

# HBCG

Training Programme

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## Trainee Handbook





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# Introduction

## About

Welcome to The Historic and Botanic Garden Training Programme (HBGTP).

The programme is managed by English Heritage and supported by the National Garden Scheme. The HBGTP (previously the HBGBS), has provided gardens with the infrastructure and bursaries to support training placements since 2006.

Research conducted in 2006 indicated that the horticultural sector had a significant skills problem, with an ageing workforce and too few new entrants, resulting in a shortage of skilled professionals in the industry.

In response, English Heritage developed the HBGTP, which offers one-year, practical placements in prestigious gardens around the UK.

As one of our trainees, the HBGTP helps ensure that you are amongst the best and most promising new horticulturalists coming into the industry.



## Team Profiles

**Elinor Davies** | HBGTP Manager | **Homeworker**  
**Mob:** 07979 401 784  
**Email:** elinor.davies@english-heritage.org.uk

Elinor oversees the HBG Training Programme, co-ordinating placement gardens, programme staff, and freelance tutors. Elinor also acts as the first point of call for trainees, supervisors and mentors with any queries. She also leads the organisation of the annual Trainee Seminar and Study Tour.

Elinor started her career as a gardener in 2005, before moving on to attain a BSc in Horticulture from Reading University. Elinor has since gained experience in both the private and public landscape sectors. She developed her interest in historic landscapes during an internship with English Heritage's Gardens & Landscape Team. Elinor also completed an MA in Landscape Architecture at Sheffield University in 2013. After which, Elinor has worked as a Landscape Manager for The Environment Partnership.



**Emma Newey** | Business Support Officer | **Homeworker**  
**Tel:** 07789 529 620  
**Email:** emma.newey@english-heritage.org.uk

Emma is the first point of contact for any admin queries from both trainees and placement gardens.

As HBGTP Administrator, she supports the recruitment process, manages the HBGTP website and helps to organise events. She also manages the content across our various social media platforms such as Instagram and Facebook.



Emma previously worked as a Personal Assistant in the NHS and an Internal Communications & Engagement Advisor at the BBC.



# 1. Dates for the Diary

Tasks		
Task	Action	Due Date
Induction	Section tours by garden Supervisor. Sign induction checklist.	End of first week
First meeting with Supervisor	Review roles and progress in first week.	End of first week
First meeting with Mentor	Review roles and progress in first week.	End of first week
Complete Individual Training Plan (ITP)	Supervisor to book a suitable date and time. Completion of ITP provides the chance to assess any skills gaps, training plan for year and discuss project ideas.	Completed in first 1-2 weeks, returned by end Sept.
Plant idents - No fewer than 10 plants	Learn Family, Genus, species and 'Cultivar'.	End of each week
Monthly meeting with Supervisor	Meeting with supervisor to review progress on practical work, project, journal and idents.	Once a month
Meet with Mentor	Informal one-to-one, notes optional.	As required
Complete technical journal, 1st garden project and plant idents	Read handbook for guidance. Obtain verbal feedback from Supervisor before submitting to HBGTP using Dropbox.	Every 4 months

Submissions
31st December 2024
30th April 2025
31st August 2025

Events
Trainee Seminar - 17th - 20th October 2024
Study Tour - 11th - 13th July 2025
Graduation Ceremony - 28th August 2025

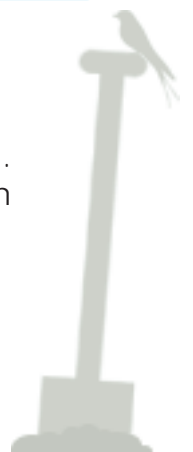
## 2. Training Structure

The HBGTP is the over-arching title for the training programme. In order to finish the traineeship, you need to complete your practical training, all HBGTP written submissions, and attend the trainee seminar and study tour.

The table below breaks down your workload:

Task	Assessment Method	Assessed By	Section
Practical training at your placement garden	Feedback to HBGTP from Supervisor	Supervisor*	3
Written project (one every four months)	Verbal & written feedback	Supervisor & HBGTP	4
Plant identification tests at your placement garden	Verbal & written feedback	Supervisor & HBGTP	4
Technical journal	Verbal & written feedback	Supervisor & HBGTP	4
Trainee Seminar	Attendance	HBGTP	5
Study Tour	Attendance	HBGTP	5

\*Refers to assigned Supervisor in placement garden (see page 9 for role details). Verbal feedback will be provided by your Supervisor and written feedback from an



## 2. Training Structure (cont.)

You are employed and line managed by your placement garden and need to adhere to the garden's staff rules and procedures.

Your placement garden will provide you with induction training (covering all aspects of health and safety), personal protective equipment, and an employment contract. In addition, your placement garden will ensure that you have access to a computer and the internet whilst on site.



Trainee & Supervisor planting bulbs at Audley End

You will be required to complete garden projects, a technical journal and plant identification tests at your placement garden. This is discussed in more detail in Section 4.

