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Urban restoration: social opportunities and constraints

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Abstract The climate created by international agreements such as the 1992 Convention on Biological Diversity and New Zealand's Resource Management Act 1991 is placing a responsibility on local and regional authorities to reclaim the concept of biodiversity protection from its use in predominantly wilderness areas and apply it to highly modified pastoral and urban environments. In developing alternative plans for landscape restoration and rehabilitation in such strongly people-oriented environments, consideration must be given to peoples' values and attitudes to urban vegetation, their understanding of indigenous ecosystems, and their acceptance of natives compared with exotics. The most important sets of attitudes are those that present opportunities for community involvement in landscape transformation, and those that may pose barriers to change. Contemporary research on the main opportunities and constraints for community involvement in urban landscape transformation is summarised, and the results of a Christchurch pilot study are discussed and related to international experience.

Keywords Ecological restoration, Public perceptions, Urban revegetation, Christchurch, New Zealand

INTRODUCTION

New Zealand has been significantly altered since European colonisation, with many native species surviving only on offshore islands free from predators (Daugherty et al. 1990). Landscape patterns and processes have been altered and natural habitats have been destroyed. Communities are also concerned about peri-urban growth in rural areas, and the need to ensure that urban environments are attractive places for future generations (Ministry for the Environment 1995). When managing these landscape effects, planners need to consider the articles of the International Convention on Biological Diversity, which require the rehabilitation and restoration of degraded ecosystems and the promotion of threatened species. Planners administering the Resource Management Act 1991 face problems in achieving protection and

rehabilitation of biodiversity (Froude 1997) because of uncertainty about local authority responsibilities and the conflicting rights and needs of property owners.

Alternative approaches to landscape planning are required, which consider people's attitudes to their urban environment, especially non-regulatory methods to achieve landscape restoration and rehabilitation. Analysis of present local authority consultation in the annual planning process (Department of Internal Affairs 1995) shows the main concerns expressed in annual plan submissions relate to basic management functions (e.g. roads, drainage, etc.). Landscape management is not raised even in "volunteered responses". Highlighting the lack of relevant research to assist local authorities in developing non-regulatory planning approaches and community projects, Froude (1997) points out that such matters are often affected by funding cuts, especially when they are not recorded in statutory plans.

In traditional evaluations of the quality of urban environments, authors usually mention "lack of greenery", "maximisation of natural features" and "protection of urban habitats" within a much longer list of issues, such as excessive impacts of vehicular activity and parking, lack of facilities for pedestrians and cyclists and the need to protect "historical continuity" (Hough 1984; Adams 1994). The physical infrastructure of the city and the gradual intrusion of built environments into natural areas set aside in the original settlement plans, are the strongest influences on our attitudes about the character of a city and its livability.

Therefore, social surveys along with observations of behaviour (Wilkerson & Edgell 1993) are needed to understand attitudes and build people's support for landscape rehabilitation. These would provide the basis for community education, community projects, assessment of the effects of projects on land development options, and evaluation of the effectiveness of non-regulatory landscape restoration/rehabilitation projects.

This paper presents early findings of ongoing research aimed at improving the effectiveness of local authorities in developing community projects to restore or rehabilitate urban landscapes. The international literature review highlights the main opportunities and constraints for community involvement in urban landscape transformation. The results of a Christchurch pilot study are discussed and related to international experience.

SOCIAL OPPORTUNITIES AND CONSTRAINTS FOR URBAN RESTORATION

Having natural open space in urban areas matters to the community, even if the community does not always appear to use it. The presence of natural landscapes contributes directly to enhancement of the quality of life of local residents, though again it can be difficult to "measure" what are often intangible benefits or uses. The problem for landscape managers and planners is that people's use of natural areas, the values they place on them, and the input they are prepared to make to conserve them are characteristically disparate and diverse. For example, the Open Spaces Society (Lutley 1992) listed the following as just some of the vast range of uses for open space: adventures, birdwatching, children's play, gathering wild foods, exercising, fishing, kite flying, looking at the view, meeting friends, picnicking, seeing the sky, short cuts, strolling, and walking the dog. Not listed is a similar array of values that may be associated with "naturalness" generally.

Natural areas also have different values and uses for different sectors of the community. Natural areas are vital for children's play, and for young people to socialise. Eubanks Owens' (1988, 1997) studies of the places teenagers use for socialisation found "the most popular place

type selected by all teens was a natural park". Teenagers' values are significant as they are often alienated and treated as "undesirables" in many, more public, spaces. As yet little comparative research has been done on the use of and attitudes to open spaces held by the elderly, though it is generally acknowledged that they are a key user-group of natural places.

