

Life, love, lamentations and loneliness,

Money, migration, memory and madness

Nuclear, nonsense,

Originality and ordinariness,

Post modernism, peace, politics, protest and place, process not product,

Quality not quantity,

Refugees and reconnection,

Symbolism, space, shelter and systems,

Trauma, tranquillity, trends and trust,

Not trendiness but

Unexpectedness, urbanism,

Vacillation, virtues and virtuosity,

Woven wanderings and wonderings,

Xenophiles and xenophobes,

All presented with zeal, zest, a zig zag or two and

Maybe a bit of

Zen.

At the outset, I asked myself:

– What is history?

– How do we feel it?

– Where do we fit into its mosaic?

– And make sense of its complexity and contradictions? Of actions and events that make no sense?

And now, in the present,

– What does the future hold?

I hoped

To make the seemingly irrelevant, relevant,

To share unheard, undiscovered, unknown stories,

To speak on behalf of the silent voices,

To bring life to the lost souls,

To make them momentarily alive,

To reveal new and unexpected narratives,

And, in the re-telling,

To make them believable, real and tangible,

To gently unsettle, cajole and shake the branches of your comfort tree.

To remind you that we are all connected to one another,

The earth and the universe.

We are all stardust.

Made manifest. Alive

On this; our only planet home.

To invite you to examine the events of our lives

In a different, broader, more philosophical, more thoughtful and richer context.

To enrich.

To encourage you to question, to query. To discover. Or rediscover.

To consider and reconsider, how

To shape and re-shape what you know.

And what you don't.

To do this critically.

To give you agency

To challenge (and oppose) mediocrity.

To do this continuously. Consciously.

Rigorously, with commitment.

To encourage a wider, broader, deeper sense of self and sense of place.

Born of sensitivity, integrity, authenticity.

And to do this sensitively, with humility and honesty.

Intellectually

And generously.  
 With humour.  
 And, occasionally  
 To subvert.  
 To subvert the spectacle of the system,  
 Ignorance and materialism.  
 To build your capacity to act,  
 To explore a different kind of power;  
 One that is born of empathy, compassion and a richer sense of community.  
 A sense of belonging.  
 A different sense of it all.  
 For a moment or two.  
 To present a larger, broader, different perspective of time.  
 For time is a construct, an illusion, a management device, a means of control.  
 Let go of control. From time to time. Give time time.  
 Time to be.  
 Give yourselves permission to claim  
 A moment (or two) to pause and wonder at the wonder of it all,  
 To experience the world with all its interwoven and disconnected  
 connectedness.  
 And chaos and contradictions, through a different, unexpected lens  
 And, in the beauty of the everyday,  
 A moment of  
 Transcendence.  
 Remember, there are no absolutes,  
 So, as wars continue, and the forests and the ice caps keep shrinking,  
 And increasing numbers of citizens become victims of loneliness and the  
 injustices meted out by  
 the greedy and corrupt,  
 And the rich get richer,  
 As the darklands get darker and the other lands become more  
 impoverished,  
 Maybe you will reflect on this experience  
 And become empowered  
 To fight (in a small way) for truth and justice,  
 Common values, nature and authenticity,  
 Maybe you will  
 Strive to avoid illusion, fake palaces and false pretences,  
 Endeavour to love life and live life imaginatively, honestly, with  
 fascination, wonder and delight,  
 To surprise and be endlessly surprised,  
 To collaborate and agitate,  
 And innovate and activate  
 The hinterlands and edgelands,  
 The urban lands and rural lands.  
 Maybe you will be compelled to shape, inform, influence and reshape  
 The landscapes of minds, of hearts and souls,

Of people and places,  
 Their lives and loves,  
 And tread gently and courageously,  
 To positively, honestly and consciously  
 Activate a new future  
 Perspective  
 That realises your dreams  
 And those of others.  
 Reflect on this,  
 Upon these words. This feeling.  
 Think, don't fear failure,  
 Take action. Directly, imaginatively,  
 With feeling.  
 Empathy,  
 Hope and meaning.  
 What have you got to lose?