### The Individual Training Plan (ITP)

When you begin your placement, you will complete an Individual Training Plan (ITP) with your Supervisor.

The ITP is based on an initial assessment of your skills and training needs and will guide and record your learning through the duration of the placement.

The ITP will also include the initial structure for your HBGTP project work, technical journals and practical training programme.

The ITP is subject to change if opportunities arise for you to undertake additional learning via exchanges, conference attendance, etc.



Trainee attending to plants in the Alpine House at Winterbourne House and Garden



## 3. Roles & Support

When you first start work in your placement garden you will be assigned a Supervisor and a Mentor.

### Supervisor

Your Supervisor is required to meet regularly with you to discuss your work programme. On a 4 monthly basis (every tertile), your Supervisor is tasked to read your technical journal and garden project work before you hand this in. They will then complete a Feedback Form on your progress which they submit to the HBGTP. The HBGTP Administrator in turn then shares feedback from an external tutor, a copy of which is given to your Supervisor. This cyclical process ensures connectivity between you, the programme and your Supervisor.

### Mentor

Your Mentor is expected to have periodic meetings with you to discuss, in confidence, your progress. The Mentor is looking particularly at skills gaps, career objectives and any concerns you may have. Your Mentor will provide professional insight, careers advice and guidance, and will discuss and agree suitable objectives to support your professional development

### Support

Your ITP will help keep your practical training on track. Your work will be reviewed and feedback provided by your Supervisor and an external tutor. Pastoral care is provided in the workplace by your Supervisor and Mentor, supported by the HBGTP Manager (see below).

You will benefit from half a day's study leave per week. This is to be taken on site with the day and time agreed between you and your Supervisor. This time is for dedicated study only (i.e. project work, technical journal or revision).

You will be allocated funding from the HBGTP to spend on training certificates or exchanges with other placement gardens. You will be expected to submit a bursary fund application form in order for this money to be released. Please contact Elinor, the HBGTP Manager, if you have any questions.

The HBGTP Manager will visit you at your placement garden near the start of your placement to review your progress, enabling any potential difficulties to be spotted early and appropriate interventions made. For example, an insufficiently informed or inappropriate project brief can be corrected at this stage.

It is important that you feel you can discuss any concerns with the HBGTP Manager in confidence. It is up to you to speak up and not to bury your worries.



## 4. Written Work

The HBGTP certificate of completion is the over-arching award for the programme. While as a gardener your practical skills are vital, it is also important to be able to review and write reports, identify key plants and be able to critically analyse day to day.

The programme's written work is designed to complement your practical training and help you in your next steps in a heritage horticulture career. As a trainee you will create 3 'submissions' which are handed in on a 4-monthly basis.

Each submission includes:

- 1 Project
- Daily Technical Journal
- Weekly Plant Identification Tests

Plant identification tests each week on plant ID, expanding your list of plant names whilst also learning about their care and appropriate placement. Projects focus on your report writing skills, helping with future situations such as inputting into management plants or creating business cases. While keeping a technical diary is more important than ever in a changing climate.

As a trainee to graduate from the programme, you must complete both your practical work as well as all three written submissions. However, there is no mark at the end. The journey is all – like the placement itself, it's what you learn from doing it that matters.



Trainees attending a talk by Sheila Das at RHS Garden Wisley as part of the Trainee Seminar

## HBGTP Projects

During your 12-month placement you will complete three written projects. Project topics are varied, reflecting your interests as well as opportunities within the garden. **Project titles are agreed with your Supervisor when completing your Individual Training Plan (ITP)**, and your second project will focus on your future career (see page 14).

Projects allow you to undertake independent research into specialist areas, encouraging in-depth understanding. Compiling a project also reinforces a key skill which you may have learned in the past: how to structure a report in a coherent and succinct way. This is a vital ability for any senior staff member, whether they are reporting to a management committee or making a funding application.

Your Supervisor will help you decide and design your projects, they will also support you throughout the process, checking in regularly to review your work and help you stay on track. To help them do this **please ensure that you hand in your work when requested**. Your Supervisor is there to support and guide you through your project journey, sharing your work with them will help with this.

A project template is not provided; however, a **project structure is listed on page 12** and should be followed whether your project is design, research or even presentation based. Sticking to these headings helps the reader understand and follow the project progression.

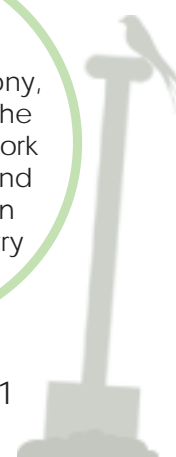
The projects do not have to be huge. Ask yourself at the start: given you have just four months to complete it, what can you realistically produce? 10 pages, 20? Photos, diagrams, graphs, plans? Have an idea of what the project will look like at the end.

