



communities in nature

GROWING THE SOCIAL ROLE
OF BOTANIC GARDENS

Evaluation Report Executive Summary



BGCI

Plants for the Planet



Botanic Gardens Conservation International (BGCI)

BGCI is the largest international network of botanic gardens and related institutions working collectively for plant conservation and environmental education. Its mission is “to mobilise botanic gardens and engage partners in securing plant diversity for the well-being of people and the planet.” Established in 1987 and with over 700 members drawn from almost 120 countries, BGCI provides technical and policy guidance as well as regular up-to-date information through its newsletters, magazines, conferences and courses. From influencing government policies and priorities to encouraging grassroots action, BGCI’s global reach and professional expertise enables it to achieve real conservation milestones. For further information, go to www.bgci.org

Communities in Nature: Growing the Social Role of Botanic Gardens

Published by: Botanic Gardens Conservation International
Descanso House, 199 Kew Road, Richmond, Surrey TW9 3BW, UK

October 2013

ISBN:

Authors: Dr Asimina Vergou and Julia Willison

Design and editorial production: Earthscope, www.earthscope.co.uk

Supported by



CALOUSTE
GULBENKIAN
FOUNDATION

Contents

	Foreword
01	Introduction
07	Overview of Communities in Nature
15	Impact of Communities in Nature
25	Addressing social inclusion
29	Raising community environmental awareness and participation
32	Conclusions and Recommendations
37	References

Foreword

Communities in Nature marks the latest stage in BGCI's mission to help botanic gardens navigate the social and environmental landscape of the 21st Century and stay relevant to the communities in which they are located. It's a journey that started in 2010 with the publication of BGCI's groundbreaking report *Towards a New Social Purpose: Redefining the Role of Botanic Gardens*, and continued a year later with *Growing the Social Role: Partnerships in the Community*.

Both studies argued that there was an urgent need for botanic gardens to relocate their social and environmental roles within a modern framework of values, mission and vision. However, as *Growing the Social Role* frankly acknowledged, changing the mindset and practices of traditionally introspective and science-oriented organisations was not an easy proposition. Yet the courageous and determined way the GSR gardens went about their task, matched by the positive response of their community partners, amply demonstrated the merit of gardens engaging with local non-traditional audiences on globally important issues like global climate change, plant conservation and social and environmental justice.

Communities in Nature took these principles and painted them on to a broader canvas. And as its projects took shape, fresh perspectives on growing the social role of botanic gardens began to open up, highlighting the critical importance of, for example, strong organisational leadership in delivering a sustainable social agenda, and the essential early involvement of participants in the project planning and design phases.

Growing the social role of botanic gardens remains a work in progress and we hope that the recommendations contained in this Executive Summary of the *Communities in Nature* Evaluation Report will point the way to the next stage in the journey.

INTRODUCTION

Communities in Nature: Growing the Social Role of Botanic Gardens (CiN) is an evolution of BGCI's strategy to encourage and support botanic gardens to become more socially relevant, first articulated in 2010 in its baseline study *Towards a New Social Purpose: Redefining the Role of Botanic Gardens*.

That report's salient recommendation was that botanic gardens should relocate their social and environmental roles within a modern framework of values, mission and vision. Building on this theme, BGCI later supported three UK botanic gardens (Winterbourne House and Garden, Ness Botanic Garden and National Botanic Garden of Wales) to develop their social role through a series of training workshops and the funding of small-scale community projects.

The impact and potential of these community projects was outlined in *Growing the Social Role: Partnerships in the Community* (2011).

Communities in Nature (CiN) has now taken this work a stage further. With the crucial backing of the Calouste Gulbenkian Foundation, BGCI worked with four more UK botanic gardens – Bristol Zoo Gardens (BZG), Royal Botanic Garden Edinburgh (RBGE), University of Leicester Botanic Garden (ULBG) and Westonbirt, The National Arboretum

(Westonbirt) – to help them examine and extend their social roles.

From September 2011 to October 2012, BGCI mentored the gardens as they structured, implemented and evaluated their projects with their local communities and reconsidered their roles, responsibilities and mission. BGCI has also compiled the reflections of the Communities in Nature partners, together with those of other gardens with a longer history in social inclusion work, in a step-by-step guide ('how-to' manual) on growing a botanic garden's social role. This publication is now available on BGCI's website.

Selection process

Drawing on its experience of the *Growing the Social Role* projects 2010-2011, BGCI introduced an application process for CiN. The information gathered from these applications was used by BGCI to frame the training and support that it offered the gardens.

In its submission, Bristol Zoo Gardens' proposed to locate a national plant collection in and among the city's community, arguing that this would engender a direct connection with plant conservation. The proposal's potential for informal learning in the community and its research possibilities as a model



Raise your Voice, Asian Women's Group visiting Westonbirt as part of the Hidden Voices project.

for community plant collection were also recognised.

The National Arboretum at Westonbirt already had experience of working with its selected community groups, while the leadership's commitment to developing Westonbirt's social role, together with the site's potential for providing meaningful experiences for the community groups were also key factors in its selection.

University of Leicester Botanic Garden's proposal was drafted to enable garden staff to enhance their skills and experience in catering for audiences with a wide range of disabilities by working with a disabilities services organisation. Its overall objective was to make the garden more accessible.

The proposal from the Royal Botanic Garden, Edinburgh emphasised its commitment to carrying out socially relevant work and determination to be part of a community of practice. The project's potential for benefiting its participants and its sensitivity to community needs were also recognised. Also important was its strategic potential to influence the Scottish government and catalyse wider change.

The overall purpose of **Communities in Nature** was to develop the capacity of botanic gardens to encourage positive social change in their communities and heighten awareness about environmental and climate change. Although conceived and implemented the UK, it was always understood that a successful outcome for Communities in Nature would unlock its potential as a global model for botanic gardens.

CiN's specific objectives were:

- To work with four UK botanic gardens in developing their social role, through supporting the design and delivery of projects intended to have a positive social impact on their local communities and raise awareness about environmental issues and climate change.
- To run three workshops to support the botanic gardens in undertaking change management and the development of their projects.

- To develop a *How-to-Manual* for gardens on Growing the Social Role of Botanic Gardens. The manual would provide a practical, step-by-step guide for botanic gardens to examine their social role in society and develop meaningful projects that address particular social issues or groups.
- To publish and publicise the results of the project via BGCI's website, conferences and publications (e.g. BGCI's education journal *Roots*).

Intended project outcomes:

- Institutional change: It was hoped that the four gardens involved in the project would reassess their mission and alter their working procedures to encompass a more social role.
- Increased motivation among gardens to develop their social role.
- Increased engagement between botanic gardens and their local communities leading to improved community cohesion.
- An emerging community of practice among botanic gardens in which they felt supported and challenged to enhance their social roles.
- A global model for botanic gardens to develop their social role.
- Increased participation in environmental issues by broader elements of society.
- The publication of a *How-to Manual*.
- Publication of project on two websites (BGCI and RCMG).

Project partners

Botanic Gardens Conservation International

(BGCI) is an independent charity founded in 1987, whose mission is 'to mobilise botanic gardens and engage partners in securing plant diversity for the wellbeing of people and the planet'. BGCI links more than 2,500 botanic gardens in 120 countries, working with them to conserve threatened plant species and raise awareness of the importance of plants as the earth's greatest natural resources.

Since it was established in 1999, **Research Centre for Museums and Galleries (RCMG)** has developed a reputation for the quality of its research and evaluation, particularly in the fields of museum learning, education, inclusion and the social role of museums. As part of the School of Museum Studies at the University of Leicester, it combines academic rigour with practical experience of the museum sector.

Royal Botanic Garden Edinburgh (RBGE)

was founded as a Physic Garden originally in 1670. Its current location in Inverleith (an inner suburb in the northern part of Edinburgh) includes over 70 acres of landscaped gardens and a Victorian Temperate Palm House. RBGE currently has 221 members of staff and 285 volunteers and is internationally renowned as a centre of plant biodiversity research, conservation and education. 800,000

people annually visit RBGE and its three satellite gardens elsewhere in Scotland. During 2011, the total number of visitors to the garden exceeded 790,000.

Founded in 1836, **Bristol Zoo Gardens (BZG)** operates on a 12-acre site that includes animal enclosures and gardens. Situated in the Clifton suburb of Bristol, BZG has 168 staff and around 250 volunteers. The botanic garden team comprises 14 staff and 12 volunteers and combines its ornamental role with *in-situ* and *ex-situ* conservation and education. Approximately 500,000 guests visit BZG annually.

Westonbirt, The National Arboretum, Forestry Commission (Westonbirt) was set up in 1855 as a private arboretum and handed over to the Forestry Commission in 1956. The Gloucestershire-based arboretum is situated in 600 acres of the south Cotswold landscape. Its 28 staff are supported by 235 volunteers. Westonbirt holds a globally celebrated tree collection and specialises in woodland management and conservation research. Attracting over 350,000 annual visitors, Westonbirt has a well developed education programme.

University of Leicester Botanic Garden (ULBG) occupies 16 acres of gardens and greenhouses in Oadby, southeast of Leicester. Established in 1921,

the garden is used for research purposes by the university's Biology Department. It runs an education programme, has a staff of 18 and attracts around 60,000 visitors annually. There is also a satellite venue, the Attenborough Arboretum.

Evaluation methodology

One of the factors that inhibits botanic gardens from assuming greater social responsibility is, according to Dodd and Jones (2010), the paucity of evidence demonstrating its impact on their audiences. This is an issue also highlighted by Kew's Gail Bromley when she talked in 2012 about the significance of evaluation in the social inclusion work undertaken by Kew. Evaluation, she argued, enabled them to demonstrate the "continuity of what they have done over the years" and show the "impact that Kew has had both socially and emotionally on people". "It's much easier," she added, "to demonstrate to funding people and other partners now what kind of work we are doing and the successes we had."

