

Discover Yourself Outside

new landscapes for a civil society in a changing climate



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Ambra Burls, Grant Luscombe MBE, Dr Alison Millward

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The Urban Forum of the UK Man and the Biosphere Committee is a network of managers, planners and researchers involved with the environment and nature conservation in urban areas.

The Man and the Biosphere initiative originated in the International Biological Programme and the 'Biosphere' conference organised by UNESCO in 1968.



United Nations
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UK National Committee
of Man and the Biosphere
Programme

UK MAB Urban Forum Secretariat contact:

Nigel Lawson
University of Manchester
School of Environment and Development
Humanities
Bridgeford Street
Manchester, M13 9PL
Tel: +44(0)161 275 3633

Front cover: Soil Inversion; Sunnyside, Gateshead.

Project delivery: Landlife for The Woodland Trust.

Discover Yourself Outside

Everyone wants their outdoor neighbourhood to be attractive, stimulating, safe and well cared for – a place to be proud of. Everyone wants daily life to be more satisfying and less stressful – to be able to go outside more often enhances personal well-being and helps people to get to know and trust more of their neighbours. Achieving these aspirations, builds stable communities with positive outlooks to change.

Environmental justice seeks a fairer world in terms of people's access to good quality landscapes. It should also involve fairness in providing the information and opportunities for people to participate in decisions

about their environment. The independent *Biodiversity Policy Review*¹ carried out in 2007 by Prof Ian Swingland OBE and Dr Susannah Paisley, calls for projects that give people access to nature, and strengthen links between people and wildlife, to be given full UK government support. This is what people want, it is what health practitioners advocate, it is what public authorities should deliver to create liveable cities and promote social cohesion.

Under Planning Policy Guidance 17 (PPG 17), local authorities should recognise that most areas of open space can perform multiple functions, by providing visually attractive green spaces close to where people live and

recognising that sites may also have potential to be corridors or stepping stones from one habitat to another and may contribute towards achieving objectives set out in local biodiversity action plans and green infrastructure strategies.

Climate change poses a threat, and societal trends such as long-term youth unemployment almost trebling by 2012² will put even more pressure on civil society. New landscapes have a role to play in helping address both these problems. People can be engaged in adapting their locality to climate change, and in the process, bring about positive social benefits for themselves and their communities.

¹ Biodiversity Policy Review: An appeal for increased UK governmental action, both domestic and international. S. Paisley & I. Swingland, 2007.

² Centre for Cities, Sticking Plaster or Stepping Stone. F. Shaheen, June 2009.

Civil society

Civil society can be achieved by starting conversations with and between residents about the opportunities for change, involving them in bringing about that change, enabling them to appreciate and get the most out of their new surroundings, and then to communicate that positive message and so spread the benefits into the wider community.

In this way, more people start to use the communal outdoor environment which helps them to get to know more of their neighbours. This helps build a sense of pride in the neighbourhood which they will take steps to protect.

New landscapes are needed. Where there are now acres of uninteresting swathes of mown grass between buildings, there could be colourful wildflower meadows, reed beds and woodlands carpeted in daffodils and bluebells; landscapes in which people can sit, watch the birds, have picnics, play hide and seek, and stop off at a bench to admire the view and have a chat with a neighbour.

Helping people to discover themselves outside involves using creative conservation techniques that reduce carbon emissions and respond to extreme climatic events. It results in new biodiverse landscapes by, for example, capturing rain and floodwater or inverting soil profiles. It makes places where nature can flourish for people to enjoy and learn by experience and observation.

It creates subtle wildflower edge effects that stimulate calming alpha brain waves and entice people to venture out.

Courage and perseverance are needed to make the best of such areas but this is sometimes hard to do. Not all sites are suitable, and many greenspaces (and communities) are notoriously difficult to transform. It won't always work,

but the rewards are huge when it does. It requires patience and persistence, using approaches that capture people's imagination, stimulating a groundswell of community spirit capable of overcoming seemingly intractable problems. Nevertheless efforts over the years have produced shining examples of what can be achieved.

New lives

New approaches to greenspace management and more people with the right skills are needed in the development and care of these areas. But, once the skills are acquired, the rewards are as great for those who create these spaces as they are for residents.

