



**PlantNetwork**  
**The Plant Collections Network of**  
**Britain & Ireland**

Annual Conference 'Skills and Standards'

11<sup>th</sup> and 12<sup>th</sup> October 2016

The Monastery, Gorton, Manchester

**#horticskills**

**@plantnetwork**



# PlantNetwork

The Plant Collections Network  
of Britain & Ireland

**PlantNetwork** is the national network of botanic and heritage gardens and arboreta and other documented plant collections

- promoting botanical collections in Britain and Ireland as a national resource for research, conservation and education
- facilitating networking and training among holders of plant collections through a programme of conferences, workshops and a regular newsletter.

*Chairman: Simon Toomer*

*Vice-Chair: Faye Steer*

*Hon. President: Dr Matthew Jebb*

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*Edited by Pamela Smith*

# Programme

## 11<sup>th</sup> October Gardens and Collections Management

- 9.30 - 10.00 Registration in The Pantry, talks in the Private Chapel
- 10.00 - 10.05 Housekeeping
- 10.05 - 10.15 Welcome and introduction Simon Toomer, PlantNetwork Chair
- 10.15 - 10.45 Gardening in a changing climate. Eleanor Webster, RHS Climate Change Scientist
- 10.45 - 11.15 UK plant health standards and skills. Professor Nicola Spence. Chief Plant Health Officer & Deputy Director Plant and Bee Health, Varieties and Seeds. Animal and Plant Health Agency (APHA)
- 11.15 - 11.40 Coffee in The Pantry**
- 11.40 - 12.10 Plant health – *Xylella fastidiosa*, quarantine pest information and biosecurity. Edward Birchall, Principal Plant Health & Seeds Inspector APHA
- 12.10 - 12.40 Discussion and questions
- 12.40 - 12.50 Forum group introductions
- 12.50 - 13.50 Lunch in The Pantry**
- 13.50 - 14.20 Managing and benchmarking collections for the Global Strategy for Plant Conservation. Sam Brockington, Curator Cambridge Botanic Garden
- 14.20 - 14.50 Setting and measuring presentation and conservation standards in National Trust Gardens Pam Smith, Gardens Adviser National Trust
- 14.50 - 15.20 Coffee in The Pantry**
- 15.20 - 15.50 Questions and discussions
- 15.50 - 16.50 Forum group breakout and feedback.
- 16.50 - 17.00 Instructions for Conference Dinner and depart for hotels
- 19.00 Conference Dinner and Silent Auction. The Fairfield Arms

## **12<sup>th</sup> October Staff management – training and skills**

- 9.15 - 9.50 The Eden Project Apprenticeship Chris Bisson, Policy Development Manager
- 9.50 - 10.20 Standards and Skills – the Worldwide Challenge. David Richardson, Director of Horticulture Commonwealth War Graves Commission
- 10.20 - 10.50 In-house CPD – the new approach from the National Trust. Kate Nicoll, National Trust Garden Training Specialist
- 10.50 - 11.20 Coffee in The Pantry**
- 11.20 - 11.50 Apprenticeships –Trailblazer. Ros Burnley Adrow
- 11.50 - 12.20 Introducing the new National Land Based College (UK). Leigh Morris, CEO, National Land Based College (UK).
- 12.20 - 12.50 Historic and Botanic Garden Training Programme Fiona Dennis, Scheme coordinator
- 12.50 - 13.20 Discussion and questions
- 13.20 - 14.20 Lunch in The Pantry**
- 14.20 - 14.50 Botany at Manchester Museum. Rachel Webster Curator of Botany
- 14.50 - 15.20 Funding awards for training. Helen Seal, Awards Manager Professional Gardeners' Trust
- 15.20 - 15.35 Discussion and questions
- 15.35 - 16.00 Feedback from our conference and next steps
- 16.00 Close

All presentations from our training days and conferences are shared through our website. [www.plantnetwork.org](http://www.plantnetwork.org). Our website search facility also allows you to find previous newsletter articles, presentations and downloads.

## Speaker biographies

**Simon Toomer**, PlantNetwork Chair and National Specialist for Plant Conservation with the National Trust

Originally trained in environmental biology and forestry, Simon Toomer has worked as a practical forester, land management advisor and arboriculturalist in both private and local authority sectors. In his current role with the National Trust, he is a national consultant for all areas of garden and parkland plant conservation including plant health and biosecurity, collections management and plant records.

His particular interests lie in the areas of conservation and management of native habitats and the use of ornamental trees and plants in garden landscapes. He previously worked for 15 years as Curator and Director at Westonbirt, The National Arboretum where he was responsible for overseeing the management and development of one of the finest tree collections in the World. Simon has travelled in many parts of Europe, North America, Asia and Africa in pursuit of trees and is the author of 'Trees for the Small Garden' (Timber Press, 2005). In 2009 he completed a second book on the establishment and maintenance of tree collections and arboreta. He is a professional member of the Arboricultural Association and a trustee of the charity Tree Aid. In July 2015 he became Chair of PlantNetwork.