With these issues in mind, the evaluation of Communities in Nature aimed to:

1. demonstrate the impact of the programme on the participants and the organisations;
2. offer examples of best practice to other botanic gardens that are eager to develop their social role and point out potential pitfalls and challenges;



Young visitors from Pilton Community Health Project visiting the Royal Botanic Garden, Edinburgh as part of the Edible Gardening project.

3. provide evidence for future funding applications to further develop the work of the programme.

BGCI identified a number of success indicators to evaluate the garden projects and these were based on the desired programme outcomes. But using such indicators has been likened to looking in a car's rear-view mirror (Scott 2012, p.2). It enables us to see where we have been and how well we are driving 'but can also obscure rather than help our seeing because we can lose the detail in the signal – not being able to see the value and quality of the trees because we're too busy measuring the wood'. Accordingly in this evaluation the indicators

were designed to assess the actual impact of the project. For example, the initial research question focusing on community cohesion – whether the projects had reinforced the 'social glue binding social systems together' (Robinson, 2005) – was modified to reflect the wider social impact the projects achieved and look at social exclusion/inclusion outcomes.

The following research questions were framed to guide the data collection for each indicator:

Indicator 1: Two of the four gardens will demonstrate an increased appreciation, acknowledgement and understanding of their social role and motivation to develop it further.

Research question 1: How has Communities in Nature influenced the botanic gardens' social role (understanding and motivation to develop it further)?

Indicator 2: Two of the four gardens will demonstrate an increased level of engagement with their community groups during the project.

Research question 2: What procedures do the botanic gardens have in place to encourage community engagement?

Indicator 3: Two of the four gardens will address issues of social exclusion.

Research question 3: What issues of social exclusion can botanic gardens address?

Indicator 4: Fifty percent of programme participants will report an increase in awareness of environmental issues and will have the opportunity to participate in activities addressing environmental challenges.

Research question 4: How has Communities in Nature influenced participants awareness of environmental issues and enabled them to participate in activities addressing environmental issues?

Evaluation methods

A **qualitative research** methodology was adopted that focused on natural settings and on people's meanings, perspectives and understandings.

Emphasis was placed on process – how things happen and how they develop (Cresswell, 2008).

Case studies were employed to enable in-depth examinations within their real-life contexts and calling on multiple sources of evidence (Yin, 2009; Stake, 1995). This was also consistent with the successful use of case studies in the earlier evaluation of the *Growing the Social Role* projects (2010-11).

Data triangulation, to secure data credibility and avoid interviewee reactivity – the tendency for interviewees to attempt to please their interviewer (Hammersley and Atkinson, 2007; Bryman, 2008; Cohen *et al.* 2005) – required collecting data about the same events from different people.

The following data gathering methods were employed in the CiN case studies:

Observations: day visits to each project to observe community activities as they were happening. This allowed the evaluator to directly observe participant experiences rather than solely relying on participants' and partners' accounts. These visits were also used to monitor progress, identifying issues that later informed interview questions. Importantly they enabled a rapport to be established between evaluator and participants, in order to facilitate effective feedback during the evaluation interviews (Hammersley and Atkinson, 2007).

Evaluation cards: these were used in the evaluation of *Growing the Social Role* 2010-2011 projects with mixed results, since it proved difficult to get both pre and post-evaluation cards from all the participants by relying on the project Partners. During *Communities in Nature*, Partners were given the option of using evaluation cards with three suggested open questions. The cards were administered in most cases at the beginning and the end of the projects.

Interviews: semi-structured interviews were conducted with botanic garden staff and some of the project participants. Most of the staff interviews (project managers but also senior management) were carried out over the phone. Other interviews, with members or groups of the participant

communities, were also used to obtain their detailed views of the activities. Consideration was given to the abilities and needs of each community group. For example in order to gain feedback from the Feel Green participants (adults with disabilities), a language therapist was employed to facilitate the focus group interviews.

Concept maps: concept maps were used at the beginning and the end of the project, with garden staff responsible for running each project, to gauge their understanding of the social role of their organisation. The concept maps were constructed in group sessions during the first three workshops organised by BGCI.

Questionnaires: questionnaires were used during the last workshop to obtain feedback from the partners on the quality and usefulness of the BGCI workshops and to gather ideas for future support that BGCI could offer.

Project partners were also asked to evaluate their own projects. Data thus collected was combined with focus group feedback and individual interviews. To ensure the evaluation was conducted ethically, BGCI followed the BERA Ethical Guidelines for Educational Research (2011).

All participants were asked to sign consent forms and the principal evaluator was required to explain what their participation would involve and assure

them that they had the right to withdraw from the process at any point. The evaluator had also undergone a Criminal Records Bureau (CRB) check and held an enhanced Criminal Record Certificate for working with children and vulnerable adults, which was available for scrutiny on request.

OVERVIEW OF THE CiN PROGRAMME

The two main components of the CiN programme were **(a)** training & meeting/sharing practice workshops organised by BGCI and **(b)** the botanic garden projects (the four case studies).

(a) Seven **workshops** were organised by BGCI. Three were aimed at developing the capacity of botanic garden staff in social inclusion work and establishing a collaborative and supportive community of practice and learning.

The workshops included:

- training opportunities (injecting creativity into projects and project management),
- presentation of the evaluation results of Growing the Social Role 2010-2011,
- presentation of a case study from the museum sector on social responsibility,
- reporting on the progress of the projects, and
- reflecting and sharing of good practice between Partners.

BGCI also ran World Café-style workshops at every Partner's site, except ULBC, to introduce CiN to all the garden staff.

(b) The botanic garden projects – four case studies:

[1] 'Hidden Voices' - Westonbirt, The National Arboretum

Westonbirt is situated in the south Cotswolds in Gloucestershire, a rural area of Outstanding Natural Beauty within reach of several urban centres including Bristol, Swindon and Gloucester. One of the demographic challenges facing Westonbirt's local community is an ageing population and increased demand for services for older people. It is predicted that by 2026, 27% of Gloucestershire's rural population will be over the age of 65 (Gloucestershire Rural Community Council, 2010). Residents of Gloucestershire enjoy high standards of living and, in terms of deprivation, Gloucestershire has experienced a substantial improvement since 2007 (Gloucestershire County Council, 2010). However there is still hidden deprivation in the rural areas (Gloucestershire Rural Community Council, 2010).

Westonbirt's rural location means that public transport to the site is limited and the vast majority of its 350,000 annual visitors are drawn from within

an hour's drive of the surrounding area. Visitors are chiefly independent adults over the age of 55, families with children and group visits.

Underrepresented audiences at Westonbirt include young adults (16-25s), disadvantaged adults (in terms of living in areas of multiple deprivation), Black and Minority Ethnic (BME) communities, and older people at risk of exclusion (Oliver and Meakin, 2012).

Aiming to engage with a number of groups that were underrepresented at Westonbirt, the Hidden Voices project worked in partnership with the Awaz Utah (AU) 'Raise your Voice', an Asian women's group that tackles issues of poverty, isolation and domestic abuse, the Bristol Drugs Project (BDP) an agency that supports drugs users and the Stroud Macular Disease Society (SMDS) that supports older people with visual impairment. Given the limited project timescale, Westonbirt elected to approach groups that it was already familiar with, reasoning that the group leaders would have some understanding of Westonbirt and its potential to meet their clients' needs.

Barriers that inhibited audiences from visiting the arboretum, based on research (e.g. Morris et al., 2011) and staff experience, include:

- communities not recognising Westonbirt as a 'place for them'

Communities in Nature: Evaluation Report Executive Summary

- the relatively high costs of visiting the arboretum (for transport and entrance fee)
- and the inexperience of staff and volunteers in engaging with these groups.

The Hidden Voices project was designed to address these issues by offering regular visits to community groups and adopting a collaborative approach to planning and developing activities.

The aim was to build a more sustained relationship with these community groups and give staff and volunteers greater confidence in approaching groups manifesting needs outside Westonbirt's traditional 'comfort zone'. This rationale was expressed in the project's aim 'to engage with communities that do not visit Westonbirt currently, using a collaborative approach that enables Westonbirt to develop a shared understanding of trees and what they mean to society'.

Hidden Voices also explored the potential for botanic gardens to engage with different audiences on environmental topics. Following discussions with the groups, Westonbirt linked BDP activities to sustainable woodland management, AU activities to the importance of trees across the globe and tree conservation and SMDS activities to climate change and gardening.

Each group visited Westonbirt on a monthly basis

for six months, followed by a final celebration event timed to coincide with the arboretum's renowned display of autumn colour. The project was divided into discreet phases and its collaborative approach encouraged garden staff, participants and group leaders to share responsibility for ensuring that the programme addressed the specific needs of the group.

Hidden Voices began with initial discussions with group leaders, followed by Westonbirt staff visits to community venues to explain the project further and discuss any concerns regarding the visits. Each group then experienced a taster day at Westonbirt to trial a range of activities, which helped gauge their interest. Westonbirt staff and volunteers also received BDP training on how to interact with people who have drug addictions. Subsequent visits (the immersion sessions) were built on the taster days and encouraged the exploration of environmental issues. BDP participants were involved in practical woodland conservation tasks, AU looked at global uses of trees through crafts and food-related activities and the SMDS explored what woodlands meant to them, based on their memories and by connecting to Westonbirt with crafts activities.

The project also included sessions during which each group was encouraged to develop a creative

initiative for visitors. BDP put together a photographic exhibition with their visual interpretations of the arboretum, AU produced a recipe book with dishes based on tree products while SMDS designed a sensory trail for visitors with visual impairment.

A celebration day at the end of the project brought the groups together to share their experiences and showcase their initiatives. A total of 112 people were involved, while some unanticipated participants were included in the visits at a later stage.

[2] 'Feel Green' - University of Leicester Botanic Garden

ULBG is situated in Oadby, an affluent suburb of Leicester that reports low levels of deprivation (Local Futures, 2008). However, the garden's location is not representative of the whole city – the twentieth most deprived area in the UK. High unemployment figures and households claiming benefits, poor health rates (high incidence of cardiovascular and respiratory diseases, cancers and diabetes) and shorter life expectancy are among the challenges facing the city (NHS Leicester City, 2009).