### **Biographical notes**

*Scott Farlow is a multi-media artist, creative practitioner, designer, and mentor, who also teaches and 'performs' as a module tutor at the University of Gloucestershire and as a visiting lecturer elsewhere. He says he never tires of inspiring through learning and exchange. "For me, teaching is a form of collaboration – a creative and dynamic interchange – between myself and my students". At the very least, it is a collective journey into unknown and previously unexplored realms of the imagination and intellect. My socially-engaged practice explores landscapes of identity, connection and belonging by encountering, exploring and sharing responses to both familiar and unfamiliar places.*



# A STONE FARM

## Edward Thomas

A crossing of roads encloses a waste place of no man's land, of dwarf oaks, hawthorn, bramble and fern, and the flowers of knapweed and harebell, and golden tormentil embroidering the heather and the minute seedling oaks. Follow one of these roads past straight avenues of elms leading up to a farm (built square of stone, under a roof of thatch or stone slate, and lying well back from the road across a level meadow with some willows in the midst, elms round about, willow herb waving rosy by the stream at the border), or merely to a cluster of ricks; and presently the hedges open wide apart and the level white road cools itself under the many trees of a green, wych elms, sycamores, limes and horse-chestnuts, by a pool, and, on the other side, the sign of the 'White Hart', its horns held back upon its haunches. A stone-built farm and its barns and sheds lie close to the green on the other side, and another of more stateliness where the hedges once more run close together alongside the road. This farmhouse has three dormers, two rows of five shadowy windows below, and an ivied porch not quite in the centre; a modest lawn divided by a straight path; dense, well-watered borders of grey lavender, rosemary, ladslove\*, halberds of crimson hollyhock, infinite blending stars of Michaelmas daisy; old apple trees seeming to be pulled down almost to the grass by glossy-rinded fruit; and, behind, the blended line of hills a league away, wedding the lowly meadows, the house and the trees to the large heavens and their white procession of clouds out of the south and the sea. The utmost kindliness of earth is expressed in these three houses, the trees on the flat green, the slightly curving road across it, the uneven posts and rails leaning this way and that at the edge of the pond. The trees are so arranged about the road that they weave a harmony of welcome, of blessing, a viaticum for whoever passes by and only for a moment tastes their shade, acknowledges unconsciously their attitudes, hears their dry summer murmuring, sees the house behind them and those who live therein, of those who planted the trees just so and not otherwise, of the causes that shaped the green, any more than of those who reaped and threshed the barley, and picked and dried the hops that made the ale at the 'White Hart'.

\* *Artemisia abrotanum*

**Edward Thomas**, English poet, 1878-1917, probably best known for *Adlestrop*, a "nebulously intangibly beautiful" poem according to Ivor Gurney, spent his early career producing nature studies and critical reviews before taking up poetry.

Born in Lambeth, south London, Thomas became familiar with the open landscapes of the local parks, the common land and the suburban fringe, observing closely the plants and wildlife. Later, spending holidays with his grandmother in Wiltshire and other relatives in Wales, his interest in natural history began to dominate his life.

In 1897 he published his first book, *The Woodland Life*, and later his more acclaimed travelogues such as *The Icknield Way*, *The South Country*, *Beautiful Wales* and *The Heart of England*. All these topographical books are significant as, according to Anna Stenning, he "was a gifted traveller along both the literal road and the metaphorical journey of discovery into the landscape"<sup>1</sup>, bequeathing a perspective on the countryside before the advent of farm mechanisation changed it indelibly. For Robert MacFarlane, Thomas was an inspiration and a muse, offering a form of participation in communal history – "And he walked: following lanes to lonely farmhouses or abandoned barns..."<sup>2</sup>. This passion for walking was acknowledged by his wife in a foreword to an early edition of *The South Country*<sup>3</sup> – "Nor was he as he walked only the nature lover ... nor was he only the aesthete satisfying his eyes with the beauty of the contours of the hills, the symmetry of the trees, and the grouping of the villages ... nor was he only the artist transmuting all this into words".