The 'Buttercup Boys' in a new landscape, Huyton.

Project Delivery: National Wildflower Centre.



Key Messages

Discovering yourself outside only happens when people can, in various ways, connect with a landscape and with each other in that landscape. Landscapes which are good for helping us to adapt to climate change have also proven to be good at creating a more civil society for those living and working in them.

Adapted Landscape	Personal Response
Creates ATTRACTIVE greenspace (Helping banish green deserts)	Gives people HOPE (Positive thinking for a better future)
LESS POLLUTING landscapes (Reducing CO ₂ & herbicides)	Restores PRIDE (Renewing a sense of place)
Creates improved ACCESS for all (Contributing to ANGSt ³ standards)	Has a CALMING effect (Stimulating alpha brain waves by sights & sounds)
Creates BIODIVERSITY (Safeguarding wildlife)	Promotes social INTERACTION (Talking points for inter-generational and multicultural discussions)
Contributes to climate ADAPTATION (Reducing flooding, aiding cooling)	Promotes SATISFYING WORK (Enhancing self-worth)
Provides a LEARNING environment (An evolving scene)	Builds LIFE SKILLS (Observing, language development, developing social dexterity and achieving employability)
Provides opportunity for INVOLVEMENT (Sowing and growing)	Creates sense of OWNERSHIP (Fostering social & cultural meanings)
Stimulates RECREATIONAL USE (Improving paths and natural play)	Engenders a FEEL GOOD factor (Walking, talking, playing, well-being and restoration)

³ ANGSt stands for Accessible Natural Greenspace Standard. See: www.naturalengland.org.uk/ourwork/enjoying/places/greenspace/greenspacestandards.aspx



New landscapes in St Helens (above) and Warrington (below) reduce mowing frequencies.

Project delivery: Landlife for St Helens and Warrington Borough Councils.



Evidence

Northwood, Kirkby – an adapted, attractive and biodiverse landscape

Local Voices

Following the sowing of cornfield annuals in 2003, two thousand questionnaires were distributed in the tower blocks, eliciting a one in five postal reply. In 2009, following 6 years of wildflower displays, a follow-up postcard survey in the same area resulted in a 98% response! It was not surprising that everyone loved the wildflowers and wanted them the following year, but the interesting response was that in 2003 two thirds of the respondents went out more often as a result, whilst in 2009 all the respondents said they were more likely to go outside more often because of the wildflowers and thought it had improved community spirit.

However, the most valuable feedback is that which comes independently as opposed to views elicited by project staff. The following extracts from the Kirkby Times community newspaper were found on the web:

Pride & Hope

“ Of all the changes in Northwood, Kirkby, the wildflowers were perhaps the most eye-turning of all changes. The wildlife, and the people, made a return, with the wildflowers being a focal point, and a talking point.

Nobody could pass that particular spot, either on foot, or by vehicle, without thinking ‘now, that really does look nice’.

For a while at least the area became less troublesome – with local youths less inclined to wreck the place. A calming influence was witnessed by many of us.

People began to use the area as it was intended – as a nice area to walk the dog, to take your children or for

carers to accompany elderly people in wheelchairs, and for local residents to enjoy a nice walk or sit off for a while. Its nice to just sit back and watch the flowers grow if you can. Even for a few minutes.”

Posted by admin under Local News: Fri 14 March 2008

Social Interaction & Feel Good Factor

“ The main event, for me at least, was the planting of the wildflower seeds. Quite a crowd volunteered, with local mums, dads, kids in tow, plus a good few school kids and people just passing by. I'd say a few hundred took part or strolled over to see the progress of the work, read leaflets or made a nice mosaic.



Quarry Green Heights, Old Rough, Kirkby; before and after.

Project Delivery: Landlife for Knowsley MBC.

This is a sign of a decent community spirit as this was a Friday morning and afternoon, and many are frantically running about and getting things ‘sorted’ for the weekend. Many of the local pupils volunteered to throw a few seeds about.

If your lad starts growing poppies and cornflowers out of his ears in a few months – that was ‘soft lad’ throwing seeds with and at his mates. It still spread the seeds about, so fair play to soft lad. We can employ him to cast seeds about for a few months of the year.”

Internet: Mon 23 June 2008

Ownership

"Although I only planted a bag of seeds myself – I can see the spot I sowed, and that becomes my little patch."

