2019 Horticulture Sector Skills Survey – Sub-Sector Report: Arboriculture

A report for the Ornamental Horticulture Roundtable Group

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Pye Tait Consulting

Registered in England, Company No: 04001365, VAT No: 755 8312 14 Registered office: Royal House, 110 Station Parade, Harrogate, North Yorkshire, HG1 1EP
Tel: 01423 509433

Email (enquiries related to this report): m.pye@pyetait.com
Email (general enquiries): info@pyetait.com
Website: www.pyetait.com

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1.Introduction

Arboriculture supported the employment of 20,900 people in 2017. The sub-sector added £709m to the UK economy in 2017 as well as £149m in taxes and NICs, according to Oxford Economics[1]. The research for this report on the sub-sector of Arboriculture was carried out as part of the wider research conducted by Pye Tait Consulting across the entire ornamental horticulture sector in 2019. The wider survey comprised 1,101 businesses in the ornamental horticulture sector.

The skills survey was based on the following research objectives and this mini-report has been so structured:

1. Define the ornamental horticulture sector, including all relevant sub-sectors, and estimate current and anticipated future UK workforce numbers, including additional and replacement demand
2. Understand the drivers of change affecting ornamental horticulture (including opportunities and constraints to growth) and how these are influencing employers' skills needs
3. Establish the profile of the horticulture workforce, including demographic information, ethnicity, qualifications attainment and working patterns
4. Quantify the prevalence of skills shortage and recruitment difficulties at all levels (including hard-to-fill vacancies) and reasons why these are being experienced
5. Quantify current skill levels and the future importance of those skills (using a skills-scoring approach), to determine future critical skills gaps and priority training needs
6. Identify the organisations that employers are using to provide training and highlight any gaps in training provision that can be identified by employers
7. Explore attitude, approaches and barriers to training.

The bespoke skills survey consortium supporting this work comprised the following organisations:

- Agricultural and Horticultural Development Board (AHDB),
- Arboricultural Association (AA),
- British Association of Landscape Industries (BALI),
- Chartered Institute of Horticulture (CIH),
- Horticultural Trades Association (HTA),
- Land Based Colleges Aspiring to Excellence (Landex),
- National Farmers' Union (NFU) and
- Royal Horticultural Society (RHS)

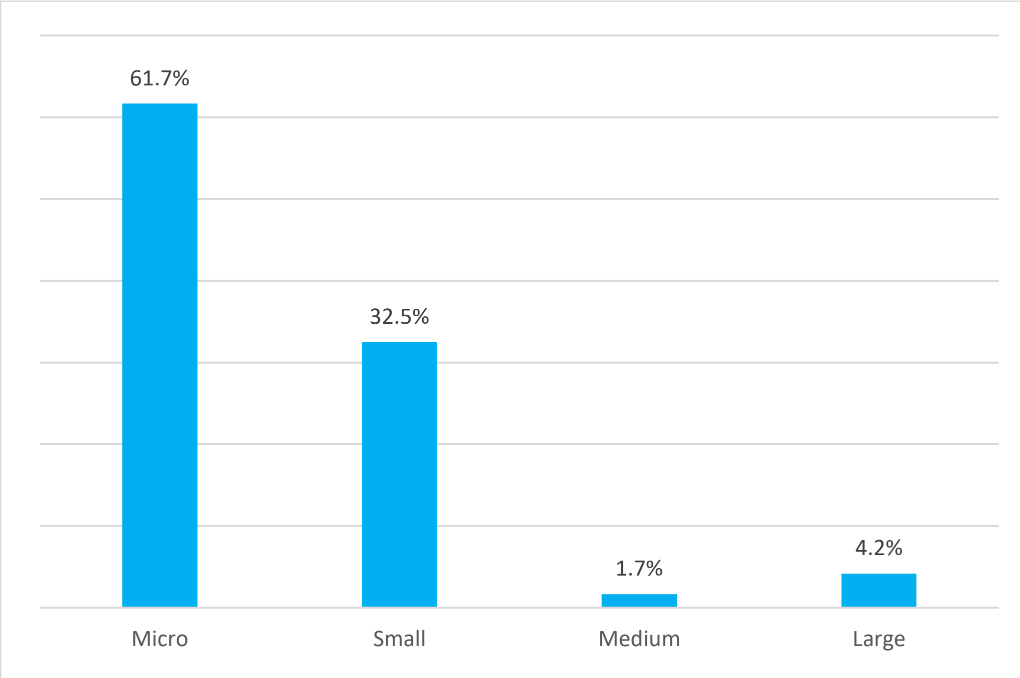
[1] Oxford Economics (2018), *The economic impact of ornamental horticulture in the UK* – NB: These figures include Silviculture, which was not in scope of this research.

1.1 Overview of Survey Participants – business size

The 125 businesses surveyed confirmed employing 2,034 workers.

Of the 120 businesses[2] responding to this question, the majority (94%) are micro and small businesses -which is not unexpected given the overall OH report shows that approximately 88% of business are micro (0-9 employees) or small (10-49 employees). A minority are medium-sized businesses (50-100 employees) and large businesses (100+ employees)

Figure 1: Business size (large defined as 100+ employees)



Base: 120 respondents, single choice question

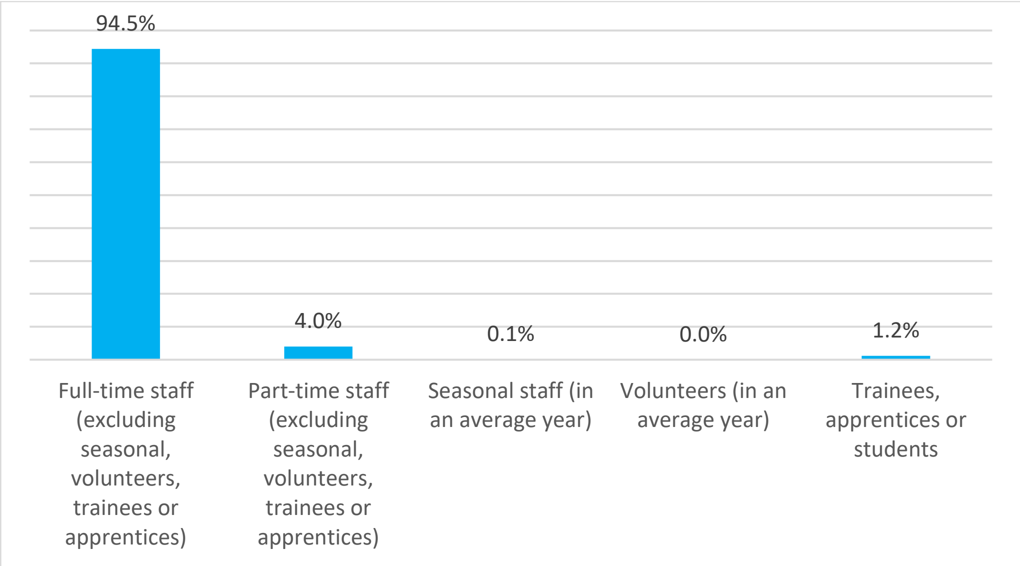
[2] It should be noted that not all businesses were able to answer each question or each in question in full detail. The base numbers for the survey responses and respondents may therefore vary from question to question.