**Projects are submitted via Dropbox**. Full instructions on how to use Dropbox will be provided by email before your first submission.

An exhibition of the graduating trainee's work on display at the HBGTP Graduation Ceremony



During the Graduation Ceremony, trainees are given the opportunity to network with professionals and senior figures within the heritage industry



## Project Structure

Your project should follow the structure below and include the following headings:

<b>Title</b>	▶	Include your name, the project title and date.
<b>Contents</b>	▶	Include page numbers and a table of figures.
<b>Summary</b>	▶	A short summary - just half a page or so.
<b>Aims &amp; Objectives</b>	▶	The aim of the project defines what you want to achieve and the objectives set out the steps you will take to achieve the aim.
<b>Introduction</b>	▶	Background to the project: what is your starting position?
<b>Methodology</b>	▶	How are you going to go about doing your project? For example, collecting information.
<b>Findings</b>	▶	These should directly relate to your objectives.
<b>Conclusion</b>	▶	Were you successful? Could the project have been done differently in hindsight? What were the barriers or unexpectedly useful things you got out of it?
<b>References</b>	▶	This is a whole subject in itself (see Project Bibliography), but essentially you need to be able to back up anything you say with evidence – what book, website, or person gave you the facts you have referred to?
<b>Additional Items</b>	▶	Place these as an appendix. For example, things you found interesting but not directly relevant. Appendices might also include lengthy lists such as plant names.

## Project Pre-submission Checks

Before you submit your project have a quick check through the points below, which lists some helpful things to review before uploading to Dropbox.

- Does the project follow the project structure on page 12, including use of section headings?
- Does the project have a front cover that includes your name, garden name, date and title?
- Is the text divided into sub-headings and short paragraphs, rather than long blocks of text?
- Has the work been spell-checked and reviewed for typos? A second pair of eyes is very helpful at this stage!
- Is the work properly referenced with sources/help acknowledged?
- Have plant names/family names been spelt correctly and italicised/underlined as appropriate?
- Is the balance of illustrative material to written effective?
- Are photographs and other illustrative material appropriately sized, spaced and positioned?
- Check that information needs to be in the body of the project, for example long tables or lists, could these be better placed in an appendix?



Trainee at  
Wrest Park learning  
to drive a tractor  
and trailer.



## Careers Project

The second project will focus on careers. To help you achieve this project we have provided a brief below. As usual if you have any queries regarding this project speak with your Supervisor or drop the HBGTP Manager an email.

### Aim

The aim of this project is to clarify your ideas about your career in horticulture

### Objectives

- Produce a well-crafted CV
- Demonstrate an understanding of how to find the right job
- Be prepared for a horticultural job interview
- Create a bursary fund application

### Methodology

- Identify at least one career path that you would consider with a 10-year trajectory. To achieve this, you should be in communication with 3 or more other horticulture professionals.
- Locate guidance on contemporary formats for a CV from at least two different sources (not necessarily in horticulture)
- Produce a CV for yourself with your career trajectory in mind
- Identify 3 online job sites and 2 other avenues from which you can find out about new posts
- Produce 10 questions that you would expect to come across in an interview for a Gardener post and write your answers to them. Answers should be both succinct and comprehensive.
- Complete a draft application for either an RHS bursary for travel OR a Professional Gardeners Trust bursary for training/placements.
- Application forms can be found here:
  - <https://www.rhs.org.uk/education-learning/bursaries-grants/rhs-bursaries/Apply-for-an-RHS-Bursary>
  - <https://pgtrust.org/apply/>

### Format

- Please follow the same project structure as outlined on page 12. For this project, writing in first person is acceptable.

## Project Bibliography

We suggest that you cite references using the Harvard Referencing Style. Examples and guidelines can be found here:

- <https://www.citethisforme.com/harvard-referencing>
- <https://www.mendeley.com/guides/harvard-citation-guide>

## Example Projects

### History

**History** Develop an in-depth timeline for:

- Your garden's history
- A special collection held by your garden
- A broader period, person or style relevant to your placement garden. In each case, relate the events of your focus study area to the wider world, such as political events, movements in architecture, art and fashion more widely, scientific advances etc.

### Submission

Complete document, with appendices and supporting documents (if relevant) uploaded to the HBGTP Dropbox. There will be a folder with your name for you to save into.

### Interpretation

**Design an interpretation panel, leaflet (e.g. for a trail) or drop-in live interpretation event relating to your placement garden.**

You should:

- Tailor the piece to your placement garden
- Clearly identify user groups/target audience
- Emphasise one or more aspects from the following: plantsmanship, heritage gardening, conservation (plants and landscapes), sustainable horticulture

### Submission

- Handout, teaching outline or leaflet should be uploaded to Dropbox.