Simon.Toomer@nationaltrust.org.uk

### **Eleanor Webster**

Eleanor recently joined the Royal Horticultural Society in the role of Climate Scientist. My background is within Environmental

Science and my research has involved assessing the implications of climate change on carbon storage in lowland peatlands, but also the effect of climate change on plant phenology. I am currently working on the 'Gardening in a Changing Climate Report' in collaboration with the University of Reading and University of Sheffield. After submission of the report in early 2017, I will be researching carbon cycling in a garden environment, both in terms of greenhouse gas exchange and soil carbon storage.

eleanorwebster@rhs.org.uk @\_eleanorwebster

### **Professor Nicola Spence, Chief Plant Health Officer DEFRA**

Nicola is Defra's Chief Plant Health Officer and is the Head of the National Plant Protection Organisation for the UK. The role of the Chief Plant Health Officer involves advising ministers, industry and others about the risks posed by plant pests and diseases, and ensuring that measures are in place to manage those risks and minimise their impact, as well as leading the operational response in the event of a disease outbreak. Although plant health is a devolved matter; the CPHO co-ordinates the UK response to European and International plant health matters and takes the lead on national plant health emergency response.

Nicola is an experienced research plant pathologist and worked on virus diseases of horticultural crops in the UK and internationally for over 20 years. She is an expert in plant health and international plant trade and was previously the Head of Plant Health and then Chief Scientist at the Food and Environment Research Agency.

She is a fellow of the Royal Society of Biology, Special Professor in the Department of Biosciences at Nottingham University, a member of Court at the University of York and a Trustee of Royal Botanic Gardens, Kew and The Yorkshire Arboretum.

She has a BSc in Botany from the University of Durham, an MSc in Microbiology from Birkbeck College, University of London and a PhD in Plant Virology from the University of Birmingham. The subject of her PhD was Bean Common Mosaic Virus in Phaseolus beans in Africa.

Nicola.spence@defra.gsi.gov.uk @plantchief

**Edward Birchall**, Principal Plant Health & Seeds Inspector,  
APHA

Edward Birchall joined the Plant Health and Seeds Inspectorate (PHSI) in 1992, working as a field based inspector for 18 years in agricultural and horticultural sectors. PHSI roles covered included inspecting, finding and eradicating quarantine plant pests and diseases, certifying plant exports, import inspections, plus detailed crop certification work in cereals and seed potatoes.

In 2010 Edward became Senior Inspector (team leader) for the northern region, covering Cheshire up to the border with Scotland. This was a dual role managing a team and supporting a key work area of surveillance, which included eradication and containment actions when a quarantine plant pest is found.

In 2014 Edward became Principal inspector responsible for plant exports to countries outside the EU, and plant passporting which regulates movement of plants within the EU. The role includes

day to day operational activities of the PHSI, advice and information to Defra, working with UK devolved authorities and external stakeholders.

Edward.Birchall@apha.gsi.gov.uk @APHAgovuk

**Dr Sam Brockington**, Curator University of Cambridge Botanic Garden.

Dr Samuel Brockington gained a BSc with 1st Class honours in Plant Science from the University of Edinburgh in 2002. He joined the laboratory of Professors Douglas and Pamela Soltis at the Florida Museum of Natural History, USA in 2003 and was awarded my PhD in 2009. He subsequently joined Professor Beverley Glover initially as a Marie Curie Re-Integration Fellow in the Department of Plant Sciences, Cambridge, and then as a post-doctoral research assistant, a Newton Trust Post-Doctoral Fellow, and Bye-Fellow of Girton College, Cambridge. He is currently a NERC Independent Research Fellow, University Lecturer at the Department of Plant Sciences, Cambridge, and Curator of the Cambridge University Botanic Gardens.

sb771@cam.ac.uk

**Pam Smith**, Gardens Adviser National Trust Midlands' Region and PlantNetwork Administrator

Pam works with property and garden teams in 26 National Trust gardens across the Midlands' Region. Her role involves advising



properties on presentation standards, staff skills and recruitment, restoration and new project work. Her main remit for the coming 12 months is to ensure all gardens have Garden Management Plans which reflect their history, Spirit of Place and resource levels. In addition to this she is currently working on two 18<sup>th</sup> C Pleasure Ground and a Georgian garden restoration projects.

Pam has worked in horticulture for over 30 years and trained in horticulture via a YTS programme in Bangor and an OND at Askham Bryan College. In 2000 Pam gained a PG Diploma with the Architecture Association in Conservation and Management of Historic Landscapes. Her career started in public parks in NE England followed by 8 years as Director of the University of Birmingham Botanic Garden. She later worked as a freelance horticultural and heritage consultant including research projects on skills in the industry with EH and Lantra and HLF bid for Great Dixter . Pam took up the National Trust role in 2011. Pam was Vice Chair of PlantNetwork from 2001 to 2013 before taking up the part time role of PlantNetwork Administrator.

Pamela.Smith@nationaltrust.org.uk @NTPamelaSmith

### **Chris Bisson**

Plant Records Manager, Horticultural Science Team, Eden Project.

Chris has spent his entire working life working with plant-based data of some sort. He worked in a team at RBG Kew creating species targeting guides for MSB collection trips for four years before becoming the Plant Records Manager at the Eden Project in Cornwall. An interesting move from the world of plant conservation to horticulture! At Eden Chris' main roles are to manage the living collections data, name verification, to compile and record material transfer and licenses. In his time at Eden,

Chris has been involved in a vast array of horticultural and educational projects, ranging from creating a GIS to working with A-level students on DNA extraction. In 2016 he took up the role of Policy Development Manager at the Eden Project.