2. Workforce

2.1 Workforce overview

Of the staff employed, a large majority (around 99%) work part-time or full-time. The proportion of seasonal staff is very low. Apprentices and trainees constitute only a small part of the workforce. The average number of apprentices per business was 1.6 in the last three years and is predicted to remain relatively unchanged at 1.5 in the next three years.

Figure 2: Working modes



Base: 118 respondents; responses, 1983 multiple choice question

2.1.1 Workforce age, residency, ethnicity, gender

Residency

Of the sector’s employees, 99% are UK residents, 0.8% are EU residents (non-UK) and 0.2% are non-EU residents. These figures include seasonal workers.

Ethnicity

In terms of ethnic origin, the workforce is predominantly of British origin (96.2%), Irish (1.1%) and other white (0.2%) backgrounds. These figures include seasonal workers.

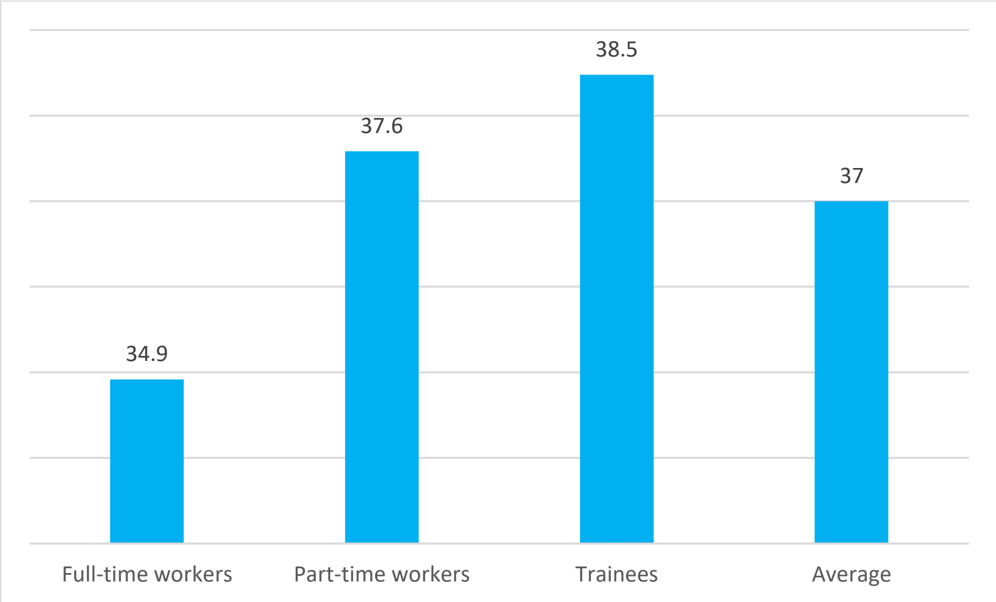
Gender

The sector’s workforce is 80% male and 20%, female. These figures include seasonal workers.

Age

As the figure below shows, the average age of the workforce is 37 years old. This figure excludes seasonal workers. Compared to the UK national average of 41.5 years, the workforce on the sector may not be seen as ageing. What has to be emphasised in this context, however, is the physical nature of many tasks and jobs in the sector. It is therefore evident, that the sector's highly skilled workforce is ageing.

Figure 3: Age of workforce (excluding seasonal workers)