In addition to acknowledging a range of uses of natural open space, those setting out to establish restoration initiatives also need to canvass a wide range of community values: various public sector agencies, different sectors of the public, and conservation groups. Traditional criteria for assessing natural spaces have allocated highest values to "pristine" or "relic" habitats; these values do not necessarily accord with the values that people hold. Consequently it may be argued that there is little point in expending scarce resources in urban areas trying to replicate native habitats, which can at best be poor imitations of the original.

A survey of how Londoners regard nature found that "the conservation of wildlife in ordinary environments is likely to be just as important to people as the conservation of wildlife in outstanding and exceptional environments"(Harrison et al. 1987). It is not possible to recreate a pre-settlement habitat, and there is no evidence to suggest that this is what people want. However, there is substantial evidence to suggest that urban dwellers do desire and respect natural habitats, particularly where these are "fun". Interaction tends to be more highly valued than narrow ecological criteria such as rarity. This is why the overabundant exotic mallard is preferred by more respondents than the more "ecologically sound" grey warbler.

Popular attitudes to natural aspects of the urban environment become evident when those elements that people value are seen to come under threat. People can become robust in the defence of such features, as in the now infamous saga of the Fitzherbert Avenue trees in Palmerston North. The trees were neither native nor rare, nor did they play a significant role in the urban ecosystem. But, their loss was keenly felt and stubbornly opposed by a substantial portion of the local population. The opposition to the tree felling was clearly indicative of a strong but hitherto largely undemonstrated value that people put on natural features of their environment, and criticism of poor administrative processes in managing the issue.

Attitudes to naturalisation can be important in multicultural societies such as Britain and New Zealand. Conservationists need to be particularly cautious in presenting conservation issues and in addressing how exotic species are included in the assessment of values. The phrase "botanical xenophobia" has been used by some to describe conservationists attacks on exotics. In Britain there are "rhodo" (rhododendron)-, or "sycie" (sycamore)-"bashing" expeditions, with increasingly vigorous destructive campaigns being waged against a more recent invader, Japanese knotweed. These negative attitudes persist in spite of the fact that, for example, the sycamore supports a larger biomass of invertebrates than does the "revered" English oak (Barker 1994). Gilbert (1989) has found that whilst such species certainly are both foreign and invasive, they are not devoid of ecological merit. Knotweed provides a shrub cover that creates a habitat mimicking woodland, providing a protective habitat for bluebells and other woodland flora. Gorse provides a similar artificial ecological niche in New Zealand. Antagonistic attitudes to exotic species, whilst often founded on sound ecological reasoning, must be handled carefully in multi-cultural urban communities.

Unlike conservation efforts in a largely non-peopled environment, the primary focus of urban conservation must be community use and catering to the needs of local people. Urban conservation is a two-way relationship as not only does wildlife have value for the community, but it is also often dependent on the community for its very existence and on the community's

complex and even contradictory perceptions of its value. Writing in 1987, Harrison et al. (p. 347) observed that:

the conservation movement in Britain is underpinned by a plurality of values and confusion of purpose that is well exemplified by the new urban conservation movement. . . all organisations have found it difficult to discover precisely how popular values for nature, as expressed by local people, can be articulated and incorporated into planning for nature conservation.

Such plurality of values is certainly a feature of conservation in New Zealand, and one that will have to be grappled with if the social opportunities and constraints associated with urban naturalisation processes are to be managed effectively.

ADMINISTRATIVE VALUES AS OPPORTUNITIES AND CONSTRAINTS

An additional component to be taken into account is the context in which we are trying to change attitudes and develop new ones. Wilkerson & Edgell (1993) note that while people may recognise that attitude change is needed, there may be other over-riding reasons why they don't change (e.g., to maintain a job). In addition, people are conditioned by economic institutions and social structures. The psychology of attitudes and their influence on behaviours is complex, and there are still substantial gaps in understanding. There is also considerable evidence that people's past behaviours can influence their attitudes (Eagly & Chaiken 1993). There are therefore no easy prescriptions to guide urban landscape managers in determining the most effective means of motivating community groups to restore ecological values.