Around 40% of Leicester's 300,000 population comes from an ethnic minority background. The



Arts and crafts at University of Leicester Botanic Garden's 'Feel Green' project.

city has a good reputation for community cohesion and its multi-ethnic, multi-cultural and multi-faith nature is widely accepted (Roberts-Thomson et al., 2008). There is insufficient evidence, however, to indicate whether ULBG's visitor profile is representative of Leicester's complex demographic. The only existing information concerns the types of activities that attract its 60,000 annual visitors. 50,000 of these attend special events, the sculpture exhibition and public open days or are just casual visitors, while 10,000 people visit for educational purposes – school visits, adult classes, teacher training, guided tours and family days.

In a bid to increase visitor numbers and ensure it attracted people from a range of backgrounds, ULBG planned its Feel Green project to provide

activities to adults with disabilities. In addition, ULBG reported that 'various special needs adult groups regularly visit the Botanic Garden on a self-guided basis, but currently we have no dedicated programmes that they can book to enhance and develop their experience'.

This need is especially acute because of limited resources. There are few venues and specialist services available in the city and county for people with disabilities. This is despite the estimates that up to 50,000 people in Leicester are disabled (16% - 18% of the population) (Leicester City Council, 2012) and 11% of the population are in receipt of Disability Living Allowance (Leicester City NHS Primary Care Trust, 2008).

In order to develop its capacity for working with people with disabilities and create suitable programmes – especially for those with an interest in gardening, plants, tactile experiences and the environment – ULBG decided to form a partnership with Mosaic, an organisation that co-ordinates the provision of services for adults (18-65 years old) with disabilities. A gardening workshop had been offered previously on a taster day by Mosaic and many people expressed interest in participating in similar sessions. Following discussions with Mosaic four groups were selected to be involved in the project.

The Feel Green project was also part of ULBG's strategy to improve accessibility to its site.

Recently all the garden paths were resurfaced and widened to accommodate wheelchairs, accessible toilets were installed and interpretation material was mounted at an appropriate height.

Feel Green's objective was to 'engage with a local organisation to help provide suitable horticultural and environmental workshops for a wide range of people with disabilities'. Early in the project ULBG and Mosaic agreed the profile of the activities, to ensure their relevance to the abilities and interests of the participants. Mosaic also trained garden staff on how to interact effectively with the participants and on general disability awareness. Four workshops focused on horticulture, plant uses, the environment and art. The workshop environmental themes included climate change, desertification and water conservation. Three groups learned about the importance of water during the planting sessions, while one group participated in a climate change workshop comparing desert and tropical environments and the importance of water supply.

Over a three month period, each of the four groups participated in two full-day workshops at the garden and a celebration day at the end of the project. Overall, 28 adults and their carers took

part in Feel Green. There was considerable variation in capability across the different groups, depending on the nature and extent of their particular disabilities, while garden staff sometimes modified the activities to match the participant's abilities more closely.

[3] 'The Edible Gardening project' - Royal Botanic Garden, Edinburgh

Located in the north of the city, RBGE occupies a boundary between middleclass districts to the south and local government housing schemes further north. A large proportion of Edinburgh's 495,360 population is young (National Records of Scotland, 2012). Pilton is one of the most economically disadvantaged areas in Scotland, with high levels of unemployment and deprivation (Edwards, 2006). 55,900 people across the city are classed as Income Deprived. Compared however with the rest of Scotland, Edinburgh also has the least deprived areas (SIMD, 2012).

Scotland exhibits one of the worst obesity rates in the developed world, with a high incidence of life-style related conditions, such as type 2 diabetes, reported (Keenan, K. Grant, I. and Ramsay, J, 2011). Some 5000 cases of homelessness are reported each year in Edinburgh (Edinburgh Cyrenian Trust, 2011), while an estimated 22,400 people in Edinburgh are

dependent drinkers. The majority of the reported 5,300 problem drug users are young (The City of Edinburgh Council, 2012). RBGE attracted 790,000 visitors in 2011 (RBGE, 2012). Audience research revealed that almost half its visitors come from Edinburgh, with overseas visitors (tourists) increasing during the summer months. RBGE audiences remain essentially middleclass – a high proportion of visitors are over 55 – while the perception of the garden among people in some socially deprived parts of the city is that 'it is not for people like us' and 'if we go there, they will be watching us' (Scotinform, 2008).

RBGE was keen to address the imbalance in its audience profile and especially interested in involving young people and communities from areas of multiple deprivation.

Four were selected because, although they were excluded from mainstream programmes, they were deemed likely to benefit from contact with plants and outdoor activity. The last two in this list were included after approaching RBGE to request one-off training:

● **Broughton High School - More Choices, More Chances (MCMC) Group** is an initiative by the Scottish Government that supports young people who rarely attend school.



MCMC Group learning how to plant vegetables at the Royal Botanic Garden, Edinburgh's Edible Gardening Project.

- The **Rock Trust** is engaged in alleviating youth homelessness.

- **Pilton Community Health Project** works to tackle health inequalities

- **The Mayfield and Easthouses Youth 2000 Project (YK2000)**, is an informal education facility for young people aged 11 to 18 offering a drop-in facility, job advice, advocacy and gardening services (social enterprise).

The aim of the Edible Gardening project, funded by Communities in Nature, was to extend and develop the pre-existing Edible Gardening project (financed by the People's Postcode Lottery) by involving a wider audience and encouraging hard- to-reach groups in the community to acquire the skills and

knowledge needed to grow their own food. Parallel to the CiN initiative and as part of the pre-existing project, other visiting community groups were also trained in food growing.

The project focused on growing, preparing and sharing healthy, sustainable food. Environmental issues addressed during the sessions included: food security, carbon footprint of food, biodiversity in the edible garden, and environmental friendly practices such as composting, water conservation and peat free gardening. Development of the project occurred through a series of programmed activities that unfolded over a five-month period. In practice this involved the two main groups visiting on a weekly basis, each tending their own plots. The participants planted and maintained their plots, then harvested, prepared and consumed their crops. While the groups shared a programme of broadly similar sessions, specific elements were incorporated in some sessions to address the specific outcomes and needs of particular groups.

One-off training days were offered to the Pilton Community Health Project and YK2000, which consisted of a tour, a garden activity and a field kitchen cooking event. Twenty-three young people were involved in the project with their group leaders and volunteers.

[4] 'Bristol Community Plant Collection' - Bristol Zoo Gardens

BZG is situated in Clifton, one of Bristol's oldest and most affluent suburbs. The local population contains a high proportion of young adults, mainly university students (Bristol City Council, 2012a). Unemployment is low and there are few benefit claimants in the area. With a population of 428,100 Bristol is relatively prosperous, although its wealth is unevenly distributed. Some of the most affluent areas in the country are situated alongside the most deprived, in terms of health, wellbeing and life expectancy.

The city also faces the challenge of catering for its rapidly growing young and ethnically diverse population. Substance abuse is a problem, with a reported 8000 drug users and 10,000 alcohol-dependents in 2010 (Bristol City Council, 2010).

BZG welcomes 500,000 visitors annually, of which 55% are middle class, while 84% of the visitors include children under 16. One-in-five visitors is a pensioner.

The Bristol Community Plant Collection aimed to engage with audiences under-represented in its visitor profiles with a plan to encourage their participation in plant conservation by establishing a dispersed national plant collection.

Nine groups agreed to participate in the project, many of which came from Bristol's deprived areas.

- **Avon Club for Young People (ACYP)** works with children aged from 8-19 years old.
- **Bannerman Road Children's Centre** caters for 3-4 year old children.
- three primary schools – **Cabot Primary School gardening club, Holymead Junior School Year 5,** and **Stoke Bishop Church of England Primary School Eco club.**
- **Chard Court sheltered housing** for residents over 50.
- **Robinson House Care Home** specialises in dementia care.
- **The Severn Project** works with recovering alcohol and drug addicts.
- **Upper Horfield Community Garden.**

Bristol Community Plant Collection planned to pilot the model for a dispersed national collection of hardy annual garden plants by engaging with community gardeners and groups. It explicitly addressed environmental issues by aiming to build the capacity of local communities to maintain a plant collection (practical plant conservation) and raising awareness of the horticultural skills and biological processes needed for plant survival (biodiversity species conservation).

Plant Heritage, which coordinates national plant collections, had previously identified the need for

more hardy annuals collections. BZG therefore focused on *Calendula spp.* (commonly known as marigold) because it is a common garden annual, colourful, easy to grow and possessing medicinal and domestic uses that communities could relate to.

Holding a national collection requires that 75% of the species listed in the RHS Plant Finder are grown (there were only three *Calendula spp.* listed in 2010). However the international Plant List (www.theplantlist.org) shows eleven accepted species of *Calendula* and this was selected as the target number of species for the project. BZG obtained nine species from botanic gardens and commercial outlets. Because of delays in obtaining the species seeds, a decision was taken to give the community groups the two commercially available species and varieties of *Calendula* to grow. The exception to this was Upper Horfield Community Garden, which was given the seeds of one species obtained from a botanic garden.

Eight out of the nine groups received training, either at BZG or their own sites, on the cultivation, propagation and harvesting of a hardy annual species in their own gardens and community spaces. In some cases only the group leader received the training. Then the growing equipment was delivered to each group and they were asked

to produce, over the summer period, 30 plants for display in BZG and retain 10 plants for seed production. Site visits were conducted throughout the project and regular emails were sent to the lead contacts of each group. In September a 'Bristol Community Plant Collection' display was created at BZG and a 'celebration' reception brought the community 'Growing Partners' together. Seven out of the nine groups successfully produced plants for display in BZG. Of these, four returned seed for use the next year. BZG succeeded in obtaining a variety of *Calendula* species, that would achieve National Plant Collection 'Provisional' status.