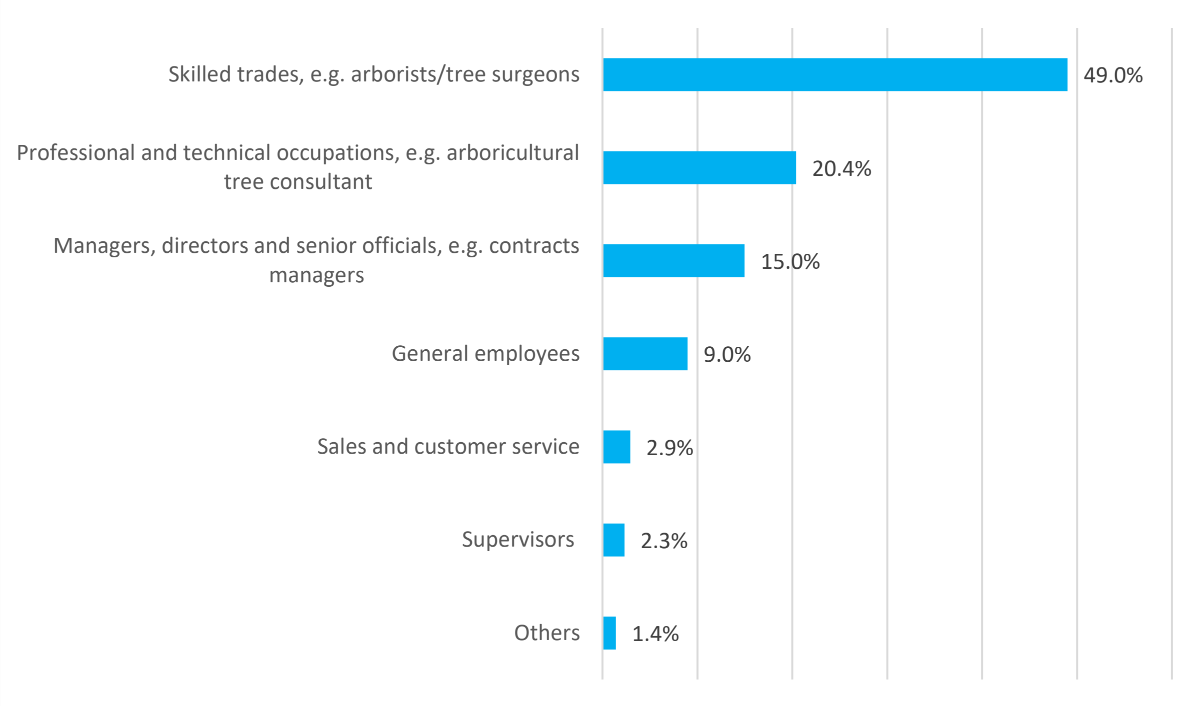


Base: 88 respondents; 1052 responses, multiple choice question

2.1.2 Workforce - Job roles (current and next two years)

Respondents were asked to provide estimates of their current and future numbers of staff including managerial roles, skilled trades or general employees whose work and jobs tasks could be associated with Arboriculture skills and knowledge. We asked about direct employment, but did not distinguish between seasonal, full-time and part-time staff. As can be seen from the figure below, the Arboriculture sub-sector, employs a relatively high proportion of workers in skilled trades (49%) and 20% in professional and technical occupations. The relatively high proportion of managers (15%) may be attributed to the large number of micro and small businesses in the sector (combined 94%).

Figure 4: Current Workforce by job role

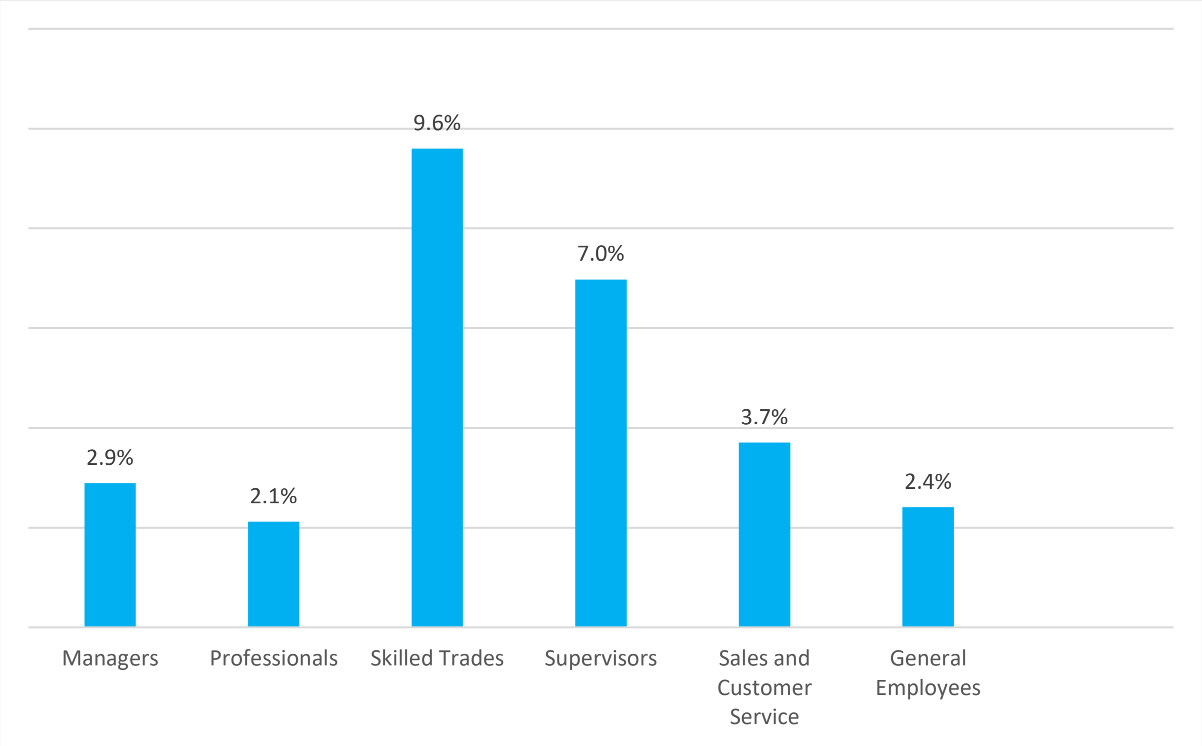


Base: 120 respondents; 1849 responses, multiple choice question

The 121 Arboriculture businesses that responded to this question confirmed employing a total of 2,034 staff, an average workforce per business of 16.8 employees (slightly lower than across the OH sector, for which the average is around 25 employees). Of these, 120 businesses named 1,849 jobs by staff category (see figure 4).

In the next two years, Arboriculture businesses predict that average numbers in all staff groups will increase, some of which considerably. What stands out here is that the highest increases are predicted for skilled trades and supervisors. It should be noted, however, that 113 businesses could not report any increases or decreases in staff and that increases were concentrated in a modest number of medium and large-sized businesses. Here, as shown in Figure 1, it has to be reiterated that the majority of businesses in the Arboriculture are micro and small-sized. In practice, this means that the owner/manager of the business manages a small, highly skilled team. To expand the business, therefore, another small team of highly competent workers has to be hired. The reported increases in skilled and supervisory are a strong indicator of such an intent to expand, but the low response rate to predicted changes in staff numbers may indicate practical difficulties of recruitment and expansion. The predicted increase in all other staff categories are a further indication that the sector is growing or sees a lot of growth potential.

