

0174-37 Level 3 Advanced Technical Extended Diploma in Horticulture (1080)

2023

Qualification Report

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Introduction

This document has been prepared by the Chief Examiner and Principal Moderator; it is designed to be used as a feedback tool for centres in order to enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for City & Guilds Technical assessments.

This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2023 academic year. It will explain aspects which caused difficulty and, potentially, why the difficulties arose.

The document provides commentary on the following assessments:

Year 1

- Pathway 1 (Professional Horticulture) and Pathway 2 (Sports Turf)
 - 0174-002/502 Level 3 Horticulture – Theory exam (1)
 - March 2023 (Spring)
 - June 2023 (Summer)
 - 0174-003 Level 3 Horticulture – Synoptic Assignment

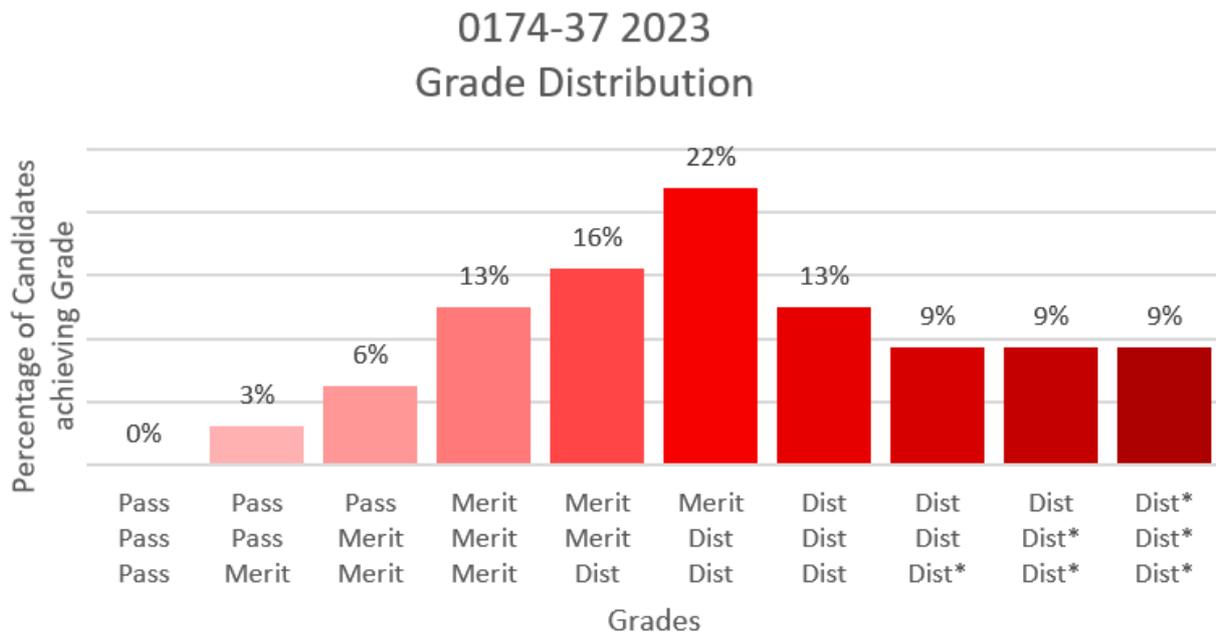
Year 2

- Pathway 1 (Professional Horticulture)
 - 0174-008/508 Level 3 Horticulture – Theory exam (2)
 - March 2023 (Spring)
 - June 2023 (Summer)
 - 0174-007 Level 3 Horticulture – Synoptic Assignment (2)

Qualification Grade Distribution

0174-37 Level 3 Advanced Technical Extended Diploma in Horticulture (1080) Professional Horticulture pathway

The grade distribution for this qualification is shown below:



Please note City & Guilds will only report qualification grades for candidates who have achieved all of the required assessment components, including Employer Involvement, optional units and any other centre assessed components as indicated within the Qualification Handbook. The grade distribution shown above could include performance from previous years.