Humour

"It reminds me a bit of those 'funny' paintings you used to see in hippies houses. Modern art stuff, a one colour background with small spots of colour."

"Actually, the wildflowers make the modern art version seem like a joke. I think most artists know that painting can never outdo nature or God."

"I like a nice painting, but given the choice of seeing wildflowers or a sky or beach on a painting, or being there to see it in reality, you'd have to want to be there ... unless you're agoraphobic or have a warrant out for you."

Internet Chat 2008

Hope

An unsolicited formal letter from the Wingate Medical Centre in 2003 illustrated the wider impacts of such landscapes:

"The Doctors and staff in the practice would like to let you know how impressed we were by the display of wildflowers near Quarry Green heights earlier this summer. The display was uplifting and enormously improved the feel of the environment."

Such activities are vitally important in making a community worth living in and encouraging people to value their environment.

Those of us who have worked in Kirkby for many years know how badly such initiatives are needed."

Wingate Medical Centre



Just sow a few wildflowers ... Halewood.

Project Delivery: Landlife for Knowsley MBC.



The National Forest – an absorbing, feel good place to be

The National Forest is creating a vast, new forested landscape for the nation across 200 square miles of the Midlands. Eventually around a third of the area will be wooded. The Forest is transforming the landscape, environment and economy of a once derelict mining area.

A recent survey of 200 individuals revealed that the people of South Derbyshire and North West Leicestershire are delighted with the creation of The National Forest on their doorsteps⁴.

Pride & Biodiversity

There is a growing trust in the organisations driving the planting, a willingness to be associated with the National Forest brand, an optimistic vision for the area and a desire to share their good fortune with new residents and tourists.

“ The National Forest is a powerful name, a very strong brand name ... people like to be associated with it, it's nice, it's green ... I wanted our product to be associated with that.”

Local businessman

“ When I came to live here... I thought oh dear have I done the right thing ... now since they took the wheel down and levelled out the parks ... it's a lovely place to live ... I couldn't wish for anything better than the park ... all those trees right at the back of my house, the wildlife that comes into my garden ... the woodpeckers ... I mean the pride is there.”

Ashby Woulds Parish Plan Group

Donisthorpe Woodland Park beside the Ashby Canal.



⁴ Millward, A. & Royal, S. Community Perceptions of the National Forest. 2009. www.nationalforest.org; Lancaster University, Growing Places – a study of social change in the National Forest. 2006.

Social Interaction

People describe their experience of the new forest loaded with the symbolism of family rituals and rites of passage: planting a tree to mark births, birthdays, deaths and marriages; introducing grandchildren to the world around them; walking and planting trees with new acquaintances made through healthy walks and volunteering activities.

“ I come along each month to catch up with this lot ... it's just good crack really ... ”

Volunteer

The vast majority of people and of all ages feel totally safe using the woodlands and comment on how friendly the people are that they meet in the woodlands, including young people.

“ When I first came down here I would see teenagers walking the dog and expect them to shuffle past looking at the ground, but they smile and say hello and I just wasn't used to that and I am used to working with teenagers.”

Ashby Woulds Parish Plan Group member

*Soil inversion buries weeds, nutrients and carbon;
St Bede's Wood, Gateshead.*

Project delivery: Landlife for The Woodland Trust.

Access, Recreation & Calm

The mobile phone has made parents more willing to allow children to use wooded open spaces unsupervised. The comfort it brings that help may be quickly at hand is also encouraging adults and especially women, to visit open spaces unaccompanied (and therefore more often) to be able to fully appreciate the peace and tranquility that such visits can bring.

“ Everybody said you must be mad because of course Moira had this reputation for being hell on earth. It's not just the planting that is impressive it's the fact that it is open access, so that my children will be able to get into hundreds of acres ... to just go off on their bikes and disappear.”

Ashby Woulds Parish Plan Group member



Making a new forest that absorbs carbon

Community involvement in the Forest's creation has been a key objective since its inception. Around 23,000 adults are involved each year in conventional tree planting, conservation volunteering, healthy walking, heritage and arts related projects; and over 40,000 school children are involved annually in environmental education activities.