Figure 5: Predicted change in staff numbers



Base: 120 respondents, 2264 responses, multiple choice question – growth in all staff groups

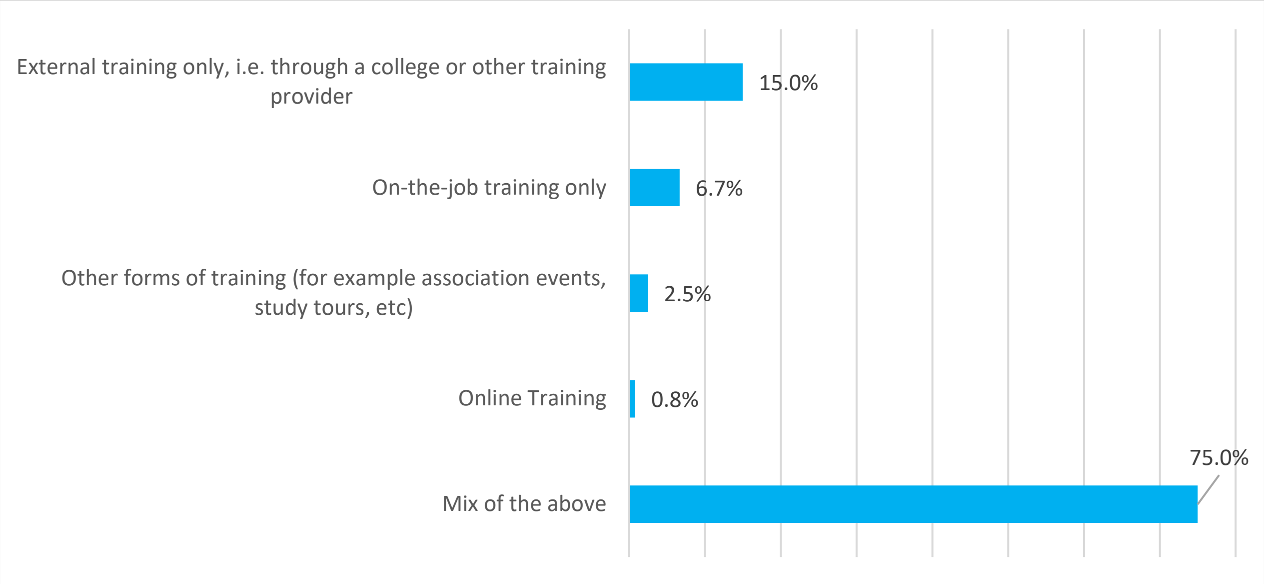
3. Training and Development

3.1 Training modes

We asked the sub-sector what they typically did when it comes to training.

The use of mixed training methods is higher than the ornamental horticulture sector's average (56%), while on the job training is significantly lower (35%), while the exclusive use of external training is also higher (7%). The lower use of on the job training may be due to business size. As stated above, most businesses consist of an owner/manager and small teams, which may be a reason for the higher use of mixed training and external training only.

Figure 6: Training modes



Base 120 respondents – single choice question

3.2 Specific training needs

According to the survey, identified horticulture training needs include training in team leadership, soft-skills training for supervisors, business and operations managers as well as employees. CSCS card training and BALI Register of Land-based Operatives (ROLO) training were also mentioned.

Access to refresher courses in chainsaw operations, health and safety, tree surgery, climbing and rigging as well as tree surgeon assessor courses, operating telehandlers, tree inspection, tree surgery, plant identification, tree species, windblown trees, CAT scanning were also highlighted. Furthermore, the operation of log grabbers and biosecurity and training for a C1 driving licence were listed.

<u>External Training</u>

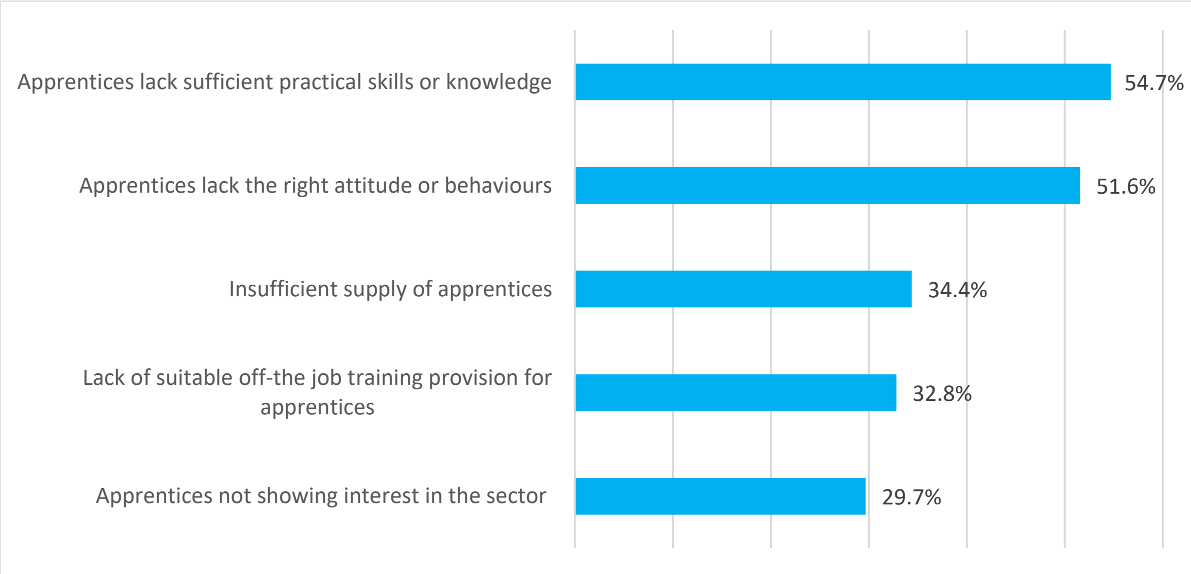
External training, as can be seen above, is moderately used. When asked separately about accessing funding to help with external training, however, a majority (52%) of Arboriculture businesses said that they do not do this, while 40% confirmed using funding “always” or at least “sometimes”. In this context, however, it should be highlighted that businesses may benefit from indirect funding for training and therefore may not need to apply for this. On the other hand, the low numbers of apprentices in the sector (average of 1.6 per business) may be an additional reason for the relatively low use of external training related funding resources.

3.3. Apprenticeships and Trailblazers

Given the relatively low numbers of apprentices in the Arboriculture sector (1.6), which is predicted to remain relatively unchanged at 1.5 in the next three years, it is worth assessing relevant barriers for employers in recruiting apprentices.

Among these, lack of skills and professional behaviours as well as low interest in the sector feature as prominent reasons for barriers in recruiting apprentices in the Arboriculture sector.

Figure 7: Barriers to recruiting apprentices



Base: 64 respondents, 130 responses, multiple-choice question

4. The skills challenge

4.1 Vacancies/Hard to Fill Vacancies

Respondents were asked how many vacancies they had had in each staff category over the last three years and how many of these still remained open. The average number of vacancies associated with each firm in the Arboriculture sector over the last three years was 4.3, based on 453 reported vacancies from 105 businesses. This represents a vacancy rate of just over 35% or 35 per 100 employees and shows a clear intention amongst businesses in the sector to grow. In this context, however, it should be noted that not all of the reported vacancies may reflect the creation of new jobs, but could also be related to staff replacements.

