

More than Nature

Nigel Dunnett and James Hitchmough

It's time for a change in the way that urban nature is considered and promoted, argue Nigel Dunnett and James Hitchmough. We need to add a greater consideration of aesthetics and design to the scientifically based "nature is good for you" arguments.

Over the past 30 years, the urban nature movement in the UK has advocated greater integration of natural elements, habitat and ecological green within the urban infrastructure. Over that period, what was originally seen as a fringe movement is now taking centre-stage, with biodiversity a current buzzword in urban environmental policy.

While this mainstreaming is to be heartily welcomed, it is also increasingly apparent that there is a wide gap between policy vision and reality at ground level, where predominant urban green space treatments remain gang-mown grass and monocultural shrub-mass plantings. Conversely, the routine experience of nature-like vegetation in towns and cities for most people is limited to undeveloped or vacant land, abandoned allotments, woodland patches, vegetation beside rivers or other water bodies, and designated urban nature sites. These settings usually have one thing in common: they are often associated with abandonment and decay [1], and generalised perceptions of danger.

Although policy makers and urban nature protagonists may believe in the inherent benefits of nature in cities, if it is not accepted by the general public then these environments can never be truly sustainable. This is perhaps particularly true of "nearby nature" — the public green space close to people's homes, which to some extent urban dwellers have no choice as to whether they use or not. It becomes a crucial point if there is to be any move towards a more general

ecologically informed approach to landscape design and planning in our towns and cities.

Is nature good for you?

The time is ripe for a step-change in the way that urban nature is considered and promoted, adding a far greater consideration of aesthetics and design to the previous, scientifically based "nature is good for you" arguments. In so doing, it is likely that some of the fundamental assumptions and tenets that landscape designers and managers, ecologists and planners hold about the definition and meaning of biodiversity, and the role and form of nature in cities, may be challenged.

In ecological terms, urban green space (defined here in the broad sense of unsealed land capable of supporting vegetation) has a range of functions that are central to notions of urban sustainability. These functions include rainwater collection, infiltration and polluted water purification as part of Sustainable Urban Drainage Systems; biodiversity support; climate amelioration, and improvement in air quality through filtration of air pollutants by vegetation.

There is a conundrum here, however. While the theoretical potential of these functions is well known, the reality is that the current design, planning and management of urban green areas achieve little of this potential. Ironically, integration and application of ecological ideas, far from being the death knell to creativity and flair that so many landscape architects fear, could lever in additional resource for urban green space planning and management, and re-energise designs. It is certain, however, that ecologically functioning urban landscape that provides rich wildlife

habitat and other benefits may look rather different to much of what we see around us today, and will require rather different maintenance skills than are currently practised.

Filled with a sense of well-being

There has been virtually no exploration of differing public and professional attitudes towards, and perceptions of, wildlife-friendly and sustainable urban landscape as an alternative to the heavily maintained and manicured urban landscape that is currently the norm in British towns and cities. Landscape preference studies (the great majority carried out through evaluating participants' preference for photographic or digitally manipulated images rather than direct on-site evaluation) indicate general public preference for natural, green surroundings in urban areas, and negative responses to a predominance of hard surfaces and built structures in urban views [2]. However, the intrinsic benefit of "naturalness" to people's sense of well-being can perhaps be exaggerated by urban nature protagonists. In one of the small number of investigations that have sought to identify the underlying reasons behind urban dweller's preferences for different urban nature-spaces, (naturalistic river-side spaces in Chicago), naturalness (i.e. presence of vegetation and wildlife) was highly rated, and the aesthetic qualities of solitude, quiet, peacefulness and scenic beauty were frequently mentioned. However, these were outweighed by concerns over cleanliness — a catch-all term that covered factors such as tidiness, lack of litter and good environmental quality (i.e. lack of pollution). In other words, nature on its own is simply not enough. Interestingly, a more complex picture of people's aesthetic responses was uncovered, whereby

combinations of natural vegetation and distinctive human creations such as bridges and buildings feature highly in people's aesthetic preferences, rather than purely natural scenes with no clear human-created reference points [3].

These findings are in line with the other investigations that have looked at public perceptions of everyday urban nature in different settings. These range from controlled and highly managed settings through to very wild contexts and indicate a potential level of acceptance of naturalistic vegetation so long as there are very obvious cues to care within the landscape, both in its design and management [4]. The most frequently encountered expression of this idea is the mowing strip alongside a wildflower meadow or area of unmown grass: a neat and tidy low edge that is intended to signify deliberate intent. And yet this is perhaps a rather superficial approach that may even have adverse ecological effects, such as eliminating habitat or increasing storm water run-off [4]. How can we deal with some of the more fundamental problems relating to acceptability of naturalistic urban vegetation?