### Planting

**Develop and draw up a planting plan appropriate for a thematic collection in the placement garden.**

This should incorporate:

- A clearly identified theme
- Considerations of best practice in terms of sustainability and climate resilience
- An annual maintenance plan for the bed

### Submission

- Planting plan, uploaded to Dropbox.
- Short (1000 word) illustrated report, uploaded to Dropbox.
- Survey in placement garden of collections - plant family profiles/database management (IrisBG). Requires Microsoft Excel or a similar spreadsheet package.



## Plant Identification

As a trainee you are required to take regular plant identification tests, helping you identify key plants within your garden along with their use and basic maintenance. As you move through your career your list of known plant names will grow, so starting early as a trainee can be highly beneficial and even fun!

### Plant Identification Tests

- Plant lists will be set and delivered by a member of your placement garden team.
- As a minimum, 10 plants a week or 20 plants a fortnight will be set for you to learn and be tested on.
- You will be tested on family, genus, species and you must submit your marked scoresheets from each test via Dropbox on a 4 monthly basis. Scanned handwritten/marked copies are also fine.
- Plant lists should focus on a range of plants but may occasionally have a specific theme, for example weed species or winter tree ID.
- It is recommended that you follow up on plant lists with your own research, looking at the plants in more detail, this may be recorded as a typed list or as a table. Additional information could include where the plant originates from, where it likes to grow in the garden, key identification features and perhaps some historical detail such as when it was introduced.
- You may include photographs, but this is not a requirement.

### Recommended websites for verifying the correct names of garden plants:

There are several primary resources used by botanical horticulturists for finding out the correct spelling of a name. These include TROPICOS, an online database of the Missouri Botanical Garden. Another is the International Plant Name Index (IPNI) maintained by the Royal Botanic Gardens, Kew.

However, professional gardeners are more likely to look at the Royal Horticultural Society database (<https://www.rhs.org.uk/plants/search-form>) in order to clarify the correct spelling or nomenclature when they are unsure of a particular plant's details.



Trainee at Audley End undertaking a weekly plant ID test



## Technical Journal

You are required to keep a daily record of your horticultural activities. The objective is to encourage you to develop the habit of professional observation and reflection.

The technical journal is an opportunity to record horticultural tasks and techniques that you undertake during your placement, including any tasks that are of particular significance to the specific garden.

**The technical journal should not be elaborate, and the length of entries should vary according to the day's activities;** some days may be longer than others for example when learning how to use a new piece of equipment.

### Format and what to include:

- Journal entries should, where possible, be completed in a computer programme such as Microsoft Word, with final versions saved as PDF for submission. Entries completed on social media accounts e.g. Instagram are not acceptable.
- Your first submission should include an introduction to the garden on page one, setting the scene for the person reviewing the work.
- At the beginning of each submission, state your name, the name of the garden and the period covered.
- Make the information for each submission readily accessible by including a contents page with page numbers. Tip: Microsoft Word has a 'contents table' feature, a quick google will supply you with the steps which are quick and easy to follow!
- Daily entries should aim to be around half a page max. Entries should be longer than one line but rarely over one page and should include frequent use of images (correctly titled).
- Weather conditions, which depending on the garden setup could be as basic as 'cloudy' or as detailed as exact temperature and rainfall.
- A description and explanation of the practical tasks undertaken (what, where, how, why, who with?) – be analytical, not chatty.
- Any tools/machinery that you used and the reason for its use plus if using for the first time how to use it and correct H&S.
- Descriptions of visits to any places of horticultural interest.
- Any additional training you may have received on or off site.
- Illustrations/photographs/sketches/plans and tables which relate to the text. These could be daily or spaced out across each week.
- Any sickness or absence so that the reader is aware of the reason for any gaps in your entries.

**Please note:** this is not an exhaustive list and not every point will apply to each day.

## Journal Pre-submission Checks

- Is the work properly referenced with sources of help acknowledged?
- Is the font size correct? Please ensure that the font is large enough to be read easily but not so large as to make the document over long.
- Are long blocks of text divided into smaller sub-headings, paragraphs or bullet points?
- Are plant names spelt correctly and are they are italicised/underlined as appropriate?
- Are any digital photographs or diagrams in a sensible format (not too large/high res) and correctly titled.
- Are photographs and other illustrative materials dated and labelled correctly, with sources acknowledged?

**21<sup>st</sup> March, 2016**

### **SPRAYING PEACHES**

Duration: all day

Area: Spring Garden

Weather conditions: Mostly sunny

An example of  
a trainee  
technical  
journal entry.

- Peaches in the kitchen garden were sprayed with copper based fungicide Cuprokyt **FL** against **Peach leaf curl** (*Taphrina deformans*). Wettable powder formulation containing 50% w/w copper oxychloride can be used for control of a wide range of diseases, including downy mildew on hops, blight on potatoes and outdoor tomatoes, leaf spot on celery, apple and pear canker and bacterial canker on cherries and plums.
- The product was mixed into pesticide knapsack sprayer according to concentrations, as stated on product label. 4 litres of solution were then sprayed using fine nozzle, covering well whole peach trees. Ladder was used to prevent inhalation of mist when spraying high above branches. All PPE, including white overall, face shield and nitrile gloves were worn while performing spraying.
- Spraying is best performed in February, or just before the bud break. Spraying may be repeated in autumn at leaf fall.