Theory Exams – Year 1

0174-36 Level 3 Advanced Technical Diploma in Horticulture (540)

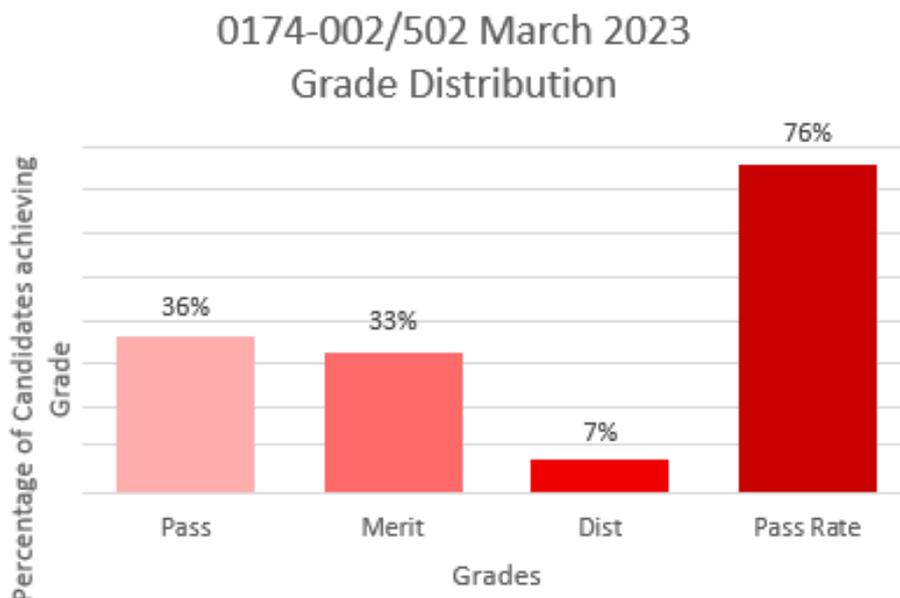
Grade Boundaries

Assessment: 0174-002/502
Series: March 2023 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	26
Merit mark	35
Distinction mark	45

The graph below shows the approximate distributions of grades and pass rate for this assessment:

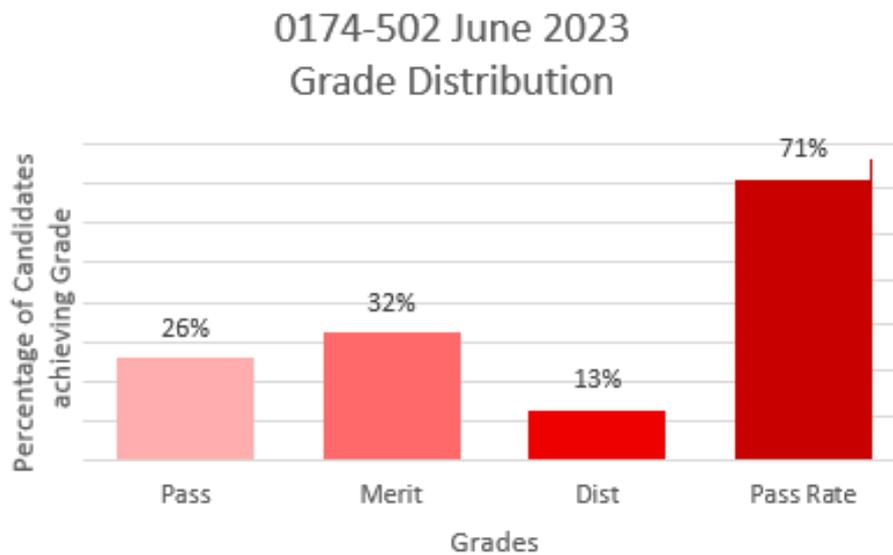


Assessment: 0174-502
Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	27
Merit mark	36
Distinction mark	45

The graph below shows the approximate distributions of grades and pass rate for this assessment:



Chief Examiner Commentary

0174-002/502 Level 3 Horticulture - Theory exam (1)

Series 1 – March 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year. It was also evident that a number of questions were interpreted incorrectly by some candidates, resulting in the question not being attempted or misunderstanding what was being asked.

Candidates demonstrated a good recall of knowledge, gaining marks in topics such as physical adaptations for shade, control measures for disease and the reduction of environmental harm when using machinery. Higher scoring candidates demonstrated the ability to justify their answers and gain maximum marks.