[cbisson@edenproject.com](mailto:cbisson@edenproject.com) @edenscience

**David Richardson**, Director of Horticulture Commonwealth War Graves Commission

David has worked at CWGC for 30 years! A chartered fellow of the CIOH and amenity rep on Council. After his degree in Horticulture at Bath he took up the position as a supervisor in France; managing sites and 80 gardeners from Amiens to Reims

David spent almost eleven years in Turkey managing the sites on the Gallipoli peninsula He returned to the UK as Horticultural Manager and went on to manage horticulture in Africa, the middle East and the Asia and Pacific regions - lots of travel!

Returning to France David project managed an archaeological excavation in Fromelles and the construction of the CWGC first new cemetery in 50 years. Back in the UK to David worked in special projects with the CEO and finally became Director of Horticulture.

[david.richardson@cwgc.org](mailto:david.richardson@cwgc.org)

**Kate Nicoll, National Trust Garden Training Specialist**

Kate Nicoll retrained as a gardener 15 years ago after a career as a producer in BBC Radio. She has spent the last 7 years working for the National Trust restoring the 2 acre Walled Garden at Attingham Park. Her own struggle to find appropriate training both outside and inside the Trust led her to take on this new role of Garden Training Specialist. Now one year into this position she has just launched the Trust's "Heritage Gardening Programme", a comprehensive training scheme which hopes to address the skills shortage in the organisation. It combines entry level training in the form of the Heritage Skills Passports and the HBGTP scheme with a broad range of one day CPD courses for staff at all levels. These come under three broad headings: Garden History and Management, Plant Conservation, and Practical Skills. A pilot scheme of Trailblazer Apprenticeships is planned for September 2017.

Catherine.Nicoll@nationaltrust.org.uk

**Ros Burnley, Director of Adrow Ltd.**

Adrow Ltd is a consultancy offering services to businesses, public bodies and charities working in horticulture, arboriculture and forestry. Adrow offers project management, partnership working, grant bid writing, industry engagement, facilitation and chairing meetings. Ros joined the PlantNetwork Board in 2015.

ros@adrow.co.uk

**Leigh Morris, CEO, National Land Based College (UK)**

Leigh took up the role as the first CEO, National Land Based College (UK) in April 2016. Prior to this he had a career spanning horticulture and land based, proudly starting on a Youth Training Scheme, before studying at Askham Bryan and Pershore Colleges. He managed Pershore's commercial nursery for 7 years, developing a Specialist Plant Unit, before moving to the Welsh College of Horticulture in 1998, where he took a sabbatical to gain an MSc in International Horticulture. From 2004-14 Leigh managed education & learning at the Royal Botanic Garden Edinburgh, leading the development of new programmes and involved a number of international capacity building projects. In 2014 he joined the Royal Zoological Society of Scotland as Director of Community Conservation, responsible for education, outreach and partnership projects. Leigh was President of the Chartered Institute of Horticulture (2012-14), Chaired the Grow Careers Initiative (2006-14) and is a Trustee of the Marine Conservation Society.

Leigh.morris@nlbc.uk

@MorrisLeigh

**Fiona Dennis, Manager of the Historic and Botanic Garden Training Programme.**

Fiona has worked in horticulture for twenty-five years. Following training at Merrist Wood Agricultural College, she began her career in the Royal Parks at Hyde Park as a Grade 2 Gardener. Fiona moved on to become the Nursery Technician at Writtle College in Essex. This was followed by a spell working as a Field Technician managing trials for Evening Primrose and Borage production. In 1989, Fiona became Propagator in the Alpine and Herbaceous Department at the Royal Botanic Gardens, Kew, during which time she achieved her RHS Master of Horticulture.

Developing her interest in conservation, she undertook an MSc in the Conservation and Utilisation of Crop Genetic Diversity at Birmingham University. Fiona became Project Officer at Botanic Gardens Conservation International working with botanic gardens worldwide. After five years of international work, she came back to work full-time in the UK with the City of London as Technical Officer based at Hampstead Heath. In her previous post, she was both lecturer and adviser at the Royal Horticultural Society Garden Wisley.

Fiona.Dennis@english-heritage.org.uk

**Rachel Webster**, Curator of Botany Manchester Museum

Rachel.E.Webster@manchester.ac.uk @aristolochia

**Helen Seal**, Awards Manager, Professional Gardeners' Trust

The Professional Gardeners' Trust was established in 2004 to fund training and study for working gardeners in the UK and Ireland. The PGT provides gardeners with the opportunity to acquire skills and gain qualifications through part-time courses and work placements. This enhances their careers and benefits the horticulture profession as a whole.

info@pgtrust.org

# **PlantNetwork Forum Groups**

We would like to encourage the sharing of skills and interests amongst our members. We aim to facilitate those working in gardens and with plant collections to be able to meet, share common interests and discuss training needs. Forum Groups will help us gain closer links with our membership, create demand led training and keep PlantNetwork up to date with current issues and skills needs.

## **What Forum Groups are there?**

Over the years we have a number of groups. The most successful and frequent has been the Plant Records Forum group. We also have interest in developing Forum groups on Glasshouses, Trees, Propagation and Botanical Heritage.