### **Observations:**

- Peaches in the Peach house have been in flower for last three weeks, and are every day pollinated using a rabbit tail. When pollinating, flowers on each branch are gently tickled with the tail, to aid delivering pollen from stamens onto pistil.



Pollinating peaches using a rabbit tail.

## Submitting Work and Receiving Feedback

The process is as follows:

**Step 1** – Supervisor reviews work in person with trainee

You are expected to submit your technical journal, one completed garden project, and a list of your plant idents, once every 4 months.

It is important that your Supervisor reviews your work before it is submitted to the HBGTP. It is your responsibility to ensure that this appointment is made and that the Supervisor is given good notice of the date.

**Step 2** – Trainee uploads work onto HBGTP Dropbox

You will be alerted when it is time to submit your work and it is critical that you do this on time. Failure to do so means that you will not get feedback and that your work will not be acknowledged by the HBGTP. You need to upload your work to the HBGTP Dropbox (a link will be sent to you before your first submission is due).

**Step 3** – Feedback is given to trainee by HBGTP

Your work will be reviewed by an expert external tutor and you will be given feedback by email.

Ensure that your name, placement garden, and dates of placement are clearly marked on the electronic attachment that you submit. Trainees may be asked by the HBGTP Manager to share items or photographs from their technical journal for the HBGTP website.

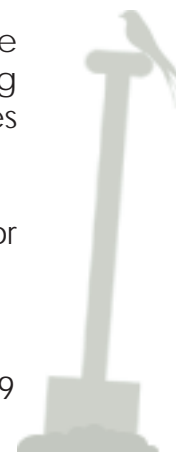
## Social Media

If you have social media make sure you follow the HBGTP for weekly updates and stories; Instagram @hbctrainingprogramme, Facebook @HBGTP.

During your placement you may be asked to get involved in various social media posts, website stories or interviews at your placement garden. You will be asked to sign a photo and video consent form when you start the programme.

We would also love to hear from you during your placement, whether you have interesting plants growing in your garden, a special event taking place, or stunning seasonal displays, we want to hear about it so we can showcase what our trainees are getting up to across our social media pages.

You can email your photos to the HBGTP Manager or Administrator (see page 5 for contact details).



## Written Work FAQs

### Q. How extensive are the written projects?

This depends on what your research produces. Quality, not length, should be the aim. A well-planned garden project will naturally come to an end. A poorly planned garden project ends up with you having lots of information and no write-up.

You may have a project that is practical with limited written text, or it may be a desk-top study that has plenty of information to record. You may have a project with lots of data: if it is, for example, a propagation study, you may need to record temperatures, compost mixes and germination rates. The use of appendices is important: if your project involves a lengthy list, then place it in the appendices and reference it in the main body of the text.

However big or small the project, you will always need to follow a structure (see page 12): Summary, Aims and Objectives, Methodology, Findings, Conclusion and Bibliography.

### Q. Do you need the originals of my design/plans?

No – just upload copies or a high-resolution photo to Dropbox.

### Q. Do you want a list of my plant ident results?

Yes, it's important that we see your plant identification results. If you are doing plant profiles, then include those too.

### Q. Can I email this submission to the HBGTP Administrator or Manager?

We would prefer you to upload your work to Dropbox so that it can be accessed from there by the HBGTP staff and your external tutor. If you have any problems, please contact the HBGTP Administrator. In exceptional circumstances, projects can be submitted by email, although larger files will need to be sent by WeTransfer.



HBGTP Trainees at the 2024 RHS Chelsea Flower Show Young Peoples' Breakfast with the National Garden Scheme's Chief Executive, George Plumtre

## 5. Trainee Seminar & Study Tour

### Trainee Seminar

The Trainee Seminar will take place during the Autumn (dates on page 6). This event will allow you to meet and interact with other trainees on other training programmes, including the Professional Gardeners Guild (PGG). We hope that the seminar will provide you with a chance to network and exchange ideas. You will also receive guidance on your future career development and how to make the most of your time as a trainee.

### Study Tour

The Study Tour will take place in the Summer (dates on page 6). The location often changes, but always incorporates visits to a wide range of gardens in the area.

Simon Tetlow  
talking to  
trainees at  
Tatton  
Park



### Study Tour & Trainee Seminar FAQ

**Q: Do I have to attend the Trainee Seminar and Study Tour?**

Yes, unless you are unable to attend due to agreed special circumstances. These events are a key part of your year's training.