IMPACT OF COMMUNITIES IN NATURE

Growing a botanic gardens' social role: understanding and attitudes

During the Communities in Nature programme, four UK botanic gardens were supported by BGCI to examine their social role through funding projects with their local communities, organising partner meetings, running an organisational workshop in each garden site, and encouraging the partners to reflect on these activities.

BGCI has defined growing the social role as:

Botanic gardens developing their commitment to working with their local communities on common

issues of social and environmental importance, for the enduring benefit of those communities, the gardens themselves, and towards a sustainable future for our planet.

So how has CiN impacted on the gardens' understanding of their social roles and to what extent has the programme motivated them to develop these roles further?

(a) Leadership views

Dodd and Jones (2010) identified the management hierarchy in botanic gardens as a potential obstacle to organisational change. They argued that the main routes into botanic garden careers are through science and horticulture, creating working communities holding similar world-views and perhaps lacking experience in social and community-based activities. Dodd and Jones (2011) also pointed out that the lack of involvement and support of senior management makes it very difficult for botanic gardens to respond to the social role agenda.

Encouragingly, perceptions may be changing, albeit slowly. Interviews with all the garden directors suggested that they understood what it meant for gardens to be socially relevant – 'attracting hard-to-reach audiences', 'being socially responsible or socially aware', 'doing social inclusion work'. While

most directors linked the social role to the mission of their organisation, there was a tendency to interpret a garden's engagement with communities as audience development. All the directors stated that it was their responsibility to support social inclusion activities in their organisation, although it was the directors of Westonbirt and RBGE who articulated a more passionate and clearer view of what this entails.

It is also instructive that staff from both Westonbirt and RBGE acknowledged the support they receive from senior management. "In terms of our organisation, the senior management team are all on board," said a Westonbirt staff member, ".... everybody has already said it should be part of what we're about."

The directors recognised the benefits of being part of a wider programme on social inclusion and acknowledged the positive impact of BGCI's organisational workshops in raising awareness of this work across the gardens.

Funding was also identified as a major obstacle for gardens in developing their social role. Directors were unable to commit core funds but agreed, should extra funding become available, that they would be willing to engage in more socially relevant work. No plans existed for structural organisational

change to accommodate enhanced social roles, although three directors agreed that socially relevant work should be explicitly included in the job description of the garden staff and not merely be an addition to existing roles.

Three of the gardens (Westonbirt, ULBG and RBGE) are already in the process of applying for more significant funding related to their social role and have concrete plans on how they intend continuing this work. The situation is complicated in the case of BZG, which is currently focused on creating a new zoo (National Wildlife Conservation Park) near the Cribbs Causeway, north Bristol.

(b) Capacity building

‘Botanic gardens have small workforces and very few workers with the appropriate kinds of skills for working with communities’ wrote Dodd and Jones (2010). Essential community engagement skills include project management, team work, the ability to work in partnership, administrative efficiency as well as empathy with community needs and the capacity for listening (Dodd and Jones, 2011).

During the CiN programme, training in project management and creative community engagement was offered in BGCI’s workshops. Some participants also received training from their community partners and their projects provided



Stroud Macular Disease Society visitor making a hurdle at Westonbirt Arboretum.

them with practical experience of community working.

Project management, including time management and multitasking, evaluation, communication skills, public speaking, teaching skills, team work, being flexible, active listening, skills for working with particular groups (disabilities, addictions, mental health problems etc.) were among the skills most frequently mentioned by garden staff. And neither should soft skills be disregarded – participants from all four projects commended the friendly and approachable staff.

Botanic gardens tend to offer one-off visits for their traditional audiences and are less accustomed to working on longer-term community projects.

Engaging with the same participants over an extended period calls for a different mindset and BGCI's training in project management skills was well received in this regard. Moreover gardens realised that they needed to develop community expertise both by training existing staff and by bringing in new people with relevant experience. In building the capacity of an organisation, its management should not only be focused on developing staff skills, but also with changing staff attitudes to enable them to work effectively alongside local communities on relevant projects.

The most notable change was apparent at Westonbirt, where the initial 'nervousness' of some of the staff and volunteers about whether they could work with the participants, transformed into the realisation that 'actually they are quite good at it [community engagement] and they got something out of it themselves'. Chris Meakin, responsible for Hidden Voices, reported: "I can see my role here as broadening to involve that social role a lot more than I did before because I've experienced it, enjoyed it, seen how it's worked, seen what we need to work on and how we can develop it."

(c) Facilities and access

While improving site accessibility is widely accepted as essential for attracting hard-to-reach groups, this did not appear to be a major concern

for most partners, although garden staff did mention plans for improvement. For ULBG the challenge of improving site access was regarded as more urgent because they were specifically working with people with disabilities.

Both Westonbirt and RBGE are applying for grants to build new facilities on their sites and they have been required to explain how they will use these facilities with hard-to-reach audiences.

RBG Kew has a decade of experience in social inclusion work and has established an Access Forum with members from local community organisations. According to Kew's Gail Bromley, the Forum advises on a range of issues such as toilet accessibility, the legibility of menus and other printed material and whether guides are trained in audio prescriptive terms.

(d) Team working

In their evaluation of the social inclusion work of three UK botanic gardens, Dodd and Jones' (2011) argued that effective team working was essential and impacted on every aspect of a garden's activities, including recruitment, events, programming and publicity. This is supported by feedback from the Communities in Nature partners, who acknowledged that the experience of working with different departments across the gardens was

crucial to the successful outcome of their projects.

BZG's project is a persuasive example of how staff changed their perceptions about working across departments. Project coordinator, Emma Moore, published information through the zoo's weekly newsletter about how the Bristol Community Plant Collection was progressing. The project also encouraged interest from elsewhere in the garden, a practise supported in BGCI's organisational workshops.

Only one garden failed to highlight the importance of team-working throughout the organisation, but with pressure on limited staff and resources this may not have been seen as a priority. However, given that the garden in question has few staff and is already stretched in terms of resources, collaborating across departments may not have been seen as feasible.

(e) Marketing

The CiN partners were all conscious of the need to carry out targeted marketing aimed at minority, under-represented or hard-to-reach groups in their communities. As Westonbirt's Gina Mills remarked: "We're going to have to find creative ways of engaging with these new audiences, both on-the-ground and in our communications with the outside world."

(f) Partnerships in the community

Every garden understood that forging relationships with other organisations and community groups enabled them to engage with a broader range of participants than they would otherwise have reached. Community and group leaders also advised on the suitability of proposed activities, facilitated communication with and supported the delivery of the project activities. Chris Meakin from Westonbirt explained: "At times it is important to stand back and let the group leader manage part of the day. As gatekeepers for their organisation, they may be the best person to communicate aspects of the programme to the participants".

When negotiating with potential partners it is important to be explicit about what each side can expect to gain from the enterprise, not least because it can be an effective way of gauging the credibility of their interest. With this in mind, BZG is planning to set up a more formal application process to select future community groups. Another potential pitfall is communications. Both RBGE and BZG had difficulty in contacting their school groups and getting hold of the responsible teachers. Finding an enthusiastic teacher to champion the project and motivate students' participation is crucial and having a permanent contact can mitigate against staff changes and turnover.

(g) Organisational partnerships

While all the CiN gardens acknowledged the value of partnerships with community groups, they were less aware that other partnerships – with botanic gardens, for example, or museums and other organisations experienced in social inclusion, could be beneficial. One example is the partnership between RBG Kew and Royal Historic Palaces, who have had a Memorandum of Understanding for more than 12 years. This supports long-term collaboration on social inclusion work, including joint community projects, and co-funding a community outreach officer (Bromley, 2012).

It was BGCI's intention, through the CiN programme, workshops and blog, to create a community of practice. This was broadly achieved and the consortium met the criteria of a Community of Practice identified by Wenger (2007). In particular, they were all committed to grow their social role (shared domain of interest), they engaged in joint activities and discussions, exchanged information (formed a community) and developed a pooled repertoire of resources, experiences and tools (shared practice). There is still some way to go, however, before this becomes second nature. It is instructive to note that the partners did not communicate with each other between workshops and updating the blog required prompting from BGCI.

(h) Sustainability and legacy

Having been through the CiN programme, to what extent will the participating gardens continue to develop their social role and harness the necessary capacity and resources to do so? Early indications are that all of them are eager to move forward – by working with the same groups in future, scaling-up their existing projects, using the same resources to engage with other groups with similar needs or by developing new activities that address other social and environmental issues.

Communities in Nature also supported the gardens to leverage funding for future developments. During its Feel Green project, ULBG piloted workshops for adults with disabilities that can be offered to similar future audiences. It also purchased a marquee, which provided an accessible teaching classroom and will be used in the future.

Another element of CiN's legacy is the willingness of the majority of the community groups involved to continue their relationship with the gardens after the projects ended. The Rock Trust, for example, asked RBGE to provide apprenticeships for young people who are at risk of homelessness, while Broughton High School has already booked two groups to return to the gardens in 2013 and requested RBGE's support for creating a vegetable garden on their school grounds. And significantly

the success of these projects has encouraged other community groups to ask to be included in future community activities. Seven new groups are on a waiting list for any future developments of the Bristol Community Plant Collection.

Evidence of staff willingness to continue socially relevant work emerged in their feedback on how much they enjoyed the actual interactions with the community groups.

Three of the four gardens (RBGE, Westonbirt, ULBG) have outlined plans for continuing their socially relevant work. In its recent application for Heritage Lottery Fund backing, Westonbirt has identified 'two new staff members to work specifically to broaden audience profile and deepen wider community engagement. The lessons learned through delivery of the Hidden Voices project provide a clear blueprint for taking these roles forward' (Oliver & Meakin, 2012).

Other significant steps include integrating the social role in their strategy plan for the next five years, and exploring options for targeted entrance charges to reduce cost to community groups.

Perhaps the greatest attitudinal change occurred at ULBG where, by the end of the project, the garden was looking for funding a new long-term gardener post for someone with experience of working with disabled visitors.