## **How can you help with a Forum Group?**

Our Forum groups could develop in a variety of ways. There is no set rule, we want to provide the support to people passionate about their subject and wanting to share their experiences, learn more themselves and develop a focus for our membership interested in the topic. We can help to coordinate, promote and deliver meetings, discussion groups and training days. You don't need to be an expert, just interested and willing to help us find the experts and relevant locations to deliver networking and training.

At this conference on Tuesday afternoon there will be an opportunity to spend time discussing these topic areas with colleagues and feedback how you would like PlantNetwork to support sharing best practice and supporting training.

Please get in touch [office@plantnetwork.org](mailto:office@plantnetwork.org) to discuss involvement with existing or new groups.

# RESOURCES

## Garden and Collections Management -Plant Health

### Plant Biosecurity Strategy for Great Britain

The plant biosecurity strategy for Great Britain provides a high level overview of the activity that Defra and the devolved administrations in Scotland and Wales are undertaking to improve plant biosecurity.

The strategy has been developed in consultation with stakeholders and details how this activity will meet the recommendations of the Independent Tree Health and Plant Biosecurity Expert Taskforce. Publications include:

- Tree Health and Plant Biosecurity Expert Taskforce: Final report
- Tree Health and Plant Biosecurity Expert Taskforce: Stakeholder Engagement Report
- Chalara and the Social Amplification of Risk
- Chalara in Ash Trees: A framework for assessing ecosystem impacts and appraising options
- Australia & New Zealand Biosecurity Review
- Tree health and plant biosecurity expert taskforce: Interim report
- Tree Health and Plant Biosecurity Evidence Plan
- Chalara Management Plan

<https://www.gov.uk/government/groups/tree-health-and-plant-biosecurity-expert-taskforce#publications>



## The UK Plant Health Risk Register

The risk register is one element of implementing the recommendations of the independent Task Force on Tree Health and Plant Biosecurity. It is a tool for government, industry and stakeholders to prioritise action against pests and diseases which threaten our crops, trees, gardens and countryside.

### Structure of the Risk Register

- There are five main parts to the risk register:
- Key features of the pest
- Unmitigated risk ratings
- Current mitigations
- Mitigated risk ratings
- Actions to reduce the residual risk.

<https://secure.fera.defra.gov.uk/phiw/riskRegister/>

**Animal and Plant Health Agency** Topical pages including access links to the *Xylella* guide, lists of hosts, the maps and lists of areas in Italy and France affected by the legal requirements to demarcate when *Xylella fastidiosa* outbreak is found. Web page <https://www.gov.uk/guidance/protecting-plant-health-topical-issues>

PHSI contacts/offices for England and Wales at <https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/access-and-opening#plant-health-offices>

Plant Health controls including Passporting gov.uk web pages <https://www.gov.uk/guidance/plant-health-controls>

Defra Plant Health risk register

<https://secure.fera.defra.gov.uk/phiw/riskRegister/> (which is not an APHA web page) but is a valuable source of information from Pest Risk Analysis, pest facts sheets, Defra Consultations etc. and is downloadable so people can filter and interrogate for their own needs.

Tree and plant notification information for certain plants from other EU member states (as opposed to imports from 3rd countries outside of the EU)

<https://www.gov.uk/guidance/importing-trees-and-plants-to-england-and-wales-from-the-eu> .You must tell the Animal and Plant Health Agency (APHA) if you're bringing the following trees, plants and seeds into England and Wales: Oak, Pine, Elm, Sweet Chestnut, Plane, Ash (currently prohibited), Prunus (e.g. cherry, plum, peach and laurel).

## **Xylella Guide**

EU Commission web pages with detail on demarcated areas with maps, and EU Commission list of 'host plants' of *Xylella fastidiosa* that must be accompanied by a plant passport for movement with the EU.

<https://www.gov.uk/guidance/protecting-plant-health-topical-issues>

# **Garden and Collections Management - Climate Change**

**Landscape Succession Strategy Melbourne Gardens 2016 – 2036** adapting a world-renowned botanical landscape to climate change 1 July 2016 - 30 June 2036 Royal Botanic Gardens Victoria

Ten years ago the Royal Botanic Gardens Victoria embarked on an ambitious project to collect, treat and distribute storm water from the catchment within and around the botanic garden. The infrastructure of wetlands filtration, a sophisticated water treatment centre and landscaping to complement and encourage improvements in water quality enhanced the international reputation in integrated water management.

The Landscape Succession Strategy is a natural extension of that project, and further strengthens the organisation as a global benchmark for environmentally responsible botanic garden management. The Royal Botanic Gardens Victoria Landscape Succession Strategy for Melbourne Gardens has been developed to adapt the landscape to the likely impacts of future climate change, dwindling water supplies, aging plant populations and plant health threats, such as biosecurity. It will guide the stewardship of the Melbourne Gardens for the next twenty years, preserving the beauty and botanical diversity of these much-loved Gardens.

The Landscape Succession Strategy guides the transition from existing plantings to a composition more suited to the projected climate and environmental conditions of 2090, while retaining the Gardens' heritage character, landscape qualities and species diversity for future generations. It sets ambitious but achievable targets, such as maintaining existing species diversity while proportionally increasing species suitable for the projected

climate, achieving 100% of landscape irrigation needs from sustainable water sources, and using these changes to assist the community in adapting to and mitigating climate change.