Those planning restoration programmes in the urban environment can learn from other community initiatives aimed at restoring riparian values, monitoring stream and estuarine values, and managing coastal environments. For example, "Streamcare", "riverwatch", and "greenway" are all US programmes which depend on groups carrying out hands-on projects such as planting, removal of rubbish and building of riverside tracks. In addition to such tasks, groups often provide scientific data for assessing habitat characteristics and river conditions. In each case, agency personnel have different roles to play in helping the groups achieve success, but there are common components in determining success.

These groups are managed very carefully by the agency personnel who deal with them, in recognition of the benefits of group activities to the community. The degree to which groups are successful or not depends not only on group dynamics (Barrett et al. 1997), but also on the degree to which groups feel that their efforts are appreciated by the government agencies they liaise with and the community. In most cases agencies provide information about getting started as a group, locating necessary resources, and obtaining additional funding. Funding assistance is often provided for group representatives to attend regional and national meetings of those involved in community projects, with the aim of encouraging communities to learn from each other's successes and failures. Agencies involve group members in organisational activities, through incentives such as invitations for a group member to address Council. Groups may be sent information about community issues to reinforce the involvement of the group in local affairs, and an officer may be appointed to manage the group's particular information needs. Finally, the group and particular members are rewarded (e.g., workshops, project featured in news media, personal letters of thanks, appreciation awards, individuals invited to make conference presentations with staff) (Anon. 1996).

However, failures do happen. For example, if a group is unable to see visible results of their work or feels they are excluded from the management planning process, group support for the task wanes. Support is also lost if there are deficiencies in feedback about the group efforts, such as when individuals are not matched with the project of their choice, when a repetitious task becomes boring (you can only plant trees and collect samples for so long), and when the group does not have "face-to-face contact" (Anon. 1996).

In the UK, the question of how to undertake public/private partnerships including community group activities mostly concerns the physical redevelopment of cities and city centres. Debates about community partnerships are focussing on the notion of shared interests and the various definitions of "community". Duffy & Hutchinson (1997) raise the issue of "new communities" for whom local geography is not the only common bond. This affects the nature and effectiveness of local involvement in area-based intervention programmes. Various names have been coined for new communities including "tribus" (Maffesoli 1996), and the groups do not share place, but have strong social relationships.

Implementation of "Agenda 21" community planning processes in the UK have also generated debate about effective involvement of community groups in local programmes to regenerate or improve local areas. Coombes & Fodor (1997) document lessons about community involvement: they believe clear leadership is required from the local authority, especially in generating ideas. Clear lines of responsibility are needed along with a "first point of contact" for the community to relate to.

In New Zealand there are some local examples of urban ecological restoration, many of which are described in this symposium. However, we still have a long way to go in determining community attitudes to restoration and in utilising this knowledge to build community support for restoration. The Christchurch pilot study is a first step in the process.

CHRISTCHURCH PILOT STUDY

In this case study we chose to investigate, broadly, "what values residents attach to the vegetation of urban Christchurch", although we had an ultimate interest in how these values might be accommodated within initiatives to protect and enhance biodiversity in the urban environment. Our very general research question avoided provoking a polarised debate over the relative merits of exotic and native vegetation, which ample evidence from local media suggests already exists. It also enabled us to explore the extent to which the exoticness or nativeness of vegetation is a widespread issue rather than a widely vocalised but narrowly held concern, and the fundamental beliefs that underlie the overt tensions.

The idea that vegetation itself has "transformative value" also provided an impetus for this study. Simply put, this is the concept that what people see is what they consider to be "normal", what they identify with, and what they consequently value. Urban communities (which now include the majority of New Zealanders) are given limited exposure to native and "living" systems. Limited exposure means limited opportunity to understand and appreciate. A sub-question to understanding the significance of transformative values is to understand "what is the state of people's current awareness and appreciation, and what vegetation is triggering this response?"

The context to this study is the current moves by local authorities (such as the Water Services unit of the Christchurch City Council) to actively promote planting of native vegetation through

service delivery and asset management functions, which are changing the dominant landscape of Christchurch and introducing concepts of endemism, ecosystems, and natural heritage into a planning area that has largely been concerned with engineering function and visual and recreational amenity.

The approach used in the research was to conduct a number of focus groups, including: specialist interest groups; community groups involved in local amenity development; residents from a range of socio-economic backgrounds; a group of residents with children at a kohanga reo; and City Council service delivery, planning, and policy staff. This focus-group approach provided information about the range of values associated with vegetation in the urban environment and enabled us to explore sector differences based on socio-economic factors, Maori/Pakeha views, officials cf. the community, and concerned groups as opposed to the general public. Discussion centred around three broad areas: what participants noticed and thought about vegetation; involvement in planning and decision making; and perceptions of ecosystems and "nativeness" in the urban environment. Photographs were used as stimuli to discussion.