The extract *A Stone Farm* given above from *The South Country* immerses us in an itemised description of the old farmhouse, the building materials and the surrounding profusion of plantlife, while simultaneously conveying his deeply felt love and empathy for the place.

In 1913 he met Robert Frost, American poet, and they lived as neighbours in the Gloucestershire village of Dymock, the two men developing a great friendship and frequently taking long walks in the countryside together. It was Frost who encouraged Thomas to write poetry. Two years later Thomas enlisted in the British Army, was posted to northern France and was killed by a shell blast on the first day of the Battle of Arras. *Adlestrop* was published three weeks after his death.

This contribution to the Poetry of Place in *Landscape Issues* was prompted and conceived during the public lecture *Edward Thomas and nature: melancholy, ecstasy and 'the strange Sweetness'* given by Dr Anna Stenning on 5th October 2018 at the University of Gloucestershire. Ed

<sup>1</sup> Anna Stenning, *Edward Thomas: a miscellany*, Galileo, 2017

<sup>2</sup> Robert MacFarlane, *The Old Ways*, Penguin, 2013

<sup>3</sup> Edward Thomas, *The South Country*, first published in 1909

## OBITUARY

We are sad to announce the death last year of **Michael Ivory**, formerly of this department. He was appointed in 1976 to what was then the School of Landscape Architecture in the Gloucestershire College of Art and Design based at the Pittville campus in Cheltenham. With his RTPI and LI qualifications, Mike's contribution to the course was to be mainly in large-scale landscape planning projects, but over the years his input expanded to developing links with courses and landscapes abroad, aided by his love of languages and travel.

Indeed his first degree was in modern languages at Lincoln College, Oxford, and his placement year was teaching in Lessing-Gymnasium, Bochum, Germany. Mike's familiarity with many European tongues was invaluable in the organisation and running of the foreign field study tours, mostly to Germany in the early years, subsequently to the Netherlands, Switzerland, Spain and Hungary.

Following his MA at Oxford and before taking a postgraduate diploma in landscape architecture at Newcastle University, Mike worked as planning assistant, then planning officer at Hertfordshire County Council and the Ministry of Housing and Local Government. He worked for a year as planning consultant in the Office Cantonale de l'Urbanisme, Lausanne, Switzerland, then three years as landscape architect in East Sussex County Planning Department. Moving to the Polytechnic of the South Bank in 1972 to lecture in the Department of Town Planning, Mike drew on his practical experience for that post, the one he had prior to arriving in Cheltenham.

From his breadth of knowledge and appreciation of planning and now some teaching experience, Mike was able to develop courses at Cheltenham in landscape history and contextual studies, as well as studio instruction. As third year tutor he steered several generations of students through the often turbulent waters of the final year, usually setting up and running two of the major projects in that year and providing additional pastoral support throughout the dissertation. Students will have found in him the mixture of stimulating insights and calm responsiveness so valuable in a tutor. Taking a one-year sabbatical in Montreal, Mike taught (in French) in the School of Landscape Architecture in the university and helped further the exchange visits of their students to Britain.

Mike retired from the Cheltenham course in 1991, continued with some teaching commitments at Birmingham City University but devoted most of his time to travel guide and topographical writing. Notable among these are the National Geographic guidebooks to Canada and Germany, and the Michelin Green guide to Ireland. He researched these countries passionately, visiting often, travelling by railways (another passion) and, working with Martin Randall Travel, was often employed directing cultural tours to places such as Prague and Budapest.

He died on 6th July 2018.