In all CiN gardens funding was seen as a major potential inhibitor to developing their social roles and there's no reason to believe that the situation would be any different elsewhere in the current economic climate. BZG's preoccupation with funding its new site was a key factor, but nevertheless its horticulture department has been exploring future funding options in respect of expanding its social role. There is an optimistic outlook for its Community Plant Collection and news of a National Lottery funding application was further boosted by the retention of its staff member to revisit and improve all the resources needed (surveys, educational materials, species seeds, etc) in the event that future funding be secured.

“Unless senior managements support and prioritise their gardens’ social roles it would be very difficult (though not impossible) for others in the organisation to sustain meaningful socially relevant work”

Similar commitment to the ethos of a social role is evident at Westonbirt, where the success of its Hidden Voices project showed that its capacity for socially inclusive work could support future funding

proposals. Westonbirt was looking at collaborating with community groups and its Friends fundraising team to this end.

Unless senior managements support and prioritise their gardens' social roles, it would be very difficult (though not impossible) for others in the garden to sustain meaningful socially relevant work.

(i) Engaging communities

Community engagement has been defined as 'the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people. It is a powerful vehicle for bringing about environmental and behavioural changes that will improve the health of the community and its members' CDC (1997, p.9). While recent research among UK museums (Lynch, 2010) suggests that most engagement is 'contained' at the level of 'consultation' rather than 'collaboration – even being used to rubber-stamp existing plans – the challenge to the CiN gardens was how to make their projects meaningful, genuinely reciprocal and engaging.

None of the gardens engaged with any participants during the application process, although some group leaders were involved in exploratory talks. Uniquely, Westonbirt involved its participants in

planning their project. Lack of time was cited by other gardens, although all agreed in retrospect that earlier involvement of the participants would have been helpful to clarify aims and activities.

If projects are to be successful in fostering social inclusion work and meeting participant needs, then adequate staff and resources have to be allocated to engage the participants in the planning phases of the project.

Good relationships with community leaders are likely to be critical to the success of social programmes and they have to be clear and unambiguous. The early removal of misconceptions and uncovering of any hidden agendas is advisable – achievable by frank and detailed discussion. Moreover this is when the unique characteristics and capabilities of the participants may be identified.

All the CiN gardens reported a deeper understanding of their participants' needs and interests and, wherever appropriate, modified their activities accordingly. Working with community groups is different from delivering one-off activities for school groups, where tight scheduling is the norm to ensure delivery of curriculum-related objectives. Community groups usually have other, sometimes social, priorities.

Westonbirt: 'Hidden Voices'

A collaborative approach:

- **Initial discussion (at community venue):** to introduce staff, Westonbirt and project – aim: to build interest among participants.
- **Discovery/orientation visits (sessions 1&2):** giving groups chance to get to know Westonbirt and try out different activities. Group discussions to plan content for remaining visits.
- **Activity sessions (sessions 3&4):** delivering agreed activities. A mixture of walks with activities and hands-on creative crafts provided good balance. Each activity aimed to deepen understanding and an appreciation of trees.
- **Creative project (sessions 5&6):** creative legacy element where participants contributed to Westonbirt by, eg, providing photos, recipes, etc.
- **Celebration:** closing the project and enabling groups to meet each other and promoting project internally and externally.

“It was a surprise to realise how relaxed the groups wanted to take the sessions,” reported Westonbirt’s Chris Meakin. “Initially we planned a full programme, with us working with groups for the whole visit, often with a choice of activities. Reducing our programme activities from this felt like we were providing less of a service to the groups, but through the collaborative approach we came to understand the importance of giving time for social sharing – indeed often the best discussions happened during this informal time.”

Some participant choice and decision-making was incorporated into all the garden projects. Staff and

volunteer attitudes and behaviour were also relevant. Many participants reported how they appreciated the staff and their descriptions of them included: ‘down to earth’, ‘genuine’, ‘helpful’, ‘good to work with’, ‘kept contact all the time’, ‘kind’, ‘part of our family’, ‘reliable’.

The quality and degree of staff-community group interaction was explored from the start of the CiN, methods ranging from providing information and enabling choices, to joint decision-making and action and even supporting community interests. By the end of the programme two gardens, BZG and Westonbirt, had developed and tested two models of community engagement.

Westonbirt’s collaborative approach allowed its groups to benefit from the Hidden Voices activities, although it was challenging to implement (Oliver & Meakin (2012, p.36) ‘The collaborative approach... helped us to remain flexible and to adapt to our increasing knowledge about our groups and to provide visits and experiences that were appropriate and of value to them. This approach was a challenge to the learning team as firm plans could not be made and the programme of activities could not always be delivered as expected; frequent changes meant unexpected staff time to develop new materials at the last minute.’

The high number of participants attending each

session is also evidence of the success of the engagement model. Westonbirt staff worked hard to ensure that the groups would always look forward to visiting and experiencing something new. A less successful element of the project was its creative output (e.g. audio trail using feedback from SMDS participants), which failed to prompt any feedback from the participants. On reflection, the staff concluded, in future they would involve the groups not only in developing the creative output but also deciding what this would be.

Overall, Hidden Voices stimulated increased levels of community engagement, ranging from consultation (offering options and receiving feedback) to jointly deciding the project activities. The successful strategies they employed included focus groups and informal discussions, but also more structured activities such as concept maps and the World Café.

BZG's approach to the Bristol Community Plant Collection differed significantly from Westonbirt's. BZG's goal was to set up a conservation project by working with communities drawn largely from deprived areas. Although the model's didactic framework evolved during the delivery phase, BZG nevertheless recognised that failing to incorporate participant input and decision-making at an early stage was an opportunity missed. Constant and

Bristol Community Plant Collection

A citizen conservation project:

- Initial contact with communities, directly or through third parties (neighbourhood partnerships) to announce project and build participant interest.
- Training of groups at BZG, or on-site where appropriate (especially important for school groups so that pupils have a context for their involvement).
- Initial site visits to deliver growing equipment, discuss any concerns and repeat any necessary training.
- Regular communication with groups – phone calls, e-mail, facebook, etc – to monitor progress and offer support.
- Regular site visits on request and to collect plants for BZG display.
- Celebration for community groups to meet and thank and also for internal and external promotion.
- Groups deliver seeds collected throughout process for growing next year.
- Contact maintained on more casual basis to update those groups who have indicated they would like to be further involved.

regular communication with the groups by e-mail, phone and site visits, monitored project progress and maintained support. Project manager Emma Moore's open and friendly manner encouraged the groups to propose changes and determine how the project would be implemented, as well as facilitating new independent initiatives.

Calendula grown by the groups was displayed at BZG and this fostered a sense of project ownership among the groups. The innovative nature of the project – embedding a National Collection in the community – also engaged the imagination and



*Cabot Primary School Gardening Club showing off their *Calendula* spp.*

commitment of the groups.

ADDRESSING SOCIAL INCLUSION

Social inclusion is usually defined in the context of social *exclusion* (Cameron, 2006). Social exclusion is a complex phenomenon (Percy-Smith 2010) that incorporates economic, social, political, neighbourhood, individual, spatial and group exclusion dimensions.

This complexity was encountered by all the CiN gardens during their projects and what emerged

was a picture of the kind of social exclusion issues that botanic gardens may be best able to address.

(a) Addressing social and economic exclusion

The economic dimension of social exclusion includes poverty and exclusion from the labour market, while its social dimension can encompass family and household breakdown, homelessness, drug and alcohol abuse and crime. It is reflected in increased teenage pregnancies and growing youth disaffection, especially among the so-called ‘Neets’ (young people not in education, employment or training).

While all the projects elected to work among communities that experienced high levels of deprivation, RBGE’s Edible Gardening Project came closest to directly addressing the socio-economic impact of exclusion. It targeted young people, many of whom were at risk of homelessness and lacked effective support networks. Low academic achievement, school absenteeism and difficulties in forming and sustaining relationships were also factors.

RBGE’s project offered a genuine experience of what it meant to grow food and opened a window on the work of gardeners and horticulturalists. Moreover it seemed to have a profound impact on some of the participants, as one explained: “Since

I've come to the garden, I've changed, I want to be a gardener, I'm changed from being a bad boy... to (thinking about) being a gardener. It's keeping me out of trouble and that's it." The project also taught its young people how to grow and cook fresh produce for the first time. They tried new vegetables and some even started growing edible plants at home.

Sustaining the same level of participation inevitably proved a challenge and RGBE concluded that future projects would have to factor a drop-out rate when planning initial recruitment numbers. RGBE is negotiating with its project partners about creating food cultivation plots at their sites in order to encourage increased participation.

RGBE's project aim, to raise confidence and aspiration among a cohort of young people who are, or are at risk of being, homeless, is broadly in line with current Scottish Government policy since, notwithstanding that homelessness rates have been falling over the last decade, it is still seen as a major problem.

(b) Addressing political and neighbourhood exclusion

The political dimension of social exclusion concerns an individual's ability to participate in or influence decision-making that affects their lives.

Non-participation may contribute to disempowerment, although this has to be seen in the context of increasing voter disillusionment with the political system in the UK and low (sometimes very low) voter turnout at elections. The neighbourhood dimension might be manifested in environmental degradation or the collapse of support networks and evidenced by low levels of participation in community and voluntary activities.

Among the CiN projects, the Bristol Community Plant Collection and the Edible Gardening project encouraged greater participation in community activity. By encouraging participants to work collaboratively and make joint decisions – in creating community gardens, for example – new community networks were established and existing networks reinforced. These unexpected outcomes were achieved because the gardens responded to the participants and their groups' needs rather than focusing on their original project plans.

Flexibility was highlighted as one of the qualities that botanic garden staff need to have when working with communities. RGBE, for example, was quick to respond to additional groups who wanted extra support and training on how to grow their own food and develop community gardens in their areas. One-off training sessions in gardening and cooking skills were offered.

The Bristol Community Plant Collection's impact was perhaps even more notable. By engaging the participants in a common enterprise – growing and saving calendula seeds for conservation – and offering continuous support and advice, they encouraged them to develop new skills in propagating, planting and collecting seeds. Community cohesion was fostered and autonomous decision-making, for example in negotiating with the local council over neighbourhood greening initiatives, encouraged.