The National Forest, Woodland Trust and Forest Enterprise have also employed soil inversion⁵ techniques that bury a metre of topsoil using specialist ploughs in the National Forest and across the UK. This results in faster tree growth compared with conventional forestry methods. The difference can be as much as a factor of three for certain species due to improved root penetration. In the first year, whips' roots have been recorded in the buried nutrient rich topsoil 70cm below the surface.

In traditional forestry a mortality rate of 30% is expected. Soil inversion reduces mortality rates to negligible proportions, with 99% survival rates recorded on inverted light soils sown with wildflowers. Moisture on these sites is held at depth enabling trees to better withstand the impacts of climate change. Forest Research recorded that 'No planted tree mortality was evident' at the soil inversion trial sites in Fordham, Essex. Improved growth and survival of trees also increases carbon sequestration rates.



⁵ Luscombe G., Scott R. & Young D. (2008), *Soil Inversion Works*, Landlife.

A forest of flowers established using soil inversion; Hedley Hall Wood, Gateshead.

Project delivery: Landlife for The Woodland Trust.

Green Estate Sheffield – building life skills & satisfying work

The Green Estate Environment and Heritage project has transformed the landscapes and communities in the inner city wards of Manor & Castle and Woodthorpe in Sheffield.

The Green Estate mission was:

To bring about an inspiring and valued urban 'estate', a place where all open space is transformed from a liability into a productive asset, which is managed in a way that protects and enhances the local heritage, demonstrates environmental excellence and delivers social justice both now, and for future generations.

The social enterprise company – Green Estate Ltd – is one of a family of third sector organisations that have engaged and involved the local community in transforming the outdoor environment of their neighbourhoods in South Sheffield. Competitive commercial services combine with many other landscapes, cultural and social initiatives to make a difference to people's quality of life.

“ Social interaction (amongst the public who visit and get involved in the pictorial meadows) is strong and is the key to their acceptance.”

Green Roof designer

Transforming lives by transforming the environment

A number of small green spaces have been created as play parks and community gardens. Large swathes of amenity grassland have been transformed into colourful pictorial wildlife meadows. The social enterprise company has developed innovative seed mixes and the skills to sow and maintain them. The green space at Fairleigh Gateway combines impressive flowerbeds of wildflowers with high resilience to trampling, a long flowering season and low maintenance requirements.

Green Estate Ltd is working to train a future workforce to meet the need for environmental management, landscaping and horticultural skills appropriate to the new adapted and biodiverse landscapes we need. Local people can train for NVQs in environmental conservation and amenity horticulture. A green waste composting enterprise and a green roof design and maintenance business, are thriving. Manor Oaks is a working demonstration farm growing food

as a community resource and welcomes visitors keen to learn more. Since 2004 over 120 jobs have been created in the Manor & Castle area as a result of this project.

An off-shoot of the cook and eat sessions put on in the early years of the project, has been rolled out as a Sheffield-wide programme of healthy eating training and awareness raising courses, funded through the Primary Care Trust. The Sheffield Wildlife Trust delivers these courses to people at risk of obesity, on referral from their GPs.

A large new park – City Park – has been created to provide a drainage function for the estate and therefore contributes to combating climate change. This space along with the many others managed by Green Estate Ltd contributes to the Living Landscape initiative covering the whole of South Sheffield. The vision is to create a network of connected and accessible green spaces that are biodiverse, productive, resilient to climate change and can deliver essential services such as good health, recreation and social interaction for those who live beside them.



Stunning flower displays.

Discover Yourself Outside

Huyton and Liverpool – making adapted, attractive, biodiverse landscapes

Adapting to climate change

New creative conservation landscapes created on Merseyside over the past 30 years that address climate change impacts, include:

- sustainable urban drainage systems where flood waters are held
- wildflower meadows using wastes *in situ* to reduce transport emissions
- wild bulb sowings using local and on-site green composts
- soil-inverted woodlands where carbon is buried and moisture held at depth to address summer droughts
- cornfield annual and subsoil meadows that reduce mowing frequencies

Every site is different, so it's always best to get advice from experienced practitioners on site to address concerns about weeds and appearance in winter time, germination of sowings, the appropriate timing of cuttings, and interpretation. There are also long established toolkits that can help⁶.