## **Challenges**

Melbourne Gardens is currently facing five significant challenges:

- Adapting to a projected climate of higher temperatures and lower rainfall
- Managing and securing water supply
- Maintaining the values of a mature, heritage landscape through this transition
- Responding to biosecurity threats from increasing globalisation and changing environments
- Managing built assets.

## **Goal**

The goal of the Landscape Succession Strategy is to provide future visitors to Melbourne Gardens with a place of beauty, biodiversity and refreshing green space in a changing climatic environment. The significant task ahead is to maintain the Gardens' heritage character and to support visitor wellbeing, while transitioning the landscape using a different palette of climate-suited plant species. This is an opportunity to replace susceptible plant species with alternatives that possess the necessary resilience to thrive in a future climate.

Available to download from

[https://www.rbg.vic.gov.au/documents/Landscape\\_Succession\\_Strategy\\_lo\\_res.pdf](https://www.rbg.vic.gov.au/documents/Landscape_Succession_Strategy_lo_res.pdf)

# The assisted migration debate – botanic gardens to the rescue?

## Introduction

Climate change is having a considerable impact on wild plant species, with declines in populations and distributions shifts towards the poles and higher elevations being reported by scientists. One of the most alarming estimates paints a grim picture of more than half of the European flora becoming endangered by the year 2080 due to climate change (Thuiller et al., 2005). However, it is not only biodiversity that is experiencing the pressures brought about by such changes. Conservation actors, including botanic gardens, are being forced to re-evaluate the suitability and effectiveness of their conservation approaches and may need to consider novel strategies.

With the combined effects of climate change and habitat degradation taking its toll on biodiversity, it seems that we can no longer focus on trying to reverse the trends. Instead, we need to start working to mitigate the negative effects. In Europe, for example, the progression of climate change will mean that more than half of the species in existing protected areas will be subject to unfavourable conditions (Araujo et al., 2011). Thus, we need to become more proactive in species conservation. Perhaps the most controversial proposal thus far is moving species beyond their historic natural ranges, a strategy often called assisted migration, assisted colonization or managed relocation. Botanic gardens, with their expertise and resources, could play an important role in investigating the possibilities of carrying out assisted migration in a sustainable way.

This article aims to highlight the responsibility, skills and opportunities that BGs have in this emerging field. It briefly

reviews the basic ideas behind assisted migration and describe a multi-disciplinary research project that was initiated at the Botany Unit of the Finnish Museum of Natural History in 2011. The article considers:

- Assisted migration challenges the traditional conservation view
- Plant conservation prohibited by law
- Botanic gardens have invaluable expertise and experience
- New openings for botanic garden conservation - the Helsinki example
- Translocation trial of Siberian primrose
- Multiple roles for botanic gardens in the development of assisted migration

Published in BGCI journal Volume 9 January 2012 *Maria Hällfors, Elina Vaara & Susanna Lehvävirta* Botany Unit  
Finnish Museum of Natural History

<https://www.bgci.org/resources/article/0706/>

# **Garden and Collections Management -Legal Frameworks**

## **The Convention on Biological Diversity (CBD)**

Opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entering into force in December 1993, the Convention on Biological Diversity is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 196 Parties up to now, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services, including threats from climate change, through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The Cartagena Protocol on Biosafety is a subsidiary agreement to the Convention. It seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. To date, 170 Parties have ratified the Cartagena Protocol. The Secretariat of the Convention and its Cartagena Protocol is located in Montreal.

[www.cbd.int](http://www.cbd.int).

## **The Nagoya Protocol**

*The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity* was adopted at the tenth meeting of the Conference of the Parties in 2010, in

Nagoya, Japan, and entered into force on 12 October 2014. The Protocol significantly advances the objective of the Convention on the fair and equitable sharing of benefits arising from the utilization of genetic resources by providing greater legal certainty and transparency for both providers and users of genetic resources. By promoting the use of genetic resources and associated traditional knowledge, and by strengthening the opportunities for fair and equitable sharing of benefits from their use, the Protocol will create incentives to conserve biodiversity, sustainably use its components, and further enhance the contribution of biodiversity to sustainable development and human well-being. To date, 68 Parties have ratified the Nagoya Protocol.

The full text of the Nagoya Protocol is available at:

Nagoya protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the convention on biological diversity; text and annex

© 2011 by the Secretariat of the Convention on Biological Diversity. To download: [www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf](http://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf)

## **Information on Access and benefit Sharing (ABS)**

The ABS-Clearing-House

<https://absch.cbd.int/>

BGCI webpages

[www.bgci.org/resources/abs/](http://www.bgci.org/resources/abs/)

EU Regulations:

[http://ec.europa.eu/environment/nature/biodiversity/international/abs/index\\_en.htm](http://ec.europa.eu/environment/nature/biodiversity/international/abs/index_en.htm)

You Tube

ABS Simply Explained



## **The Global Strategy for Plant Conservation**

In 2010, the Conference of the Parties, by decision X/17, adopted the Updated Global Strategy for Plant Conservation 2011-2020. The Strategy's vision is to halt the continuing loss of plant diversity and to secure a positive, sustainable future where human activities support the diversity of plant life (including the endurance of plant genetic diversity, survival of plant species and communities and their associated habitats and ecological associations), and where in turn the diversity of plants support and improve our livelihoods and well-being.