By comparison, the UK national average of vacancies as of March 2019, is 2.8 per 100 employees for the economy as a whole[3]. The sectors with the highest reported vacancy rate are information and communication (4.1 vacancies) and accommodation and food services (4.0).[4] The vacancy rate in the Arboriculture sector is thus higher than the national average. The table below breaks the number of vacancies per job role and indicates the job roles, where hard to fill vacancies are most prevalent.

Table 1: Hard to fill vacancies

Job Role	**Past 3 yrs.**	**Remain open**	**% Remaining open**
Managers/Directors	11	0	0
Professional/Technical	109	24	22
Skilled trades	231	98	42
Supervisors	0	0	0
Sales/Customer service	0	0	0
General employees	6	1	16
Others	13	2	15
Total	370	125	34

Base: 122 respondents; 370 responses, multiple choice question

The results provide a broad indication of which job roles are most difficult to fill at present. Leaving aside the unknowns in the "Other" category the proportion of vacancies remaining open is highest for Skilled Trades and Professional & Technical occupations, followed by General Employees. By comparison, 65% of vacancies (excluding "others") are for skilled trades, but of these, 42% remain open. Similarly, 31% of vacancies (excluding "others") are for professional & technical occupations, of which 22% remain open. This indicates that the sector intends to grow and has faced considerable challenges in tackling the growing need for staff in both of these groups. Nevertheless, this does not necessarily mean that the staff hired meet all the qualifications required.

[3] Office for National Statistics (2019): *Jobs and vacancies in the UK: March 2019*

[4] Office for National Statistics (2019): *Jobs and vacancies in the UK: March 2019*

4.2 Skills Scoring

As a key component of the skills survey, respondents from all sub-sectors were asked to score the current level of skills for a selection of job-role groups such as managers or skilled trades on a scale from 1-10 – where one is the lowest score and ten the highest.

Respondents were asked to assess the future importance of the skill from 1-10, with “5” meaning that the importance of the skill will stay the same.

These rankings were then analysed for this report using skills scoring methods. The following diagrams and tables show the results of the skills scoring exercise. Overall, each group (aligned to different job role levels) of soft and technical skills is set to increase in importance, sometimes significantly.

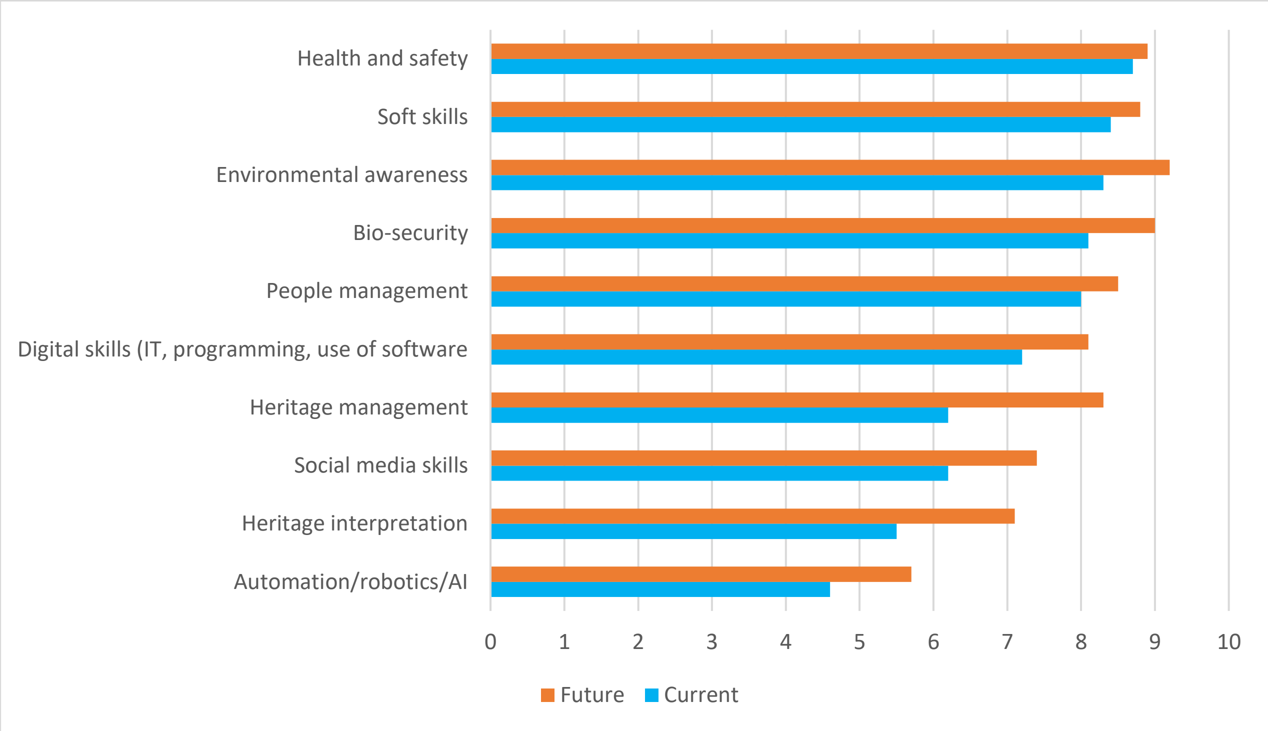
The results of both exercises, that is scoring of the current importance of skills and predictions of future importance in the next 3-5 years, were entirely based on employers’ perceptions of both.