## STAFFING NEWS

Last autumn **Dr Carla Molinari** left our department for a post in the School of Art, Architecture and Design at Leeds Beckett University. While here, she taught modules in history of the landscape and landscape legislation but she may be best remembered for the student trip she organised and led to Rome including a visit to the Sapienza University, her alma mater and where she obtained a PhD in Theory and Criticism of Architecture. In the summer of 2018 she planned and coordinated the *Urban Futures* conference at the University of Gloucestershire, which included a wide range of international speakers all endeavouring to answer the question *What is landscape?* She also made a significant contribution to the redesign of our course curriculum which will be a constant reminder to us all of her short but productive stay with us. We wish her well in her new ventures.

Joining the team in Cheltenham we welcome **Dr Ying Li**, recently teaching at Birmingham City University's School of Architecture and Design and before that at the University of Greenwich. She has also held guest professor roles overseas, including Juiz de Fora University in Brazil, Hong Kong Design Institute and Tianjin University, China. In 2017 Ying founded the urban design consultancy Supos Assessment Method (SAM), its approach following her PhD research on the assessment, design and planning of small public urban spaces to enhance social sustainability. Her research interests include public health and wellbeing and also musical composition in architectural design. Now she will be responsible for managing our undergraduate programme as academic course leader and is keen to develop a cross-cultural and interdisciplinary approach within the various modules being offered. She believes that she has the responsibility to carry forward the spirit of Geoffrey Jellicoe and make landscape architecture the most comprehensive of the arts in the 21st century.

Also joining us at the University of Gloucestershire is **Dr Alessio Russo** from Naples and who takes over the postgraduate course leadership. His first degree was in plant production (University of Naples). His postgraduate specialisation was in healing garden design from the University of Milan and an MSc in landscape design and planning from the University of Pisa. Subsequently he studied urban forestry at the University of Bologna (for a PhD). He has taught and examined at Sapienza University (Rome), the University of Florida, USAMV University in Romania and the University of Hamburg. His last post was as assistant professor in landscape architecture at Rudn University, Moscow. He brings this wide experience and a comprehensive knowledge of sustainable design, eco-urbanism, and zero carbon master planning to our course. His current research interests are manifold, ranging from ecosystem services to health and wellbeing in urban green spaces.

Finally, we should acknowledge the contribution that **Robin Snowdon** has made to our course for many years. He left a little over a year ago to set up and manage a biodynamic vineyard in Somerset and we are looking forward

to the time his wines rival the best French *grands crus*, Brexit or no Brexit! Robin qualified first in architecture at Nottingham University and the Bartlett, London, before completing a masters in landscape architecture at Edinburgh University. He has worked for Norman Foster and Partners and Andrew Grant Associates, and for some time in Vienna on river landscapes, before coming to Cheltenham in 2005. His teaching here was at all levels: drawing and digital communication with the first years, the philosophy and creativity project at degree level and design studio in the postgraduate year. In each he introduced a sound sense of practical objectives always embracing the best sustainability and ecological principles underpinned by effective visual and analytical techniques. He was an excellent teacher. The students appreciated his commitment. For me, I will best remember him for the foreign field trips we organised together – Barcelona, Paris, Berlin, Copenhagen – where he assembled thoroughly-researched programmes of sites to visit, always allowing ample time for sketching (a passion we both share). More prosaically but equally important were Robin's contributions to curriculum development. He wrote, *inter alia*, the course vision statement and its supporting values, founded the Sustainable Landscape Series of public lectures and created the course blog *gloscape*. Outside academia, Robin practises what he preaches. He is environmentally motivated, advocating a 'green' lifestyle that respects the natural world and its wildlife. And he is a passionate birder. I used to meet him en route to Slimbridge Wildfowl Centre at Cam and Dursley station. He'd get off the train carrying his Brompton bike and we'd spend a wonderful time observing the ducks, swans and geese, while notionally trying to discuss some course business!

From all his former colleagues and students, we wish him every success in his new career. Ed

*Some of Robin's Barcelona sketches:*