Similar community cohesion outcomes through gardening activities have also been reported elsewhere, such as the RHS (2011) Britain in Bloom community horticulture programmes. Participants regarded community development as a positive consequence of their involvement.

(c) Addressing individual and group exclusion

Research from the museum community (Sandell, 2003) suggests that enhanced self-esteem is a positive outcome of effective social inclusion projects, encouraging participants to develop more active, fulfilled and social lives (Hooper-Greenhill et al., 2000). Translated into the CiN experience, improvements in participant self-confidence appeared to depend on the degree of their involvement with their gardens. This may sound axiomatic, but since it goes to the heart of the

social role relationship it is a point worth underlining. Of course one cannot discount the disinhibiting effect of familiarity but the feedback, notably from ULBG and Westonbirt, is nonetheless persuasive.

Westonbirt's Hidden Voices project, whose ethnic Asian women experience considerable domestic, social and health challenges, reported marked improvements in participant self-confidence over the course of the project. Their initial concern about going into a 'muddy place' and being 'scared to go and do something different' was transformed by the end of the sixth visit when they suggested going there for camping!

"We could never have asked that group ...to go off on their own in the first visit or two," said Westonbirt's Chris Meakin, "because they were so nervous about walking and how far to walk and getting lost, so I'm delighted that they feel confident enough just to go off and wander. It's just brilliant."

Health and wellbeing

There is worldwide support for the view that interacting with plants can have a positive impact on human well-being. This includes people with physical or mental health conditions, as well as those with learning difficulties and the elderly.

Evidence is widespread and crosses national boundaries and cultures, from the Royal Botanic Gardens Sydney's Community Greening programme (Urbis, 2004) to Gothenburg Botanic Garden's Green Rehab for people with stress-related disorders and Winterbourne's Urban Veg project (Dodd and Jones, 2011).

Similarly, CiN members reported positive physical and mental benefits, from dietary improvements in the Edible Gardening project (significant indeed, given Scotland's notoriously poor record in lifestyle-related illnesses such as obesity, type 2 diabetes and cardiovascular disease) to Westonbirt's Hidden Voices initiative.

At Westonbirt, BDP project members recognised the rehabilitative benefits of going from the chaos of the city into a quiet natural space. At the end of a visit that involved training in practical woodland management, one of the participants observed: "It was an amazing experience, a wicked day. It gave me a bit of hope that I can be part of the community, be normal. I found I could put my mind to something that let me have a really good time, I was 100% there."

"The natural high from that day," he added, "got me through the whole weekend (without using drugs), which I was worried about."

Widening access

Botanic gardens in the UK tend to attract a very narrow audience – generally white, middle class and middle-aged. Not unexpectedly, all four CiN gardens fell into this category yet, after running their small-scale projects, they were able to alter the perceptions of the community groups they worked with. All the more noteworthy since the profiles of the groups in question – disabled, elderly, ethnic minorities, drug addicts and young people with homeless backgrounds – put them firmly among the excluded and disenfranchised members of society.

The majority of the participants who provided feedback for this evaluation said they would now visit the gardens again. The provision of appropriate facilities, including disabled access and amenities as well as education and learning spaces was also seen as essential. For every group, access to a botanic garden meant escaping the problems of their everyday lives. Joining Hidden Voices enabled BDP participants to step away from inner city neighbourhoods blighted by drug and alcohol abuse. For the young people at risk of homelessness, visiting RBGE meant "it's quiet, nobody will bother you, you don't get gangs in here, they don't fight in here, it's quiet."

While CiN enabled hitherto 'excluded' community

“While it may not always be obvious, issues of social equity are intimately interwoven with environmental issues in the sense that underserved communities often have insufficient or deteriorating infrastructure, reduced access to natural resources such as fresh food or water, clean air, and green space, and lack high quality social services such as health care and education.

As botanic gardens work with communities to develop locally relevant programs, it is entirely appropriate to tie-in environmental issues that are connected to the needs that the community has identified. In fact, communicating about sustainable practices in pursuit of something that is important to the community is far more likely to have a lasting impact than conservation messages outside of a meaningful context.”

Jennifer Schwarz-Ballard,

Chicago Botanic Garden, 2012

groups to visit the gardens, where they were welcomed and made to feel included, the challenge

for the partner gardens is how to sustain this over the long term and embed a social role in their core provision. For BZG and Westonbirt, reliant as they are on entrance fees, the reality is that some of their groups will not be able to afford future visits. Westonbirt’s problem is compounded by the lack of reliable and cheap public transport links to its rural site. RBGE is more fortunate in this respect because it charges no entrance fee, public transport is plentiful and it is conveniently located.

Raising community environmental awareness and participation

A broad spectrum of environmental issues were tackled during the CiN programme, ranging from green gardening practices and sustainable living (RBGE) to BZG’s conserving biodiversity and ULBG’s climate change and the importance of water conservation. Westonbirt also highlighted woodland conservation management. A variety of communication and engagement strategies were employed, including demonstrating and speaking about the issues (ULBG) or participatory approaches that sought to engage people in conservation practices (BZG and Westonbirt).

To establish whether the environmental objectives of the CiN partners were met, as well as find out whether more general environmental learning occurred, the evaluation adopted Scott & Gough’s

conceptual framework ‘**Categories of interest in environmental learning**’ (2008).

[a] Values and feelings about nature and plants

Participant feedback highlighted the life-enhancing experience of visiting the gardens, as well as their social benefits. Participants also appreciated the opportunity to build relationships with the gardens. ULBG designed its hands-on activities for its disabled participants specifically to enable them to interact with nature, prompting one of the carers for a participant with complex physical and learning disabilities to comment: “She seemed to enjoy getting her hand in the soil, to feel the texture a bit but not to get right in as she pulled her hand out. She enjoyed choosing her coloured pot, nodding and smiling when we said purple. She seemed to enjoy being outside in the gardens”.

Westonbirt’s Hidden Voices project reported comparable emotional and physical benefits for both its BDP and Asian women participants.

[b] Nature-based skills

Another outcome of the CiN programme was the acquisition of nature-based skills by the participants. Yet while the skills themselves may have been relatively modest – horticultural and plant-derived products and crafts – their positive impact on the participants’ self-confidence was

pronounced, a bolster to their self-esteem that they could take back into their personal lives.

[c] Conservation understanding

Part of the rationale of the CiN programme was to unlock the gardens’ potential to engage with marginalised and disenfranchised members of their local communities in order to raise their awareness of the importance of plant conservation and environmental sustainability.

Of the nine groups who took part in Bristol’s Community Plant collection, four appear to have developed some awareness of what biodiversity conservation means. However not all the groups were able to make the conceptual link between establishing a plant collection and its conservation implications, although they did acknowledge BZG’s contribution to plant conservation. At Westonbirt, the Asian women’s group recognised the importance of tree conservation and were able to articulate some of the relevant environmental challenges. However it was not clear that they felt they could be part of the solution.

[d] Conservation behaviours

One way to achieve conservation and sustainability goals is by encouraging relevant behavioural changes at the individual level. However, as Heimlich and Ardoin (2008) point out, many

environmental educators make the mistake of focusing specifically on behavioural outcomes, rather than the steps required to reach those outcomes. They also recommend that each of the individual behaviours and actions that comprise the overall environmental behaviour they want to modify, be specifically addressed. Skill acquisition can encourage this process, interrupting old behavioural patterns and replacing them with sympathetic new ones.

Edinburgh's Edible Gardening project appeared to make most progress in this direction by teaching its young participants how to live more sustainably, learn how to grow their own food and understand the benefits of a healthy diet. Whether such behavioural changes can be sustained over the long-term is impossible to predict or guarantee, however, not least because of the many competing challenges that these young people are facing in their lives.

[e] Social change, citizenship skills

The Hidden Voices and Bristol Community Dispersed Collection projects both showed that action on conservation and sustainability is not exclusive to policy makers and experts. Communities can also get involved in these activities and, in doing so, exercise their democratic citizenship skills (Scott and Gough,



'Feeling Green' at University of Leicester Botanic Garden.

2008, p.84). The hands-on involvement of BDP members in woodland conservation and management activities explicitly located their activities inside an overall environmental framework and, moreover, enabled them to grapple with the broader conservation implications of what they were doing – namely that it would 'conserve species, allow diversity, and get the most out of the piece of land'. And importantly the participants

recognised that they, too, had a personal stake in tackling these environmental and conservation challenges.

Similarly BZG's Community Plant Collection placed community participation at the heart of their programme. The contrast with the other groups (Asian women and SMDS), whose programmes were not so participative, is marked. While they

were informed about environmental issues, they either failed or were unable to express how they could be part of the solution.

BZG's project is a successful model of community-based conservation. Looking forward, the garden is committed to ensuring that all members of future groups clearly and unambiguously understand their conservation role.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

In their seminal report, *Redefining the role of botanic gardens* (2010), Dodd and Jones argued that organisations should reflect on:

- **why they exist (purpose)**
- **what they believe in (values)**
- **who they do it for (audiences)**
- **and what they want to achieve (goals)**

The four CiN gardens embarked on this process of reflection by running small-scale projects with their local communities, attending training workshops and holding organisational meetings. Feedback from all four partners suggested that they understood the importance of developing their social role and, moreover, that they were willing to

do so. For those gardens with prior experience of social inclusion, the CiN programme enabled them to accelerate their plans and support the promulgation of the social role throughout their organisations. The less experienced gardens, on the other hand, saw CiN as an opportunity to develop their capacity and think more strategically about next steps.

It was notable that those gardens who most enthusiastically embraced social inclusion were led by people with a positive commitment to its ethos. The less experienced gardens, where leadership around the social role was less evident, were also affected by capacity constraints and had different organisational priorities. In the absence of strong leadership and direction, therefore, it is unlikely that a botanic garden would be able to entrench an

enduring social inclusion strategy. This is not to say that passionate and determined staff elsewhere in the organisation cannot generate social inclusion initiatives of their own, but in the absence of a coherent whole-organisation approach, these are likely to be more ad hoc and temporary .