The staff categories surveyed included:

(1) Directors, managers and senior officials,
(2) Professional and technical occupations,
(3) Skilled Trades and
(4) General Employees

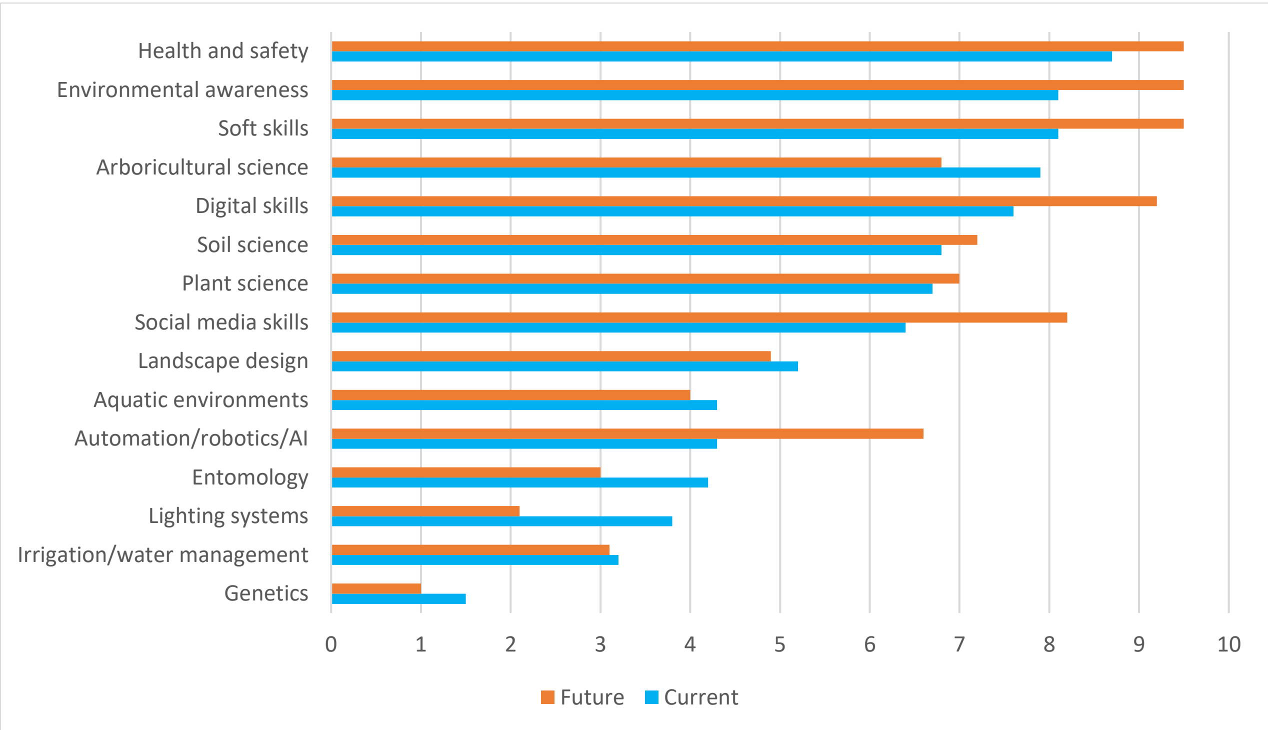
Thus, skills surveyed for scoring were not sub-divided by each ornamental horticulture sub-sector, but by staff category. Therefore, where appropriate, certain sets of skills not relevant to a sub-sector were removed in the following figures below (8 to 11) which show the current skill level in terms of how well these job roles perform these skills, the future equivalent importance of the skills surveyed and the change between current and future in percent terms. This is shown in the following charts for managers, professional and technical occupations, skilled trades and general employees. In this context, please note the term “general employees” was not further defined and could therefore include seasonal workers.

Figure 8: Current and predicted future importance of managerial level skills



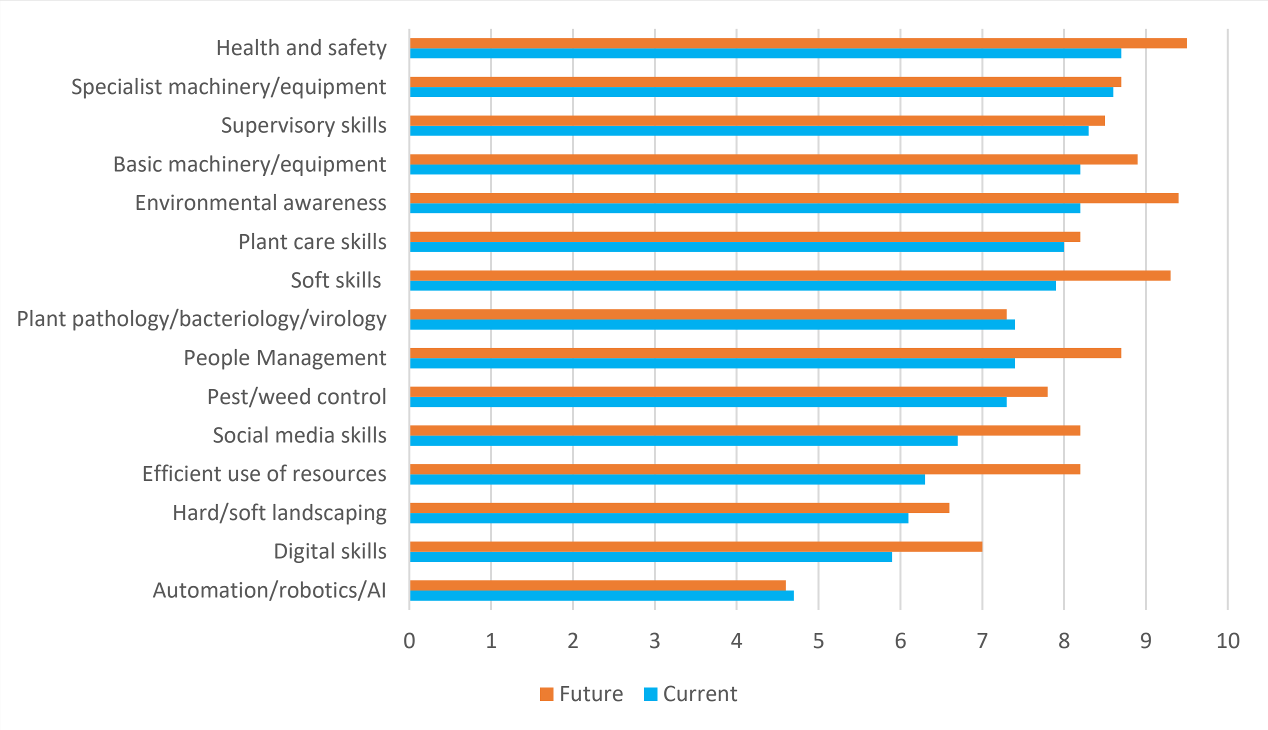
Base: 121 respondents, multiple responses, ranging from 34 to 902