⁶ Luscombe G. & Scott R., (2004), *Wildflowers Work*, 3rd ed, Landlife.



Scrape holding autumn flood water (above) and in full flower (below); Court Hey Park, Huyton.

Project delivery: National Wildflower Centre.



Management

What is certain is that these new adapted and biodiverse landscapes need to be managed and cared for by staff with ecological skills and the responsibility to take site management decisions. These people will need to be good communicators with an eye for when to intervene to maintain a cared for appearance.

But if you go to the trouble to do it right, it will contribute to key policy targets on climate change adaptation, carbon reduction, biodiversity, accessible natural greenspace standards, community cohesion and healthy lifestyles.



Crushed demolition waste; Anfield, Liverpool.

Project delivery: Landlife for Doyles.

Meanwhile Wildlife Garden – a calm and hopeful place for learning

Meanwhile Wildlife Garden is a Kensington & Chelsea MIND project, located in a densely populated area of west London and nestled between rail, motorway and canal routes into the city. This urban wildlife haven has developed since 1993 as a training project on previously developed brownfield land.



*Meanwhile Wildlife Garden –
a wildlife haven in west London.*

Local Voices

The whole of the area is open to the public at all times and is well used. There is a longstanding commitment to sustainability, a parallel history of using this space as the base and inspiration for a range of creative projects. It is a setting in which to begin the process of engaging, or re-engaging with the world of work.

“ The fact that it is a little bit wild makes it different from a normal park. You get all sorts of different and unusual plants and you get squirrels and other little creatures crossing your path and that’s nice.”

“ I come most days, with my dogs. We like to walk through here because is very peaceful and I think it’s a very nice piece of urban greenery and it’s nice that a lot of people work here and seem to have a lot of fun doing so.”

Members of the public

Building life skills, facilitating satisfying work & self-worth

The project offers a comprehensive range of vocational services and works with people who have difficulty in accessing mainstream employment and education options because of their mental health issues.

“ My favourite task here is the Portobello Market where we run a retail business of wild and native plants and herbs that we grow here in our nursery.”

“ I am conserving all these living things that we don’t see. I can say, without going into detail, that there’s a lot of benefits in what I am doing: for nature and the community in general.”

Trainees at Meanwhile Garden

Experimenting with herbs.

The feel good factor – well-being, restoration & public health

There are many therapeutic outcomes for those who are referred here; natural processes such as spending extra time outdoors in natural light, the benefits of the physical activity and working in a team with other people have a marked impact on an individual’s ability to cope and move on to a socially healthy life in their community.

The public also uses this space for health purposes and social networking and the relations with the community have reduced stigma and crime, increased cohesion and environmental awareness.



Learning environment & evolving scene

The local schools and the public use this space to learn about the environment. The people who work here have become “interactive interpretation people”. No need for interpretation boards here. They talk about their work from the background of their own lived experiences, their own progress and recovery from ill health and pass on their knowledge about this green urban space, fostering genuine interest by the general public. They become a form of ‘steward’ and tell convincing and authentic stories about nature.

“ And you see a lot of other things that people walk right past, they don’t even see them, but to me I’m looking down when I’m out for a walk, I notice fox footprints, I can see where different things have been, what’s been going on, and I have spread that to other people.”

A trainee/steward at Meanwhile Garden

Restoring local pride, creating community cohesion and ownership

This was a space which was well frequented but also abused by members of the public - a place to throw rubbish and to vandalise because it looked ‘wild’ - but after years of community involvement the local neighbourhood has learnt to value it and they are very ‘jealous’ of it because it is an attractive and ‘natural’ place where they can relax. Vandalism has stopped, pride and zeal to keep it clean and healthy has grown, even amongst those groups who did not initially seem to care.

Those who work here want to be seen to be integral to the community and develop a posture of ‘embracement’⁷: they want to be part of this because they have benefited from it and want to do their bit.

“ I am part of a group, a city, a country and a society which can take care of its vulnerable members, of which I was one, and this has benefited me greatly and I feel I want to give something back to this culture and to nature in general by coming here and making an effort.”

A former trainee now member of Kensington & Chelsea MIND social enterprise staff

Creating biodiverse landscapes to stimulate social interaction, inter-generational and multicultural cohesion

The model of Meanwhile Wildlife Garden is successful because it supports activities and projects on well-being, the environment, gardening, ecology, creativity, sustainability and mental health.