The focus groups revealed a complex array of functions, values, and beliefs regarding vegetation in the urban environment. They also posed some possible hypotheses regarding views held by various sectors, which require validation through quantitative research. The limited findings discussed correspond with the ideas raised in the literature, and are issues of particular significance for those developing urban-based restoration programmes. These are presented here as observations from the study.

Range of values

Participants identified a wide but consistent range of values for vegetation, which covered areas of cultural and historical association; psychological importance; fulfilment of spiritual needs; as well as aesthetic, physiological, engineering, productive, economic, educational, and recreational functions. The most commonly expressed values for vegetation were prizing it for intangible benefits of "making you feel good", providing peace, harmony, calm, and rest. Physiological functions of shade, shelter, and acting as the "lungs of the city" were also highly valued. Wildlife-associated functions were the least identified by the groups; and one of the interesting sectoral differences that emerged was the greater emphasis placed on the "resource value" of vegetation by the kohanga reo group. None of the values expressed by the participants is surprising in itself but, as pointed out earlier, the challenge for planners is not in simply identifying these values, but managing the complex and often contradictory needs they represent. The value of culture and history associated with vegetation is of particular interest in the highly modified and "Anglicized" landscape of Christchurch. Feelings of identity with Christchurch were expressed in response to photographs of willows alongside the Avon, the Botanic Gardens or the Port Hills — all highly modified landscapes. In contrast, the photograph of the remnant forest at Riccarton frequently provoked surprise that it was even within the Christchurch borders, and the photograph of a restoration site prompted one participant to applaud the opportunity to show children what the West Coast looked like! The issue of cultural identity with vegetation types proved to be a key source of the contention regarding the appropriateness of native or exotic planting in the Christchurch urban environment.

"Wilderness" and "naturalness"

For many participants these terms were confused. Wilderness did not appear to relate to the type of species present (i.e., it could equally be applied to exotic or native vegetation). More significant was whether the vegetation was seen to be in some way "uncontrolled". This was clearly acceptable in some cases, but frequently not acceptable within an urban environment. As illustrated in the literature quoted earlier, wild landscapes are commonly seen as more appropriate for children, providing elements of surprise and adventure. Where vegetation that was considered "wild" did not offer these recreational benefits (as in an overgrown grass verge), it was generally rejected as of little or negative value.

Naturalness suffered a similarly confused definition. Some participants described a photograph of the Christchurch Botanic Garden spring bulb display as "natural". This confusion is highly significant for public education initiatives where the terms "natural systems" or "natural heritage" are frequently used with quite specific definitions in mind.

Low level of ecosystem understanding

The concept of ecosystems was poorly understood, if at all, and few had views that revegetation efforts were contributing to this in any positive way. Furthermore, some expressed outright doubts that areas such as Riccarton Bush had any ecological value because of their small size and isolation. When prompted by the suggestion that a Kowhai might have different values from an oak tree (which supports considerably fewer species in New Zealand than in its European place of origin), participants gave a mixed response. For some this was important, for many it was just another factor, and not the major one, to be considered when determining what should be planted where. Even those with a "green" background, who supported the idea of more native vegetation in the urban environment, could not explain how this benefited the ecosystem. Where there is limited understanding of environmental "health" issues and the need for living ecosystems within an urban context, the choice to revegetate with native rather than exotic species becomes a matter seemingly for personal preference, based on the strength and direction of one's particular cultural or aesthetic bias.

No clear distinction between "nativeness" and "exoticness"

The topic of nativeness or exoticness was rarely independently introduced by participants. Overall, participants were more interested in the aesthetics and age of vegetation (particularly trees venerated for their age). When the topic was raised, people rapidly introduced the notion of "balance". There was no consistent view as to what this balance would look like; rather it was an expression of a principle that there should be room for the seemingly conflicting values of exotic vegetation (associated with greater aesthetic value and more recent Christchurch tradition) and the native vegetation (less visually interesting but ideologically satisfying to those for whom this had a strong "New Zealand identity"). Interestingly, in contrast to UK examples of "botanical xenophobia", hostility was more frequently expressed towards native rather than exotic species, particularly towards flax, toitoi, and lancewood. These plants were deplored as ugly and unmanageable in the small urban landscapes.