In order for gardens to grow their social roles effectively, the following key factors were identified:

- capacity for working across teams
- development of project management skills
- evaluation and communication skills
- developing a targeted marketing strategy
- building partnerships with community groups and other organisations

Critical to any garden's social inclusion strategy is the quality of its engagement with its local communities and it became clear, during the CiN programme, that all gardens needed to develop this capability. An extended planning phase may have given the gardens more time to develop this approach, especially in co-opting the participants to help shape the project activities, although they would still have had to overcome the early deficit in staff skills and understanding. It was only during the implementation period that staff began to evolve and expand their relationships with the participants, understanding their needs and interests and modifying the activities accordingly.

Nevertheless, by the end of the CiN Programme, two viable social engagement models had emerged which could provide templates for other gardens.

The primary task of most botanic gardens is plant conservation, although environmental concerns also feature prominently. It is axiomatic that the terms of their social engagement with communities should make these themes relevant to them. This is the Eden Project's community ethos, as Juliet Rose explained (2012):

“Environmental issues do not exist in a vacuum, they are intertwined with people's daily lives. Part of our role is to demonstrate how they are connected...There are a range of tangible environmental issues you can incorporate that will help make a real contribution to the community and provide insight into broader environment issues. For example a food growing project can help tackle food security and climate change by reducing food miles. Showing people how easy it is to take ownership and responsibility for their green spaces can help inspire them to care more about the environment in which they live, leading to greater social cohesion. Stronger communities are more likely to be able to face up to environmental challenges.”

But Eden is an exception that proves the rule, because at Eden the social dimension was

incorporated in its organisational culture from the outset. The picture for more conventional botanic gardens is different and several CiN gardens said that addressing both social and environmental issues was problematic for them. However the lesson from the CiN evaluation is that this can be achieved, especially if the potential participants are involved from an early stage in project planning and design so that the environmental issues are relevant to them.

Recommendations

FOR BOTANIC GARDENS

- The CiN programme successfully piloted small-scale, limited duration models of social inclusion. However the evaluation argues that, in order to achieve significant impact over the long term, community-based projects have to be based on enduring garden-community relationships supported by regular contact and communication.
- To address community needs botanic gardens must employ engagement processes that empower participants to make decisions about the project they are involved in. These should be in place early, preferably by the project planning phase, and include participants as well as group leaders.
- Sufficient time should be allocated for the planning process and gardens are recommended not to rush to implement their projects as soon as they receive their funding.
- In order for botanic gardens to develop their social role, it is essential that community engagement is acknowledged as part of the work of garden staff and is included in their job descriptions. Community engagement should not be seen as an 'add-on'. It is also important to ensure that staff have the skills to conduct socially relevant work. A staff skills-audit will provide evidence of in-house capabilities as well as highlighting skill deficits requiring training or the employment of qualified additional staff.
- Developing a garden's social role requires leadership support and must be consolidated across the organisation. It should not be the sole responsibility of one team, usually the Learning Team. Working with different teams on community projects is likely to help garden staff from different departments understand the significance of social relevance and this may encourage them to contribute to similar work in the future. Moreover successful community projects require the input of several departments including horticulture, fundraising and marketing. It is a holistic process.
- Growing a botanic garden's social role can be undertaken by developing partnerships with community groups and community services. This will facilitate access to individual members of the community, provide support and help develop staff knowledge on how to interact effectively with these individuals. Establishing partnerships with other

organisations more experienced in socially relevant work (e.g. museums or other botanic gardens) will also unlock invaluable advice and support.

■ Thorough evaluation of community projects will help improve a garden's performance and may demonstrate their impact to potential funders. It is also important for gardens to share these results with the wider community of botanic gardens, so that others may learn from their successes and challenges. Promotion of community project activities and publication of their outcomes to wider audiences may engage the interest of other groups and organisations, encouraging them to collaborate on social inclusion work. Generating media coverage, forming partnerships with other organisations and communicating the impact of social inclusion projects are useful tools when looking for funding, as well as demonstrating the garden's expertise and a successful track record in social inclusion.

FOR BGCI

■ Throughout Communities in Nature, BGCI supported, trained, and coordinated the four UK gardens as they developed their social roles. The response from the gardens has been very positive and encouraging and they are looking to expand the existing collaborations. The gardens all believe that BGCI's pivotal role in championing Growing the Social Role (GSR) of botanic gardens must be

sustained and amplified. Given this degree of interest and support from all BGCI's partners in the GSR enterprise, it is therefore imperative that BGCI scales-up its initiative and builds a consensus among the wider international community of botanic gardens on the importance of growing their social role. One possible way forward, for example, could be the drafting of a Memorandum of Understanding as the basis for an international Community of Practice – in which gardens work together towards a common goal, sharing knowledge, practice and experience.

■ Building on the findings of the research report 'Redefining the role of botanic gardens' Dodd and Jones (2010), BGCI has led two programmes that have worked with seven UK botanic gardens to become more socially relevant. Through such programmes, BGCI has developed its own understanding of how to support these organisations. One approach is to help identify funding streams to enable a larger number of gardens to run social inclusion projects. Another would be for BGCI to commission further research on the impact of social inclusion projects on particular groups – elderly patients with dementia, for example, or individuals recovering from substance addiction.

■ Another role for BGCI would be the promulgation of best practice and knowledge-sharing among gardens. There are positive examples from other

gardens worldwide and harnessing their experience may help build success and avoid mistakes.

Creating a global portfolio of case studies is certainly feasible and in this regard BGCI's role as the hub of an international network of gardens is invaluable.

■ CiN underlined the vital importance of training in the successful delivery of socially relevant programmes. BGCI's expertise and leadership in this field should be expanded into areas such as project management and evaluation, community engagement strategies and harnessing social diversity.

FOR FUNDERS

■ It became clear during CiN that an extended project planning phase is required in most cases to enable relationships to develop and fruitful collaboration on project activities to emerge.

Funders should therefore look at backing flexible projects with broadly articulated outcomes that may be refined and detailed, in collaboration with local communities, during the extended planning phase. The collaborative approach adopted by Westonbirt illustrates what a more flexible project can achieve in terms of social impact on the communities.

■ If botanic gardens are to develop their capacity in socially relevant work – and bearing in mind that many of them do not consider this as a priority for their organisations – more funding should be directed towards partnerships and organisational change strategies. While short-term project funding may sow the seeds for change, strategic financing is essential to sustain change over the longer term. And sustainable funding is particularly important to those organisations who are taking their first steps towards developing their social role.

References

- BERA, British Educational Research Association (2011).** *Ethical Guidelines for Educational Research*. Southwell: BERA.
- Bristol City Council, 2010.** *Health and Wellbeing Factosheets* April 2010. [pdf] Bristol: Bristol City Council Available at: <http://www.bristol.gov.uk/sites/default/files/documents/health_and_adult_care/health_and_medical_advice/Bristol%20public%20health%20factsheet%20-%20drugs.pdf> [Accessed 10 December 2012].
- Bristol City Council, 2012a.** *Neighbourhood Partnership Statistical Profile 2012*. [pdf] Bristol: Bristol City Council. Available at: <http://www.bristol.gov.uk/sites/default/files/documents/community_and_safety/neighbourhood_partnerships/Cabout%20Clifton%20Clifton%20East%20statistical%20profile%20v2_0.pdf> [Accessed 10 December 2012].
- Bromley, G., 2012.** *Interview for the Communities in Nature 'How to manual'*, Royal Botanic Gardens, Kew, 11 October 2012.
- Bryman, A. 2008.** *Social Research Methods*. 3rd ed. Oxford: Oxford University Press.
- BZG. 2008. Marketing at Bristol Zoo Gardens. Available at: <<http://www.school-portal.co.uk/GroupDownloadFile.asp?GroupId=520386&ResourceId=3042729>> [Accessed 10 January 2013].
- Cohen, L., Lawrence, M., and Morrison, K., 2005.** *Research methods in education*. London; New York: RoutledgeFalmer.
- Creswell, J.W., 2008.** *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd ed. Los Angeles, London, New Delhi and Singapore: Sage.
- Department of Health, 2012. *Health Profile 2012*. [pdf] Bristol: Department of Health. Available at: <http://www.bristol.gov.uk/sites/default/files/documents/health_and_adult_care/health/HealthProfile2012Bristol00HB%5B1%5D.pdf> [Accessed 10 November 2012].
- Dodd, J. and Jones, C., 2010.** *Redefining the Role of Botanic Gardens – Towards a New Social Purpose*. Leicester: Research Centre for Museum and Galleries (RCMG) and BGCI
- Dodd, J. and Jones, C., 2011.** *Growing the Social Role of Botanic Gardens: an internal evaluation for BGCI*. Leicester: Research Centre for Museums and Galleries and BGCI
- Edinburgh Cyrenian Trust, 2011.** *Prevention Saves Money and Misery Cyrenians Homelessness Prevention Service Impact Report*. Edinburgh: Edinburgh Cyrenian Trust.
- Edwards, I., 2006.** *Social Integration for All*, Roots, [online] 3(1). Available at: <<http://www.bgci.org/resources/article/0247/>> [Accessed 15 January 2013].
- Gloucestershire County Council (GCC), 2010.** *Indices of Multiple Deprivation: Gloucestershire Summary*, 2010. Gloucester: GCC. Available at: <www.gloucestershire.gov.uk> [Accessed 05 January 2013]
- Gloucestershire Rural Community Council, 2010.** *The state of Rural Gloucestershire 2010*. [pdf] Gloucester: Gloucestershire Rural Community Council. Available at: <<http://www.grcc.org.uk/downloads/resources/grcc-state-of-rural-gloucestershire-2010.pdf>> [Accessed 10 January 2012].
- Hammersley, M., and Atkinson, P., 2007.** *Ethnography, principles in practice*. London; New York: Routledge Taylor and Francis Group.
- Heimlich, J. E., and Ardoin N.M., 2008.** *Understanding behaviour to understand behaviour change: a literature review*, *Environmental Education Research*, 14, 3, 215-237.
- Hooper-Greenhill, E., Sandell, R., Moussouri, T. and O'Riain, H., 2000.** *Museums and Social Inclusion The GLLAM Report*. Leicester: GLLAM.
- Leicester City Council, 2012.** *The Diversity of Leicester: Summary of Key Facts: 2011*. Leicester: Leicester City Council. Available at: <www.leicester.gov.uk/EasySiteWeb/GatewayLink.aspx?allId=89093> [Accessed 10 January 2012].
- Leicester City NHS Primary Care Trust, 2008.** *Disability Equality Scheme 2007-2010* [pdf] Leicester: Leicester City NHS Primary Care Trust. Available at: <http://www.leicestercity.nhs.uk/Library/disability_equality_scheme.pdf> [Accessed 5 February 2013].
- Local Futures, 2008.** *The State of Oadby and Wigston: District Audit*. [pdf] East Midlands: Local Futures. Available at: <http://www.oadbywigston.gov.uk/files/documents/local_future_s_part_3/Local%20Futures%20Part%203.pdf> [Accessed 20 December 2012].
- Lynch, B. 2010.** *Whose cake is it anyway? A collaborative investigation into engagement and participation in 12 museums and galleries in the UK*. London: Paul Hamlyn Foundation. Available at: <<http://www.phf.org.uk/page.asp?id=1417>> [Accessed 15 November 2012]
- Morris, J., O'Brien, L., Ambrose-Oji, B., Lawrence, A. and Carter, C., 2011** *Access for all? Barriers to accessing woodlands and forests in the UK* pp. 25-34 in Ambrose-Oji, B. and Fancett, K., (eds.) (2011) *Woods and Forests in British Society: Progress in research and practice*. Conference proceedings, *Forest Research Monograph*, 3, Forest Research, Surrey, 97pp. Available at <http://www.forestry.gov.uk/pdf/FRMG003_Woods_and_forests_in_British_society.pdf>