Most importantly projects like Meanwhile can be actually led by mental health service users as community members. This ‘showcase’ should provide inspiration for diverse communities to promote social inclusion and positive messages about mental health and disability. These are examples of community and environmental urban hubs which are non-institutional, innovative and can promote ecotherapy, sustainable living, multicultural and intergenerational harmony.



Providing food for urban wildlife.

⁷ Burls & Caan, 2004.

Standards

We already have standards for providing people with access to natural green spaces within easy walking distance from home – the ANGSt standards. We may now need standards which help us to achieve **high quality adapted and attractive green spaces** that people will want to use and will therefore help them get to know their neighbours and build stronger communities. The landscapes that strengthen social cohesion not just biological diversity also deliver environmental justice and a civil society.

The multitude of agencies that are responsible for creating and managing outdoor environments in our towns and cities should seek to do the following:

1. Identify poor quality and under-used outdoor environments

PPG 17 open space assessment

2. Create local partnerships with local residents and each other to design, implement and care for new landscapes

Worpole K. (c.2000), Regenerating communities. Groundwork: www.green-space.org.uk

3. Generate multiple environmental, social and economic benefits from new landscapes

Burls A. (2007), People and green spaces: promoting public health and mental well-being through ecotherapy. J. Public Mental Health 6(3)
Green P., Luscombe G., Murray M. & Scott R. (2005), Woodland Wildflowers Work, Landlife.

Hill et al. 2000. ECOFACT 2 Technical Annex – Ellenberg's indicator values for British plants. Downloadable from CEH website: www.ceh.ac.uk
Luscombe G. & Scott R. (2004), Wildflowers Work, 3rd ed, Landlife.
Natural England (2009), Our Natural Health Service
Wong J. L. & Auckland R. (2005), Ethnic communities and green spaces – guidance for greenspace managers. Downloadable from: www.ben-network.org.uk

4. Employ and train up staff to stimulate and coordinate community involvement.

Cabe Space (2006), Making Contracts Work for Wildlife: how to encourage biodiversity in urban parks, CABA.

Church C. (c. 2004), Potential in people. Groundwork West Midlands.

The above references include suggestions as to how to take these actions.

February flowering wild bulbs sown into green waste; Court Hey Park, Huyton.

Project delivery: National Wildflower Centre.



Research

Research matrix adapted from Maller *et al*, 2006. Updated in December, 2009.