In order to achieve urban landscapes with a greater degree of environmental sustainability it will be necessary to apply ecological ideas on a wider scale and bring naturalistic planting styles in from their current relegation to the furthest reaches or wild areas of a park, and from their segregation into urban nature reserves or patches of derelict or unmanaged land. To do this it is necessary to pick up on some of the visual qualities of familiar ornamental vegetation so that we can begin to substitute ecologically informed landscape plantings for standard horticulturally derived vegetation in a way that is likely to win public favour. In most instances this will involve the production of more colourful displays than might be found in semi-natural vegetation in the countryside, and concentrating on flowering herbaceous layers as well as trees and shrubs.

For the past ten years or so we have been developing techniques that

apply maintenance and establishment techniques that are usually associated with restoration ecology (such as direct-sowing, coppicing, meadow management and burning) to urban landscape plantings for public and private spaces. These techniques are far more cost-effective than intensive horticultural landscape maintenance practice and offer the possibility of reintroducing visually exciting plantings into spaces that have lost them, or never had them in the first place.

However, we see very little ecological point in trying to recreate the countryside in our urban parks and gardens. Instead, why not reduce or leave out the grass components of meadow vegetation to create vibrant flowering displays, and why not limit species selection to particular colour themes? This approach has for some time been championed in the "creative conservation" landscapes of the conservation charity Landlife in Liverpool, and perhaps reaches its zenith in the beautiful naturalistic

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"heem parks" of Amstelveen in The Netherlands [5].

These examples rely on native British species. Aspects of our work have gone beyond this to include non-native or exotic species in our naturalistic vegetation. Such species may extend flowering periods or produce heightened visual effects, or produce displays that are not possible with native species (e.g. late summer and autumn-flowering North American prairie vegetation). The use of non-natives is, of course, a highly contentious issue, with, until recently, majority opinion equating biodiversity and naturalness with native species and plant communities. Certainly, many ecologists, rooted in the language of biodiversity action plans and notions of local and regional

provenance, may regard anything other than native as a danger to the integrity of native plant communities. However, in recent years, the ecological value of specific spontaneous urban plant communities of waste ground and brownfield sites (so-called urban commons) has been recognised. Such communities are as ecologically valid as any other type of semi-natural vegetation, and yet very often their most visible and attractive components are non-natives (for example buddleia, michaelmas daises, evening primroses). More recently the Biodiversity in Urban Gardens Study (BUGS) in Sheffield, the largest of its kind ever undertaken, strongly supports the fact that exotic plants are extremely important for native invertebrate and bird biodiversity. Probably the key factor in urban biodiversity is not the geographical origin of the plant species used (although this is critical for some fauna), but rather taxonomic diversity and spatial complexity of planting and landscape spaces. In short, lots of different plant species arranged in as many layers as possible. Using non-invasive exotic species in certain controlled situations in naturalistic urban green spaces is simply putting a modern take on the rich cultural history of cultivation of non-native species that we have in the UK. Conversely, insistence on natives-only on sites that do not have designated nature conservation value has unfortunate connotations in a multi-cultural society [6].

Meadow versus bedding

There is a tendency among urban horticulturists to think that what the public wants is more of the Victorian gardenesque landscape style. However, in a survey of 300 park users that compared preferences for a colourful naturalistic meadow in a small formal bed with that for formal bedding in an adjacent similarly sized bed in a Sheffield park in summer 2002, the meadow received an equally positive response as the bedding (around 75 per cent of

people liking both in equal measure). However, when people were asked whether they would like to see more of either type of planting in the park, around 80 per cent wanted to see more meadow areas, compared with only 30 per cent wanting more bedding. Surprisingly, even those people who had a strong preference for bedding didn't necessarily want to see more of it. This study also indicated that greater familiarity with naturalistic vegetation also increases acceptance [7].

A common response among ecologists to the ecological-horticultural vegetations described above is that they are akin to "gardening" and therefore are somehow not valid. However, the gardening label is not something to be ashamed of. In reality, virtually all valuable, semi-natural vegetation is

heavily influenced or has even been created by human management, for example hay-meadows, heathlands and coppice woodland. It is likely that with ever-increasing densities of urban development we will have to increasingly rely on artificial and technological ways of increasing the biodiversity value of buildings and the spaces around them through the use of things such as green roofs or stylised meadow and woodland patches on synthesised substrates. This is the beginning of a potentially exciting new era for ecological landscape design where current initiatives on topics such as biodiversity and sustainable urban drainage can be turned to great advantage in providing policy-driven justification for ecologically rich, visually beautiful and culturally acceptable landscape design. By moving on from purely scientific

notions of what urban nature is and should be, and taking more account of public acceptability and aesthetics, it is possible to envisage a gradient of ecological approaches that differ in their purity depending on context and the degree of human contact. Hotspots of intensive maintenance and colour set within more formal frameworks provide reference points within less intensively managed naturalistic landscape. In turn, these will link with patches of spontaneous vegetation, woodland and other natural resources. This vision is yet to be explored effectively in the UK.

A conference on "Nature Enhanced" explored the issues raised in this article at the University of Sheffield, 22-24 June 2004, with presentations from leading practitioners from the USA and Europe.

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