Figure 9: Current and predicted future importance of professionals and technical skills



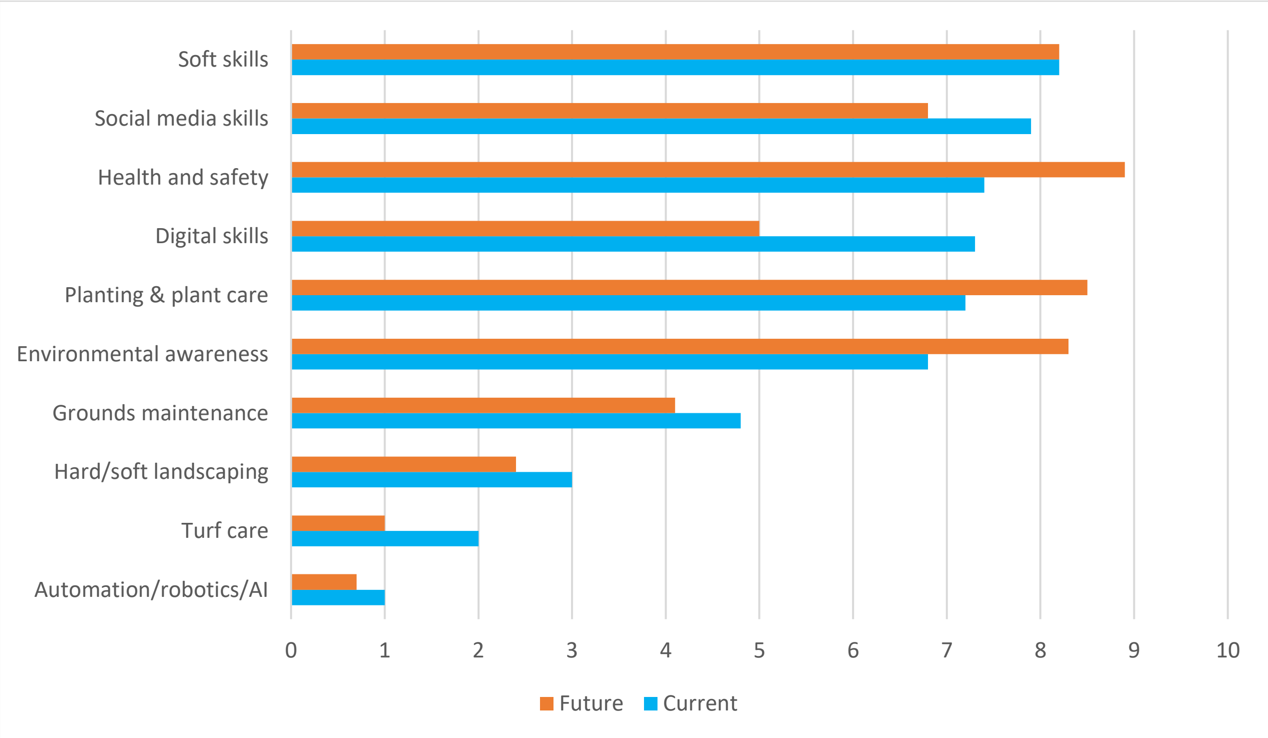
Base: 121 respondents, multiple responses, ranging from 34 to 902

Figure 10 Current and predicted future importance of skilled trades skills



Base: 121 respondents, multiple responses, ranging from 34 to 902

Figure 11: Current and predicted future importance of general employee skills



Base:121 respondents, multiple responses, ranging from 34 to 902

4.3 Skills Gaps

Figure 12: Reasons for skill gaps

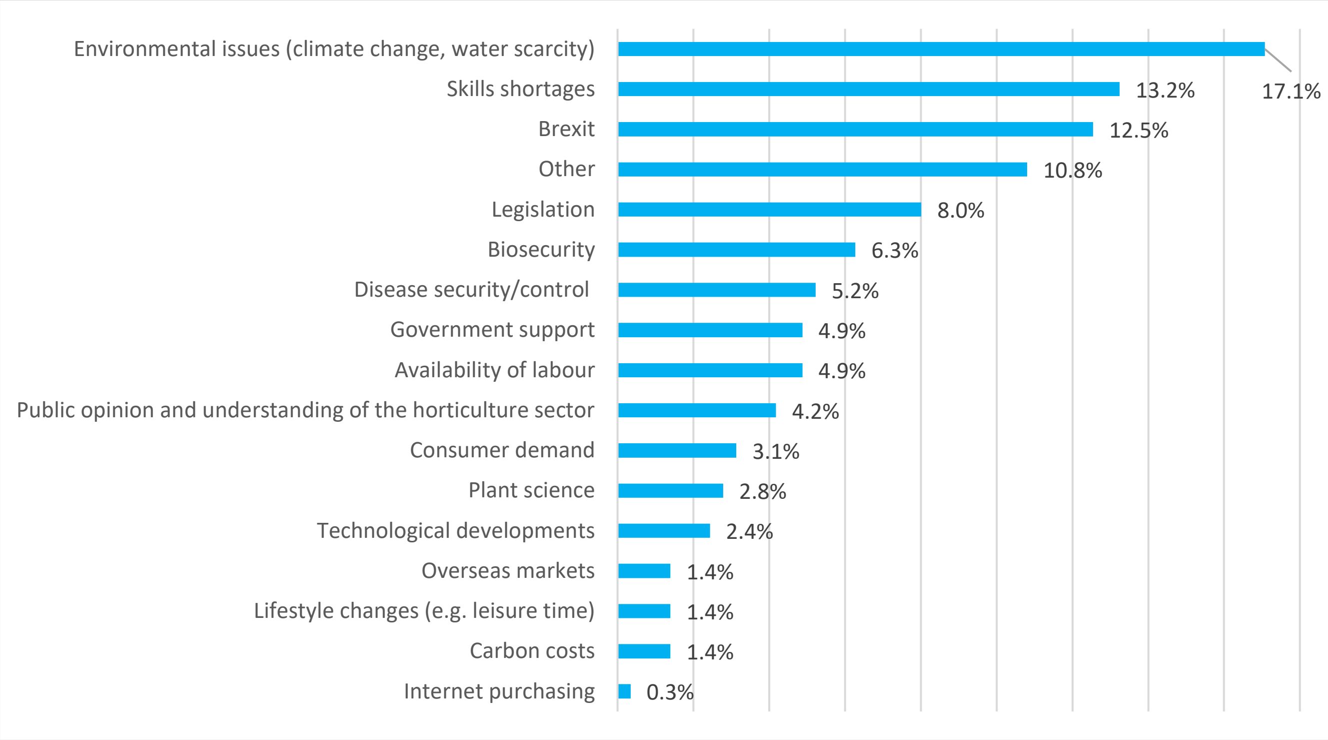
Base: 73 respondents; 110 responses, multiple choice; Respondent could also select the option “other”. Examples of this include tree surgery and tree climbing/rigging, having required tickets (e.g. for chainsaws) does not necessarily mean having the right level of skill and experience in practice. In addition, new employees sometimes do not have the right certification for chainsaws or the use of chippers and college leavers are not equipped with the right skills and experience for working in the Arb industry.