Assertion	Key references
There are some known physiological, psychological and social benefits when humans interact with nature (animals, plants, trees, landscapes, wilderness, urban green spaces). Ecopsychology is one of the branches of psychology which affirms these benefits. Ecohealth is a new branch of public health which also highlights these benefits.	Friedmann <i>et al</i> , 1983a; Friedmann <i>et al</i> , 1983b; Parsons, 1991; Ulrich <i>et al</i> , 1991; Rohde & Kendle, 1994; Beck & Katcher, 1996; Frumkin, 2001; Reynolds, 2002; St Leger, 2003; Berman & Davis-Berman, 2005; Conner, 2005; O'Brien, 2006; Dawe & Millward, 2008; Bird, 2008; Douglas, 2008; Mayer <i>et al</i> , 2009; Thompson, 2009.
Natural environments foster recovery from mental fatigue and are restorative, they also facilitate regular exercise and thus reduce the incidence of some common diseases (diabetes, coronary heart disease, stress related problems).	Furnass, 1979; Kaplan & Kaplan, 1989; Kaplan & Kaplan, 1990; Hartig <i>et al</i> , 1991; Kaplan, 1995; Grahn & Stingdotter, 2003; Sorrell, 2006; Pretty <i>et al</i> , 2007; Yerrel, 2008.
There are established methods of nature-based therapy (including ecotherapy, wilderness, social and therapeutic horticulture, animal-assisted therapy and others) that help patients recover from conditions which had not responded to other treatments.	Levinson, 1969; Katcher & Beck, 1983; Beck <i>et al</i> , 1986; Lewis, 1996; Clinebell, 1996; Crisp & O'Donnell, 1998; Russell <i>et al</i> , 1999; Fawcett & Gullone, 2001; Nebbe, 2002; Pryor, 2003; Grahn & Stingdotter, 2003; Sandel, 2004; Sempik <i>et al</i> , 2005; Relf, 2005; Burls & Caan, 2005; Berger & McLeod, 2006; Burns, 2007; Burls, 2007a; Burls, 2007b; Burls, 2008; Buzzell & Chalquist, 2009.
People have a positive preference for natural environments rather than urban ones (especially where there is water, large old trees, intact vegetation or minimal human influence), regardless of nationality or culture.	Parsons, 1991; Newell, 1997; Herzog <i>et al</i> , 2000; Ferrini & Barbacciani, 2003.
The majority of places that people consider favourite or restorative are natural places, and being in these places is recuperative.	Kaplan & Kaplan, 1989; Rohde & Kendle, 1994; Korpela & Hartig, 1996; Herzog <i>et al</i> , 1997; Newell, 1997; Herzog <i>et al</i> , 2000; Kellert, 2004.
People have a more positive outlook on life and higher life satisfaction when in proximity to nature (particularly in urban areas).	Kaplan & Kaplan, 1989; Kaplan, 1992; Lewis, 1996; Herbert, 1996; Leather <i>et al</i> , 1998; Parsons <i>et al</i> , 1998; Kuo, 2001; Kuo & Sullivan, 2001; Milligan <i>et al</i> , 2004; Mitchell & Popham, 2007; Maas <i>et al</i> , 2008; Fuller & Gaston, 2009.
Exposure to natural environments enhances people's coping mechanisms, mental health and problem solving abilities and facilitate recovery from stress, illness and injury.	Ulrich, 1984; Parsons, 1991; Ulrich <i>et al</i> , 1991; Ulrich 2000; Kellert 2002; Stingdotter & Grahn, 2002; Peacock <i>et al</i> , 2007; Verheij <i>et al</i> , 2008.
Observing and interacting with nature can restore concentration and improve productivity.	Tennessen & Cimprich, 1995; Leather <i>et al</i> , 1998; Taylor <i>et al</i> , 2001; Taylor <i>et al</i> , 2002; Louv, 2006.
Having nature in close proximity, or just knowing it exists, is important to people, regardless of whether they are regular users of it.	Kaplan & Kaplan, 1989; Cordell <i>et al</i> , 1998.
Access to urban green space and other natural areas leads to social cohesion in neighbourhoods, abating of stigma, increasing multi-cultural harmony, reducing crime and fostering general social transformation in communities.	Lewis, 1992; Schukoske, 2000; Wong, 2003; Leyden, 2003; De Graaf & Jordan, 2003; Maileimont, 2004; Adams, 2005; Rishbeth, 2004a, 2004b; Rishbeth & Finney, 2006; Townsend, 2006; Parr, 2007; Burls, 2007a, 2008b; Kazmierczak & James, 2007; Ming Wen <i>et al</i> , 2007; Belanger, 2007; Maller <i>et al</i> , 2008; Sugiyama <i>et al</i> , 2008; Bjork <i>et al</i> , 2008; Konijnendijk, 2008; Kimberlee <i>et al</i> , 2009; Kwon, 2009; Fuller <i>et al</i> , 2007; Ozunger & Kendle, 2006; Cattell <i>et al</i> , 2007; Rishbeth & Finney, 2008; Lawrence <i>et al</i> , 2009.

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new landscapes for a civil society in a changing climate?

We can make it happen

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Authors

The authors are members of the UK UNESCO MAB Urban Forum.

www.ukmaburbanforum.co.uk

Ambra Burls FHEA MA is Deputy Chair of the UK UNESCO MAB Urban Forum and specialist in ecotherapy, ecohealth, originator of the concept of embracement and of new HE programmes within the field of public health and the environment.

Grant Luscombe MBE FRSA CEnv MIEEM is Chief Executive of Landlife – the creative conservation charity that created the National Wildflower Centre in Knowlsey.

www.landlife.org.uk

Dr Alison Millward FRSA MIEEM is director of the environmental consultancy Alison Millward Associates, a specialist in community engagement, an expert advisor to the Heritage Lottery Fund and a trustee of several environmental charities.



UK MAB Urban Forum

Website: www.ukmaburbanforum.co.uk

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