**Q: Will accommodation, meals and transport be provided?**

Yes. Accommodation will be provided, and there will be a minibus or coach to take you on garden visits. All meals will be provided, with a range of dietary options.

**Q: Will my transport be paid for to get to the Study Tour/Seminar?**

Yes. All reasonable expenses incurred in travelling to the Study Tour or Seminar can be claimed back from the HBGTP. When booking train tickets, please try to book advance for a standard fare only. If travelling by car, please co-ordinate travel with other trainees as much as possible to save on unnecessary expenses.

## 6. Miscellaneous

### Contracts

Your employment contract is with your employer - the placement garden. The employment contract outlines terms and conditions including annual leave and pay.

You will also sign a Learning Agreement with the HBGTP. This outlines your agreement to work within the structure of the programme and to commit to the learning objectives set out at the start of your placement.

### Equipment

As a trainee, you will be expected to provide your own stationery, including notebooks. Trainees are encouraged to access local and national library resources including the Lindley Library in London.

All placement gardens will provide the basic personal protective equipment (PPE) required to undertake the daily work. This will include steel toe-capped boots, gloves, ear protectors and other items required for specific machinery.

### Failure to complete

Very few of our trainees have failed to complete their placements and those that have left the programme have usually done so because of personal circumstances, rather than because of any dispute with their placement garden.

However, a breach of your learning agreement with the HBGTP, or of your employment contract with your placement garden may result in a failure to complete.

### Further Funding

If you are considering a field trip (in addition to the potential exchanges mentioned above) or are struggling to support yourself through the programme, it is worth investigating the grants and bursaries offered by the following:

**Professional Gardener's Trust:**

[www.pgtrust.org/](http://www.pgtrust.org/) (e.g. certificate training fees)

**RHS Bursaries:**

[www.rhs.org.uk/education-learning/bursaries-grants](http://www.rhs.org.uk/education-learning/bursaries-grants) (e.g. travel bursaries)

**Merlin Trust:**

[www.merlin-trust.org.uk/](http://www.merlin-trust.org.uk/) (e.g. travel or exchange funding)

**Perennial, The Gardeners' Benevolent Society:**

[www.perennial.org.uk/](http://www.perennial.org.uk/) (e.g. help in the event of economic hardship)

# Appendix 1 - Nomenclature

The scientific name of a plant normally consists of two parts: its generic name (the name of the genus; plural: 'genera') and its specific epithet. This forms the name of a species. These names should always be printed in italics (underlined if handwritten or if an italic font is not available). The generic name always has a capital initial letter.

**Note:** the word 'specie' has no validity in botany. 'Species' is both singular and plural.

**Examples:** *Primula*; *Pimelea*; *Sarcococca*

The specific epithet should always have a lower case initial letter, even when derived from a person's name or when a noun.

**Examples:** *Primula vulgaris*; *Pimelea prostrata*; *Sarcococca hookeriana*

In some cases, the epithet of a subspecies, botanical variety ('varietas'), or forma is also given. Subspecific and varietal epithets and those of formae are treated in the same way as specific epithets but the abbreviations subsp., var. and f. are printed in Roman, not italics. Where known, the appropriate abbreviation should always be included to avoid any ambiguity.

**Examples:** *Primula vulgaris* subsp. *sibthorpii*; *Pimelea prostrata* f. *parvifolia*; *Sarcococca hookeriana* var. *digyna*

**Note:** The term subspecies is sometimes abbreviated to ssp., but this is liable to be confused with sp., the abbreviation for species (singular) or spp., the abbreviation for species (plural). Therefore, subsp. is the preferred abbreviation for subspecies.

Where the genus is quite clear from the context, it may be abbreviated to a single letter (eg: in a paragraph about roses, repetitions of *Rosa* may be shortened to *R.*); it is not good practice to abbreviate any other parts of a plant name, or to indicate the plural use of a generic name by doubling the initial letter (eg: *RR.* or *Rr.* for several species of *Rosa*).

## Authorities

For precision when using plant names, it is helpful to include the authority for a name. This is the name of the person who gave the name to the plant. The author's name may be written out in full or abbreviated according to a standard list of abbreviations, and should be in Roman. When a name is changed, the author of the original name is placed in parenthesis and the new author added:

**Examples:** *Fragaria vesca* L. (named by Linnaeus), *Scilla socialis* Bak. (named by Baker) was changed to *Ledebouria socialis* (Bak.) Jessop (changed by Jessop!).

## Hybrids

When plants of two species or more are crossed, the resultant seedlings are known as hybrids. A hybrid can be indicated by writing the names of the parents, in alphabetical order, linked by a multiplication sign (or a lower case 'x' in Roman if a multiplication sign is not available). This is a hybrid formula.

**Examples:** *Hebe elliptica* × *H. speciosa*;

Many plants known to be hybrids are given new names. In hybrids between species of the same genus, the specific epithet is separated from the generic name by a multiplication sign (or 'x').