The Strategy includes 16 outcome-oriented global targets set for 2020, and provides a framework to facilitate harmony between existing initiatives aimed at plant conservation, to identify gaps where new initiatives are required, and to promote mobilization of the necessary resources. The global targets for 2011–2020 should be viewed as a flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities, and taking into account differences in plant diversity between countries.

In 2002, the Conference of the Parties, by decision VI/9, had adopted the Global Strategy for Plant Conservation which provided a pilot exercise for the development and use of outcome targets under the first Strategic Plan of the CBD.

The updating of the Strategy for the new decade was undertaken in parallel to the consultations leading to the adoption of the Strategic Plan for Biodiversity 2011-2020 and its implementation should be considered within the broader framework of the Strategic Plan for Biodiversity 2011-2020.

## The targets 2011-2020

Objective I: Plant diversity is well understood, documented and recognised

**Target 1:** An online flora of all known plants.

**Target 2:** An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action.

**Target 3:** Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared.

Objective II: Plant diversity is urgently and effectively conserved

**Target 4:** At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration.

**Target 5:** At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.

**Target 6:** At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity.

**Target 7:** At least 75 per cent of known threatened plant species conserved in situ.

**Target 8:** At least 75 per cent of threatened plant species in ex situ collections, preferably in the country of origin, and at least 20 per cent available for recovery and restoration programmes.

**Target 9:** 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge.

**Target 10:** Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.

Objective III: Plant diversity is used in a sustainable and equitable manner

**Target 11:** No species of wild flora endangered by international trade.

**Target 12:** All wild harvested plant-based products sourced sustainably.

**Target 13:** Indigenous and local knowledge innovations and practices associated with plant resources maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care.

Objective IV: Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on earth is promoted

**Target 14:** The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

Objective V: The capacities and public engagement necessary to implement the Strategy have been developed

**Target 15:** The number of trained people working with appropriate facilities sufficient according to national needs, to achieve the targets of this Strategy.

**Target 16:** Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this Strategy.

<http://www.cbd.int/gspc/strategy.shtml>

## **GSPC Toolkit**

The toolkit for the Global Strategy for Plant Conservation has been developed under the leadership of Botanic Gardens Conservation International. You are invited to use it, provide feedback, and recommend material to be added.

<http://www.plants2020.net/>

# Staff Management -Training and Professional Development



The National Land Based College (UK) is an employer led organisation, operating virtually through a hub and spoke model. The primary goal is to engage land based industries far more in education, training, skills development and careers promotion. Importantly, the National College will look to work with

existing initiatives, add value and stimulate the development of new joint working, collaborations and partnerships. The objectives are to:

- Establish and liaise with existing industry groups to help steer skills development.
- Work with the awarding body partner City & Guilds to develop a suite of land based qualifications 'fit for purpose', for delivery by existing land based providers.
- Co-create a range of professional development programmes, from one-day training courses, up to degree level programmes, delivered by a range of blended learning methodologies.
- Establish an on-line register of land based learners and employees, which encourages and facilitates continued professional development throughout their lives.
- Promote and advocate the whole spectrum of land based careers.

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The Chartered Institute of Horticulture is the authoritative organisation representing those professionally engaged in horticulture in the UK and Ireland.

Its membership comprises, and represents, those that are involved in amenity horticulture, parks, landscaping, botanic/heritage gardens, and the full range of horticulture within leisure industries as well as those producing, managing, growing and marketing all edible and decorative horticultural crops, allied research, education and consultancy. It also includes those working in associated supply industries and students taking their first steps into horticulture.

<http://www.horticulture.org.uk> @IoHort



Grow is an initiative set up by a group of influential organisations within the horticulture industry to inform people about horticultural careers and the range of fantastic opportunities horticulture has to offer. The web portal is backed by a schools' pack which includes series of posters and careers information leaflets.

[www.growcareers.info](http://www.growcareers.info) @GrowCareers

## Plant Health Professionals

The Plant Health Professional Register has been created in response to the Department of Environment, Food and Rural Affairs (Defra) and Government Office of Science reports<sup>1</sup> recommending development of plant health skills and creating opportunities for a wider community of trained plant health professionals.

<https://www.rsb.org.uk/careers-and-cpd/registers/plant-health-register>

DEFRA is working with professional bodies to embed greater awareness of plant health as a key competency and component of continuous professional development, and to enhance the official training programme for inspectors, providing a better and more professional service. Defra with assistance from the York, North Yorkshire & East Riding Enterprise Partnership have funded the establishment of the Professional Register overseen by the Royal Society of Biology. An advisory group comprising representatives from Plant Health agencies from England, Scotland, Wales, Northern Ireland and the Forestry Commission has compiled the competencies.

Following a successful pilot exercise, a plan is now in place to register 300 government employees by 2018 with the intention of including other professional roles where a significant involvement in plant health is required.

Contact Celia Knight      [celia@ckconsult.co.uk](mailto:celia@ckconsult.co.uk)

## **The National Trust's Heritage Gardening Programme**

The programme, launched on September 29<sup>th</sup> 2016, will for the first time offer comprehensive training across all National Trust gardening roles. From volunteer gardeners and trainees to garden managers, it will put in place a formal structure to provide development opportunities within the organisation. To complement the training, internal bursaries will be made available to allow National Trust gardeners to travel to other properties if needed, in order to acquire new skills.