- National Records of Scotland, 2012.** *City of Edinburgh Council Area - Demographic Factsheet.*[pdf] Edinburgh: National Records of Scotland. Available at: <<http://www.gro-scotland.gov.uk/files2/stats/council-area-data-sheets/city-of-edinburgh-factsheet.pdf>>. [Accessed 20 January 2013].
- NHS Leicester City, 2009.** *Local health - the big picture* [online] Leicester: Leicester City NHS. Available at: <http://www.leicestercity.nhs.uk/_yourhealth-localhealth.aspx>[Accessed 15 January 2013].
- Oliver, B. and Meakin, C. 2012.** *Communities in Nature: Final Report for the Hidden Voices Project at Westonbirt*, The National Arboretum. Tedbury: Westonbirt The National Arboretum. Available at:<http://www.bgci.org/files/Worldwide/Education/Social_inclusion/Final%20Westonbirt%20Hidden%20Voices%20report.pdf> [Accessed 10 January, 2013].
- Percy-Smith, J., 2000.** *Introduction: The contours of social exclusion* in Percy-Smith, J. ed. *Policy responses to social exclusion: towards inclusion?* Buckingham, Philadelphia, The Open University Press, pp. 1-21.
- RBGE, 2012.** *Growing bands of visitors enjoy rich diversity of the Garden.* Press Release. Edinburgh: RBGE. Available at: <<http://www.rbge.org.uk/about-us/press-centre/press-releases-2012/growing-bands-of-visitors-enjoy-rich-diversity-of-the-garden>>. [Accessed 11 December 2012].
- RHS, 2011.** *Britain in Bloom transforming local communities.* [pdf] London: RHS. Available at:<<http://www.rhs.org.uk/Gardening/Community-gardening/pdf/Britain-in-Bloom-Impact-Report>> [Accessed 16 January 2013].
- Roberts-Thomson, T., Clarke, R., Coulter, K. and Robertson, I., 2008.** *The Diversity of Leicester, A Demographic Profile.* [pdf] Leicester: Leicester City Council. Available at: <<http://www.emcbe.com/download/clientfiles/files/The%20Diversity%20of%20Leicester%20a%20Demographic%20Profile.pdf>> [Accessed 18 January 2013].
- Robinson, D., 2005.** *The Search for Community Cohesion: Key Themes and Dominant Concepts of the Public Policy Agenda.* *Urban Studies*, 42(8), pp.1411–1427.
- Sandell, R., 2003.** *Social inclusion, the museum and the dynamics of sectoral change.* *Museum and Society*, 1(1), pp. 45-62.
- Scotinform, 2008.** *Royal Botanic Garden Edinburgh, Survey of Visitors to the Edinburgh Garden Visitor Survey Report 2006-2008*, Edinburgh: Scotinform Ltd.
- ScotPHO, 2013.** *Diet and nutrition: policy context.* Available at: <<http://www.scotpho.org.uk/behaviour/diet-and-nutrition/policy-context>> [Accessed 15 February 2013].
- Scott, W. A. H. and Gough, S. R., 2008.** *Environmental Learning and Categories of Interest: exploring modes of participation.* In: Reid, A. D., Jensen, B. B., Nikel, J. and Simovska, V., eds. *Participation and Learning: perspectives on education and the environment, health and sustainability.* Springer. Pp. 81-97.
- Scott, W. 2012.** *Indicators for success. Presentation at BGCI Think Tank Strategy Meeting on Communities in Nature: Growing the Social Role of Botanic Gardens.* 12 July, 2012 Calouste Gulbenkian, London, unpublished.
- SIMD Scottish Index of Multiple Deprivation, 2012.** *SIMD 2012 Local Authority Summary – Edinburgh City.* [pdf] Edinburgh: SIMD Scottish Index of Multiple Deprivation. Available at: <<http://simd.scotland.gov.uk/publication-2012/>>[Accessed 18 January 2013].
- Stake, R. E. 1995.** *The art of Case Study Research.* Thousand Oaks, California; London: Sage.
- Schwarz-Ballard, J., 2012.** *Feedback for the 'How to manual', Royal Botanic Gardens, 08/10/2012.* E-mail communication.
- The City of Edinburgh Council, 2012.** *Edinburgh Alcohol and Drug Partnership Commissioning Plan for Treatment and Recovery Report no PS/50/11-12/H&SC.* Edinburgh: The City of Edinburgh Council. Available at: <http://www.edinburgh.gov.uk/download/meetings/id/34683/item_no_10->[Accessed 5 February 2013].
- Urbis Keys Young, 2004.** *Community Greening Program Evaluation Final Report.* [pdf] Sidney: Urbis Keys Young. Available at: <http://www.rbg Syd.nsw.gov.au/__data/assets/pdf_file/0020/52922/CommunityGreeningReport.pdf>. [Accessed 10 November 2012].
- Wenger, E., 2007.** *Communities of practice. A brief introduction.* [online] *Communities of practice.* Available at <<http://www.ewenger.com/theory/>> [Accessed 20 January 2013].
- Yin, R. K., 2009.** *Case Study research. Design and Methods* 4th edition. London: Sage.



CALOUSTE GULBENKIAN FOUNDATION

Calouste Gulbenkian Foundation

The Calouste Gulbenkian Foundation is an international charitable foundation with cultural, educational and social interests. Based in Lisbon, with offices in London and Paris, the Foundation is in a privileged position to support national and transnational work tackling contemporary issues. The purpose of the UK branch in London is to connect and enrich the experiences of individuals, families and communities, with a special interest in supporting those who are most disadvantaged. Its current work focuses on three areas: cultural understanding, fulfilling potential, and the environment. Its aim for the environment is to help in the development of a society which benefits from a more sustainable relationship with the natural world and understands the value of its resources. For further information, go to www.gulbenkian.org.uk

Calouste Gulbenkian Foundation
(UK Branch)
50 Hoxton Square
London N1 6PB
T +44 (0)20 7012 1400
F +44 (0)20 7739 1961
E info@gulbenkian.org.uk

Acknowledgements

BGCI is grateful to our many colleagues from botanic gardens, staff from the community organisations, and project participants who were involved in the Communities in Nature Programme. We appreciate their readiness to talk to us, their tolerance of our questions, and their hospitality. We are particularly indebted to:

■ staff from the following gardens:

Westonbirt, The National Arboretum, Royal Botanic Gardens Edinburgh, University of Leicester Botanic Garden, and Bristol Zoo Gardens.

■ staff and participants from the following community groups and organisations:

Mosaic disabilities services, Broughton High School – More Chances More Choices group, The Rock Trust, Pilton Community Health Project, Mayfield and Easthouses Youth 2000 Project, Avon Club for Young People, Bristol, Bannerman Road Children's Centre – Easton, Cabot Primary School, Chard Court sheltered housing, Holymead Junior School, Robinson House Care Home, Severn Project, Stoke Bishop Church of England Primary School, Upper Horfield Community Garden, Awaz Utah (Raise your Voice) Asian Women's Group, Bristol Drugs Project, Stroud Macular Disease Society

■ We would like to thank Jill Eddlestone from Clear for all for her support in conducting the focus group interview with adults with disabilities and Margaret Willison-Duff and Dulcie Barnes for their support with transcribing the evaluation interviews.

■ We are also grateful to our academic colleagues for their helpful comments along the way and especially to Jocelyn Dodd from the Research Centre for Museums and Galleries (RCMG) University of Leicester, Professor Emeritus William Scott from University of Bath and Dr Elaine Regan, from King's College London.

■ And last, but by no means least, we would like to acknowledge the help of Chiara Rocci and Ou Lian, BGCI interns, with collecting background information and collating this evaluation report.



BGCI

Plants for the Planet

**Botanic Gardens
Conservation International**

Descanso House, 199 Kew Road,
Richmond, Surrey, TW9 3BW, UK

Tel: +44 (0)20 8332 5953

Fax: +44 (0)20 8332 5956

E-mail: info@bgci.org

Internet: www.bgci.org