**Example:** *Hebe* × *franciscana* (*H. elliptica* × *H. speciosa*)

In hybrids between species of different genera, the hybrid generic name is preceded by a multiplication sign.

**Examples:** × *Mahoberberis* (*Mahonia* × *Berberis*); × *Citrofortunella* (*Citrus* × *Fortunella*); × *Potinnara* (*Brassavola* × *Cattleya* × *Laelia* × *Sophranitis*)

Graft-chimaeras involving two genera are treated as cultivars but denoted by an addition sign preceding the new generic name.

**Examples:** + *Laburnocytisus* 'Adamii' (*Laburnum* + *Cytisus*);  
+ *Crataegomespilus* 'Bronvaux' (*Crataegus* + *Mespilus*)

Graft-chimaeras between species in the same genus can only be indicated by adding a hybrid formula after the name.

Example: *Aesculus* 'Dallimorei' (*A. flava* + *A. hippocastanum*)

Orchid hybrids are often referred to by their parentage. To avoid writing out several long generic names, these are often reduced to a standard abbreviation.

**Examples:** × *Lc.* (× *Laeliocattleya*); *Paph.* (*Paphiopedilum*); × *Smbep.* (× *Schombopendrum*)

**Note:** Although there are many hybrid genera in the orchid family, it is common practice among orchid growers and in orchid literature to omit the multiplication sign. This can, unfortunately, cause confusion for those not familiar with orchid nomenclature.

### Cultivars - Garden Varieties

New cultivar names must be coined in a modern language such as English, but many older ones are latinised and are therefore not always easily distinguished from botanical names. However, the style of writing cultivar names is quite different.

Cultivar names should always be printed in Roman type, each word with a capital initial letter (except for conjunctions, particles and prepositions) – even when latinised. They should be enclosed in single quotation marks (never double). Cultivar names consisting of a person's name with initials should include stops and a space between the initials and the surname. Hyphenated names are treated as one word. Abbreviations require a full stop; contractions do not.

**Examples:** *Potentilla fruticosa* 'Daydawn'; *Clematis* 'Belle Nantaise';  
*Crocsmia* 'Jenny Bloom'; *Mahonia repens* 'Rotundifolia';  
*Tulipa* 'Queen of Sheba'; *Erica* × *darleyensis* 'J.W. Porter'



## Trade Designations

When plants are registered for Plant Breeders' Rights (PBR) under a code-name or have a cultivar name in a foreign language, they are often sold using an alternative name or a translation, both of which are termed trade designations. These are not regarded as direct equivalents of the cultivar name and should not be printed in the same way. A trade designation should always be quoted in tandem with the cultivar name (except where this is not known) and styled in a different font (capital letters are often used but need not be), without single quotation marks. Translation of cultivar names is to be discouraged and there is no necessity to use translations when the original is known.

**Examples:** PBR: *Rosa* RADIO TIMES 'Aussal' *Rosa* MEMENTO *Fragaria* Pink Panda 'Frel'  
Translation: *Potentilla fruticosa* MOONLIGHT 'Maanelys' *Hydrangea macrophylla* Blue Prince 'Blauer Prinz'

## Trademarks

Increasingly, plants are being sold using trademarks as alternatives to or in addition to cultivar names. Strictly speaking, trademarks should not be quoted without permission from the trademark holder, but in some cases there is no alternative name to use. Trademarks are not cultivar names or trade designations but are best treated in the same way as trade designations with the addition of <sup>TM</sup> or <sup>®</sup> as appropriate.

**Examples:** *Rosa* LA SEVILLANA<sup>®</sup> 'Meigekanu'; *Rosmarinus* SILVER SPIRES<sup>TM</sup>; *Petunia* Surfino<sup>®</sup> Hot Pink 'Marrose'

## Grexes and Cultivar Groups

For cultivated orchids, use is made of grex names for plants sharing the same parentage, as well as cultivar names for individual clones. In other cases, assemblages of related or similar plants are placed in cultivar-groups. Both grex and group names are printed in Roman, with capital initial letters. The word 'Group' is always part of group names, but the word 'grex' or the abbreviation gx is optional and may be used.

**Examples:** grex: *Cymbidium* Strathdon; × *Vuylstekeara* Cambria 'Plush'  
group: *Hosta* Tardiana Group  
*Rhododendron* (PJM Group) 'Rim Checkmate'

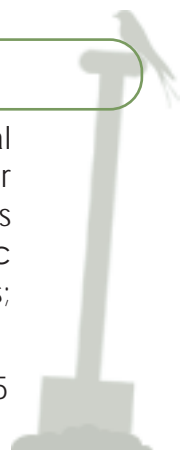
## Families

The names of plant families should be printed in italics (or underlined) with a capital initial letter.