5. Drivers of future change

To provide information on their future outlook of the Arboriculture sector, businesses were asked to name the most important drivers of future change from their perspective.

Top of the table are Environmental issues, Skills Shortages and Brexit. The top two for the wider sector are the same, though Brexit ranks slightly lower (fourth).

Figure 13: Drivers of change



Base: 287 responses (multi-choice question)

6. Conclusions and additional information relating to the Arboriculture sector

According to NOMIS, the ornamental horticulture sector has over 32,000 businesses – largely as defined by the remit of the Ornamental Horticulture Roundtable Group[5] . The Oxford Economics report (2018) estimates that the wider sector supports the employment of 338,200 people. The wider sector comprises just under 92% micro and small businesses but contributes near on £12bn to GDP (2017). An important sector that has wider impacts than is immediately perceived, and as the Oxford Economics report suggests, its full/wider economic contribution extends well beyond the estimates given in their and this report. The Arboriculture sub-sector has around 2,400 businesses and supports the employment of 20,900 people, according to NOMIS and the same Oxford Economics report. In this context, it has to be highlighted that these figures include Silviculture, which is not in scope of this survey.

1. Skills and labour issues are of key concern for this sub-sector in the near to medium term. The sector is largely made up of micro and small businesses, which consist of owner/managers and small teams. There are significant skills issues (skills gaps and shortages) which were highlighted by the sub-sector through the survey and workshops and which need to be addressed for both the sector as a whole and for this sub-sector. These skills challenges include:

   - Difficulties in recruitment of people with the right skills and/or attitudes was selected as the top reason for skills gaps;
   - A lack of relevant external training exacerbates this issue
   - The high proportion of vacancies in skilled trades and professional occupations remaining open after three years (10%) (see Table 1);
   - This is compounded by the fact that the number of jobs in skilled trades positions is set to increase by almost 10% (see figure 5), a major indicator for a skills shortage in the sector
   - While the predicted increase in skilled trades (9.6%) may already seem considerable, it should be reiterated that skilled trades constitute 49% of the current workforce and that hard to fill vacancies in skilled trades rank first (42%) and represent the largest absolute number of hard to fill vacancies in the sector. This strongly indicates a growing demand for workers in this professional group as well as related recruitment difficulties;
   - An ageing full-time, part-time and trainee workforce, combined with the strong physical demands of tasks in the sector;
   - A modest average number of apprentices per business (1.6), to remain relatively unchanged (1.5) in the next three years;
   - Skills shortages is ranked as second in drivers of future change in the sector (see figure 13)

2. Six percent of the businesses surveyed said they anticipate increases in numbers in the surveyed staff categories over the next two years. Difficulties for micro and small businesses

[5] although it includes silviculture which is broader than the definition focussed on here for Arboriculture.

to expand, such as the need to hire a team of skilled workers have to be taken into account here as well. This was noted at a time when, due to there being almost full employment in the UK, there is a challenging labour pool for employers. It is predicted that staff numbers will increase for skilled labour (42% of vacancies remaining open) and professional/technical occupations (22%). Here, it is important to note that the 6% (current number of businesses anticipating increased in staff numbers) could easily become much even higher in the short-medium term as skills deficiencies in the sector begin to bite further.

3. It is reported that recruits to the sector often lack basic practical skills and professional behaviour skills – for example 55% and 52% respectively selected this as a barrier to the recruitment of Apprentices. T-levels could help in guiding more young people into the sector, but 85% of businesses in the wider sector are virtually unaware of them.

4. The average age of workers (37 years) is lower than the UK average (41.5 years). Nevertheless, there are strong perceptions among employers that the workforce is ageing (from workshop feedback and some survey open answers) and while this survey did not have questions permitting the necessary degree of disaggregation there are possible reasons why there may be a serious "ageing" problem including a low number of apprentices in the sector, the ageing of key job roles (managers, skilled trades, supervisors, technical staff etc.), and the effects of the physically demanding nature (such as climbing) of work related to ornamental horticulture and Arboriculture. There is a clear and pressing need for more detailed research into this matter.

5. Whilst the vacancy rate of 35% over the last three years seems relatively moderate, this likely hides concerns experienced by businesses of a lack of skilled people and subsequent 'make-do' activities such as a greater use of volunteers. The sector may need to undertake a gradual increasing use of flexible working as a result, to accommodate the growing atypical workforce structures being experienced[6]. The Taylor Review (2017) noted that '*Full-time, permanent work remains the norm, but other 'atypical' arrangements are usually chosen and valued by the individuals concerned.'*

6. Most skillsets which were queried in the survey are perceived by employers as increasing in importance over the next 3-5 years. Of focus are health and safety, soft skills, supervisory skills, use of specialist machinery and Arboricultural Science.

7. The relatively low average number of apprentices in the sector and the cited perception of the low quality of apprentices in terms of behaviour and skills indicate that talent pipelines into the sector need to be improved. The survey indicates that the average number of apprentices in a business will remain relatively unchanged (1.6 to 1.5) over the next three years– bearing in mind margins of error. This also suggests that employers need help with understanding the apprentice model and the benefits to their business. The new

[6] *Good Work*, the Taylor Review, 2017

Apprenticeship trailblazer standard is relatively new to the sector and the time-lag in this bedding in reinforces the need for great understanding.

8. The high use of mixed training methods and the widespread concern over availability of relevant training are additional indications of barriers to a talent pipeline into the sector.