A key part of the programme will be the launch of Heritage Skills Passports, funded by the Heritage Lottery Fund. The passports will provide volunteers and gardeners with the opportunity to acquire a wide range of horticultural skills by tracking the user's development and linking to available training courses.

The National Trust's Heritage Gardening Programme is a response to the sector's skills shortage, particularly in heritage gardening. Mike Calnan, Head of Gardens says

'It offers more entry points into the sector, more opportunities for staff to share their knowledge with colleagues and for the Trust to develop the skills we need in order to look after the 240 heritage gardens in our care.'

This is the second stage in the revamp of the gardening training programme. Last year the National Trust announced a partnership with the Historic and Botanic Garden Trainee Programme (HBGTP) funded by the Heritage Lottery Fund and run by English Heritage.

The HBGTP aims to help sustain and develop the gardeners of the future with its recruitment training programme. The continued



partnership with the HBGTP has secured full-time salaried placements for trainee gardeners across 16 National Trust heritage gardens.

Jobs and career profiles at  
<http://www.nationaltrustjobs.org.uk/find-your-place/gardening/>

## **The Professional Gardeners' Guild annual salary guidelines**

For 2016 the PGG recommends a 3% increase across the range, based on an increase of 10% as the National Minimum Wage moves to the National Living Wage, reflecting growth of the UK economy, rising living costs and the continued need to attract young people to a career in Horticulture.

### **Gardens Manager – recommended band £33,950 to £48,800+**

#### Role Profile

Reports to: Owner, Property Manager, Board of Trustees or similar.

Line management responsibility: 10 – 50 employees supervised.

Budget responsibility: in range £250,000 to £500,000, comprising both expenses and wages.

Knowledge, skills and experience:

- NVQ Level 4 or equivalent together with substantial horticultural experience.
- Formal management training allied with proven management experience.
- Budget planning and control skills.
- Excellent interpersonal skills.

- A detailed understanding of the relevant Health & Safety Regulations, Environmental Management and employment legislation, manual handling and risk assessment.

### **Head Gardener – recommended band £27,585 to £38,200+**

#### Role Profile

Reports to: Owner, Gardens Manager, Gardens Advisor, Property Manager or similar.

Line management responsibility: 2 -10 employees supervised, plus volunteers and contractors where appropriate.

Budget responsibility: garden expenses excluding wages.

Knowledge, skills and experience:

- NVQ Level 3 or equivalent, NCH, HND, OND, City & Guilds, Kew or Edinburgh Diploma in Horticulture, RHS level 2, RHS Level 3, MHort RHS.
- A proven track record of high quality horticultural work.
- People management and communication skills training with proven supervisory experience.
- Thorough understanding of relevant Health and Safety legislation, formal training in manual handling and risk assessment, a valid driving licence.

### **Deputy Head Gardener/Sole Gardener – recommended band £ 23,340 to £29,700+**

#### Role Profile

Reports to: Head Gardener, Owner, Property Manager, Gardens Advisor or similar.

Line management responsibility: assistant or part-time gardeners, contractors and volunteers supervised in absence of Head Gardener or other line manager.

Budget responsibility: day-to-day expenses, petty cash purchases or similar.

Knowledge, skills and experience:

- NVQ Level 3 or equivalent, RHS Level 1, 2 or 3, HND, OND, City & Guilds.

At least three years relevant experience in horticulture together with 1 year's proven supervisory experience, together with comprehensive plant knowledge.

- Clear understanding of the relevant Health and Safety legislation, formal training in manual handling and risk assessment, a valid driving licence.

### **Gardener (skilled) – recommended band £21,220 to £27,585+**

#### Role Profile

Reports to: Head Gardener, Deputy Head Gardener, Owner, Property Manager or similar.

Line management responsibility: basic guidance of trainees and volunteers under supervision of Head Gardener.

Budget responsibility: none.

Knowledge, skills and experience:

- Practical experience and/or Entry Level Qualification in gardens and/or landscape management. NVQ level 1 or 2, RHS level 1 or 2.
- Comprehensive plant knowledge, a keen interest in gardens and landscapes, familiarity with most gardening practices together with the use and maintenance of machinery eg. mowers and strimmers.
- A willingness to work alongside and to support other staff and volunteers.

- Well motivated with an eye for detail and a desire to achieve a high-standards, ability to work on own initiative.
- Good written and verbal communication skills, good organisational skills, a good understanding of Health and Safety issues, a valid driving licence.

### **Gardener – recommended band £16,975 to £22,280+**

#### Role Profile

Reports to: Head Gardener, Deputy Head Gardener, Owner, Property Manager or similar

Line management responsibility: none.

Budget responsibility: none.

Knowledge, skills and experience:

- Basic knowledge of plants, gardening practices and use of garden machinery.
- Appreciation of gardens, willingness to learn new skills.
- Degree of self-motivation and organisational skills.
- Good understanding of Health and Safety issues.

### **Junior gardener (age 17)/ trainee – recommended band £14,855 to £16,975**

#### Role Profile

Reports to: Head Gardener, Deputy Head Gardener, Owner, Property Manager or similar.

Line management responsibility: none.

Budget responsibility: none.