As noted earlier, values of endemism and botanical accuracy held by restorationists were rarely shared by participants. In addition, restoration efforts were seen as poor substitutes for the preservation of existing remnants, in part because this fits more readily with people's veneration for age and size of vegetation, but also because of the view that native vegetation was a natural phenomenon and human influence removed some of this value.

Ultimately the question regarding the appropriateness of native planting was heavily influenced by sense of heritage. Participants who openly admitted they could not tell a native plant from an exotic one were happy to enter the debate on the grounds of colonial heritage being displaced by the "politically correct". People who strongly identified with Aotearoa/ New Zealand or had an "ecological faith" were more likely to favour natives. For those concerned about the rise in favour of native plants, the idea that they may be providing greater wildlife habitat seemed of little concern. This somewhat contradicts findings from European urban centres and possibly reflects a perception in New Zealand that wildlife issues are plentifully provided for outside urban areas.

Planning and community input

During the focus group discussions a number of issues emerged that are quite significant for those planning urban-based restoration initiatives.

Ownership was important in influencing the responsibility people were prepared to take for the vegetation in their locality. This was commonly expressed in terms of street planting, but was also highlighted as a positive factor by the group interviewed who had taken part in a Council-facilitated restoration initiative for their local waterway.

The idea that the **forethought** exhibited by the City's forebears is not being mirrored today was also commonly expressed. This reflected a concern at the management of urban subdivision and the consequent diminishing space for vegetation. The perception of participants was that, historically, the City's leaders had put land aside and invested in the future, providing such resources as Hagley Park, in a way that was not being provided for today. The question was often asked, "what heritage is being passed down to future generations?"

People strongly **identified localities by their vegetation**, and often by a specific type or individual tree. Although this had positive connotations (i.e., that vegetation is linked to a sense of belonging and identity), the perception was also expressed that poorer areas suffered from a lack of interest in vegetation from both the local community and the Council, leading to a type of community stratification based on vegetation. One participant commented that exclusive developments in the City were creating elite suburbs and using vegetation "like a franchise".

Safety concerns are often thought of as a crucial factor telling against restoration initiatives, yet this was surprisingly seldom remarked upon without some prompting, and overall people were not perturbed by the photographs of the dense revegetation planting, and did not express concern about going to such a place in the dark. Issues like lighting and making sure places didn't lead to dead ends seemed more important than avoiding the existence of such vegetation forms altogether. A specific demographic difference was also noted here amongst residents in areas that could be described as a "social wilderness" (subject to vandalism). Here residents were less receptive to the idea of having a "vegetation wilderness" in their backyard as well.

The participants' general views on planning the vegetative form of their urban environment was that **Council should be leading the way but looking behind**. The groups that had been actively involved in working on their local environment were notably more positive about their ability to effect changes that were important to them through the City Council. Other groups saw the process of making submissions as impenetrable barriers, and not positive. Generally, people felt that Council should be taking a leading role in planning and promoting various

forms of vegetation in the urban environment, but by actively seeking input from the local residents (not necessarily just city-wide pressure groups).

DISCUSSION AND CONCLUSIONS

The current situation is one where local authorities are enacting a landscape transformation based on legal responsibilities and their ecological/ functional understanding. Difficulties can arise, as has been evident in Christchurch, where this enactment moves ahead of the general understanding and consequently the support of local residents. Barriers to restoration initiatives identified here are largely ones of awareness, understanding, and cultural identity. It would be an insurmountable task to engender the support for restoration from all members of the community. Better understanding of the ecological significance of restoration may win some converts but is unlikely to affect entrenched issues of cultural identity. This highlights the importance of drawing restoration projects into general city design, which avoids emphasising the polarised debate regarding natives and exotics.

There are also a number of triggers to enhance community support. These include focussing on the design of restoration initiatives that meet one or more of the values associated with vegetation in the urban environment (e.g., education, amenity, or resource needs). There is clearly a need for local authorities to be proactive in seeking public involvement, even as they assume some degree of leadership. This can be achieved through the healthy "exploitation" of the values of heritage; personal identification with key vegetation types and localities; ownership; and concern for the future. To carry this out local authorities need to develop expertise in the factors that lead to successful partnerships with the community in the planning and undertaking of restoration initiatives, and to acknowledge their responsibility to lead by encouragement and example.

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