**Examples:** *Rosaceae*; *Berberidaceae*; *Compositae*

## Common Names of Plants

Unlike botanical and cultivar names, common names are governed by no international rules. However, our recommendation is to print them always in Roman type, with lower case initial letters except when the word is a geographical or personal name. This applies also when the scientific name is used as the common name and if the scientific name is turned into a plural. Examples: potato; good King Henry; rhododendrons; camellia; Jersey lily; proteas.



## Appendix 2 - Useful Resources

### PlantNetwork

As a horticultural student, you are entitled to free membership of PlantNetwork: <https://plantnetwork.org/>

This gives you access to a weekly newsletter, job vacancies, and discounted conferences, workshops and training days.

### General Botany Resources: Online Databases

#### Royal Botanic Gardens Kew: World Checklist of Selected Plant Families

[www.kew.org/wcsp/](http://www.kew.org/wcsp/)

The checklist includes 173 Seed Plant families ('View list of included families'). Different families are in different stages of review, as indicated in the family list.

#### Royal Horticultural Society: RHS Plant Finder

[www.rhs.org.uk/plants/search-form](http://www.rhs.org.uk/plants/search-form)

The RHS Plant Finder can give expert help and advice on growing, feeding, pruning, pest and diseases. Search by plant name, attribute, or both to find plant details and a list of suppliers. The website also highlights certain trends, such as a list each year of the most stocked new plants. When a specialist nursery goes out of business, there is a "Last Listed" section which tells you when a plant was last there. Sometimes you can track down the nurseryman and some of their remaining collection. Wholesale nurseries are excluded.

The RHS Plant Selector, based on the Plant Finder, is a hugely popular, free tool from the RHS that enables you to enter a wide range of conditions such as damp soil, shade or ground cover into a database.

**TROPICOS** - The Missouri Botanical Garden vascular plant database: <http://www.tropicos.org/>

**International Plant Name Index (IPNI)** <http://www.ipni.org/>

#### Alternative resources:

Internet Directory for Botany: [www.ou.edu/cas/botany-micro/idb-alpha/botany.html](http://www.ou.edu/cas/botany-micro/idb-alpha/botany.html)

Index Herbariorum: <http://sweetgum.nybg.org/science/ih/>

Angiosperm Phylogeny Website: [www.mobot.org/MOBOT/Research/APweb/welcome.html](http://www.mobot.org/MOBOT/Research/APweb/welcome.html)

Global Biodiversity Information Facility: <https://www.gbif.org/>

USDA PLANTS: <https://plants.sc.egov.usda.gov/java/>

Index Nominum Genericorum: <http://botany.si.edu/ing/>

## Regional Floras and Individual Plant Groups

Trees and Shrubs Online: <https://treesandshrubsonline.org/>  
Checklist of World Ferns: <https://www.worldplants.de/world-ferns/ferns-and-lycophytes-list>  
World List of Cycads: <https://cycadlist.org/>  
The Gymnosperm Database: <http://www.conifers.org/>  
Catalogue of New World Grasses: <http://www.tropicos.org/Project/CNWG>  
Flora Europaea: <http://ww2.bgbm.org/EuroPlusMed/query.asp>  
Flora of China Checklist: [http://www.efloras.org/flora\\_page.aspx?flora\\_id=2](http://www.efloras.org/flora_page.aspx?flora_id=2)  
LegumeWeb (pea family): <http://www.legumes-online.net/ildis/aweb/database.htm>  
CalFlora (California flora on-line): <http://www.calflora.org/>  
Botanical Society of Britain and Ireland (BSBI): <https://bsbi.org/>

## Recommended apps

### LEAFSNAP

Used by The Natural History Museum, Leafsnap helps you with identification. The app contains lovely high-resolution images of leaves, flowers, fruits, petioles, seeds, and bark. As the app's name suggests, the plant species are identified by their leaves.

### GARDEN ANSWERS

Garden Answers is an easy-to-use and incredibly popular identification app that can instantly define over 20,000 plants, coming with some very useful information. Take a snap of the plant you want to identify, press 'submit' and you'll have the answer

### MYSOIL

mySoil is a free app from the British Geological Survey and the Centre for Ecology & Hydrology. Find out your soil properties - type, organic matter, texture and pH - based on your area of the country. See [bgs.ac.uk/mysoil/](http://bgs.ac.uk/mysoil/) for more information.

### NATIONAL GARDENS SCHEME (NGS)

Search through the 3,800+ gardens that open under the scheme, and automatically find any that are open close to your location or by postcode. Includes opening times, prices, info about the garden and directions.

### iRECORD

iRecord App enables you to get involved with biological recording. Contribute native plant sightings with GPS acquired coordinates, descriptions and other information, thus providing scientists with important new biodiversity information that contributes to nature conservation, planning, research and education.

### GARDEN PLAN PRO

Draw on an extensive library of veg to scale-plan your patch through the seasons, with sowing and harvesting reminders based on local weather station data.



## Notes




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