Knowledge, skills and experience:

- A willingness to learn by participating in training programme.

- Ability to work to agreed standards; with direction, to work with a wide range of horticultural tools & equipment, in a safe manner.
- Ability to grasp information and apply recently gained knowledge.
- Keen interest in plants and horticulture, enthusiasm for working outdoors.

*The above bands reflect minimum recommended basic salary payment with effect from 1st April 2016 and are based upon a 37.5 hour week.*

*The benefit value of any accommodation provided has not been included and should be negotiated separately. Bonuses, overtime and subsistence payments have not been included in the salary bands and are therefore additional.*

*Regional pay variations have been taken into account within the bands. Higher cost areas of the country would expect to make salary awards at the upper levels of the appropriate band. Institute of Groundsmanship research indicates regional pay in London Inner (0-6miles of Charing Cross) £3,579 pa, London Outer (7-16miles) £2,137 pa, London Fringe (17-22 miles) £639 - £1,283 pa. Other UK regions are broadly similar in their pay levels. We would expect pay for over 18's in London to always be above £18,400 to ensure a living wage.*

*It is recommended that Junior Gardeners, Gardeners and Skilled Gardeners receive financial recognition within the salary bands of £500 pa for successful completion of each relevant professional qualification e.g. NVQ levels 1 and 2.*

*Employees with other relevant vocational qualifications such as a First Aid, Chainsaw or Spraying certificates should be recognised with additional remuneration.*

*It should be noted that whilst these salary bands are recommended by the Professional Gardeners' Guild, individual negotiations must be conducted between an employer and employee taking into account individual circumstances.*

### **Self Employed recommended minimum rates**

London rates – £22 to £32 per hour

SE, including East Anglia – £19 to £27 per hour.

Scotland, Wales and UK Regions – £17 to £27 per hour.

### **For information:**

The National Living Wage (Apr.2016) is £7.20 per hour which equates to £14,976 pa for those over the age of 25, £6.70 (£13.936pa) for those aged 21-24 and £5.30 for those aged 18-20 (£11,024pa). This represents a 10.7 % rise from the previous National Minimum Wage

The 'Living Wage' is £8.25 per hour (£9.40 in London) which equates to £17,160 pa (£19,552 pa in London) ie a 5% increase in the last year

<http://www.pgg.org.uk/salaries-rates-guidelines>

## **PlantNetwork salary analysis**

PlantNetwork offers a job advertisement circulation service\*. The last 100 horticultural jobs, from April 2015 – September 2016, have been analysed for salary comparison.

This is a broad overview. Job titles and responsibilities vary across organisations and for those offering a salary range the mid-point has been selected for this exercise.

Average salary rates.

Garden/Landscape Manager role

Average salary £39,500, lowest £30,000, highest £68,000

Head Gardener

Average salary £26,452, lowest £24,000, highest £35,000

Assistant Head Gardener/ area supervisor

Average salary £21,447, lowest £17,000, highest £28,000

Gardener

Average salary £17,467, lowest £15,544, highest £25,000

\*The Job advertisement circulation service costs £125 for member organisations, £250 for non-member organisations.

# Skills Analysis

## **Cultivating Skills in Historic and Botanic Gardens – 2012 Careers**, Occupations and Skills required for the Management and Maintenance of Historic and Botanic Gardens

The report was commissioned by English Heritage and Lantra, the Sector Skills Council for the Environmental and Land-based Sector. It builds upon that undertaken by E3 Marketing in 2005. The research was undertaken to update our understanding of the sector, in relation to:

- Occupations and organisational structures
- Salary structures
- Career paths, qualifications and experience
- Current and future staffing needs and skill shortages
- Demographic, economic and business information.

### Summary

There is clear evidence that the challenges are evolving for gardens and parks, a foundation stone of the UK visitor economy on the one hand, and a key component of healthy urban communities on the other. Garden managers identify a clear need for the skills to meet those challenges, and express concern.

Key themes that emerge in the study, and that characterise the challenges, are:

- The demand for skills to manage ever-increasing visitor numbers, and their impact upon an inherently fragile landscape. Many gardens have reported significant increases in visitor numbers in recent years, reflecting



wider tourism trends and the impact of economic circumstances

- A continuing need for investment in the maintenance and repair of infrastructure, requiring more skilled people to ensure that further degradation is minimised and to find creative ways to resolve significant problems in the face of severe financial constraints
- The recognition of a need for new approaches to garden management in the face of environmental change, recognised to be having an impact today, and anticipated by managers to be more serious as the years progress.
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Overall, a greater breadth of knowledge and experience is demanded, though there are clear differences in emphasis between public parks, which require more generic skills to manage work programmes and to engage their communities, and gardens, which demand a greater depth of underpinning knowledge in horticulture and related subjects, as well as managing the visitor experience.

The sector has become very reliant upon a small number of well-established training institutions to provide successive generations of skilled horticulturists that can meet the diversity of challenges in our gardens and parks. The impact of innovative training schemes such as the lottery-funded Historic and Botanic Gardens Bursary Scheme (HBGBS) is therefore all the more noticeable in this study, and demonstrates that there is an appetite to provide training across the range of gardens where the right kind of support can be applied.

Hard copies and downloadable PDF available at:

<https://www.historicengland.org.uk/imagesbooks/publications/cultivating-skills/>

# NOTES

