Many candidates demonstrated weaknesses in both the recall and understanding questions that related to machinery. Some candidates omitted to attempt to answer the questions that related to the PTO and methods of transmitting power mechanically. Some of the responses to the knowledge questions on perennial weeds in lawns were limited. For example, when asked about perennial weeds survival in lawns, some responses cited the features of perennial weeds but did not relate them to the context of surviving in a lawn. Some candidates missed the opportunity to gain marks as they were unable to demonstrate recall of knowledge for names of plants as examples for questions regarding plant nomenclature.

The candidates who achieved higher marks were able to demonstrate breadth and depth of knowledge, backed up by relevant examples and including explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers. There was evidence of candidates not fully reading questions, which meant they missed out on marks by not responding in the way needed or providing the level of detail required to access the full range of marks available. Candidates did not always engage with the command verbs, for example simply stating rather than explaining, this meant that candidates did not always provide enough detail when asked for explanations or descriptions.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall, candidates showed strength in the following areas:

- 306 - Plant health
- 303 - Plant ID, selection and planting.

Candidates require further support in:

- 305 - Operation of land-based industry machinery
- 306 - Biology of weeds and the problems they cause.

Extended Response Question (ERQ)

The extended answer question gives candidates the opportunity to demonstrate their grasp of the qualification and knowledge of horticulture in general. Candidates were asked about managing biosecurity. There were some well-developed answers with some excellent use of examples and some higher-level candidates were able to discuss a range of measures to take when managing a biosecurity risk with in-depth examples. The responses to the ERQ showed a

reasonable understanding of hygiene measures. However, most candidates failed to discuss key areas such as quarantine and focussed on IPM. Fewer responses showed an appreciation of the full range of measures or used relevant terminology.

Series 2 – June 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Candidates answered questions with varying degrees of accuracy and depth. The candidates' performance on the paper was comparable to last year. Some questions were interpreted incorrectly as candidates did not recognise specific terms from the qualification handbook which affected the content of their answer. A number of candidates did not attempt questions or did not understand what was being asked.

Candidates demonstrated a good recall of knowledge, gaining marks in topics such as site factors affecting plant choice, the features of ephemeral weeds and the reduction of environmental harm when carrying out horticultural operations. Higher scoring candidates demonstrated the ability to justify their answers and gain maximum marks.

Overall, candidates showed strength in the following areas:

- Unit 305 - Land based industry machinery operations
- Unit 303 - Identification, selection and planting of plants

Many candidates demonstrated weaknesses in both the recall and understanding questions that related to plant health. Some candidates omitted to attempt to answer the questions that related to the chemical controls. Some of the responses to the knowledge questions on the use of chemical pesticides were limited and basic. Some candidates missed the opportunity to gain marks as they were unable to demonstrate recall of knowledge for names of chemical herbicides.

Extended Response Question (ERQ)

The extended answer question gives candidates the opportunity to demonstrate their grasp of the qualification and knowledge of environmental issues in horticulture. Candidates were asked about minimising environmental impacts. There were some well-developed answers evident with some excellent use of examples and some higher-level candidates were able to discuss a range of measures to take to minimise environmental damage with in-depth examples. The responses to the ERQ showed a reasonable understanding of selection of tools and machinery, impacts of operating machinery and equipment, pollution (water, air, soil) waste and waste disposal, noise, damage to soil structure and harm to wildlife. However, most candidates failed to discuss key areas such as legislation and seasonality. Few responses showed an appreciation of the full range of measures or used relevant terminology. Many candidates did not structure their answer effectively to allow them to explore the problems and solutions in detail and focused on one or two issues and did not deal with the full scope of the issues raised in the question.

A number of candidates showed that they were not fully familiar with the written examination technique. Candidates are urged to read the questions carefully and provide answers relevant to them.

City & Guilds has produced a technical exam guide to support the work on exam technique, which is available to download here:

<https://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/horticulture/0174-technical-in-horticulture-and-forestry-arboriculture#tab=documents>

Centres may also refer to the past papers available to download from the same webpage under the Past Papers tab.

Theory Exams – Year 2

0174-37 Level 3 Advanced Technical Extended Diploma in Horticulture (1080) Professional Horticulture pathway

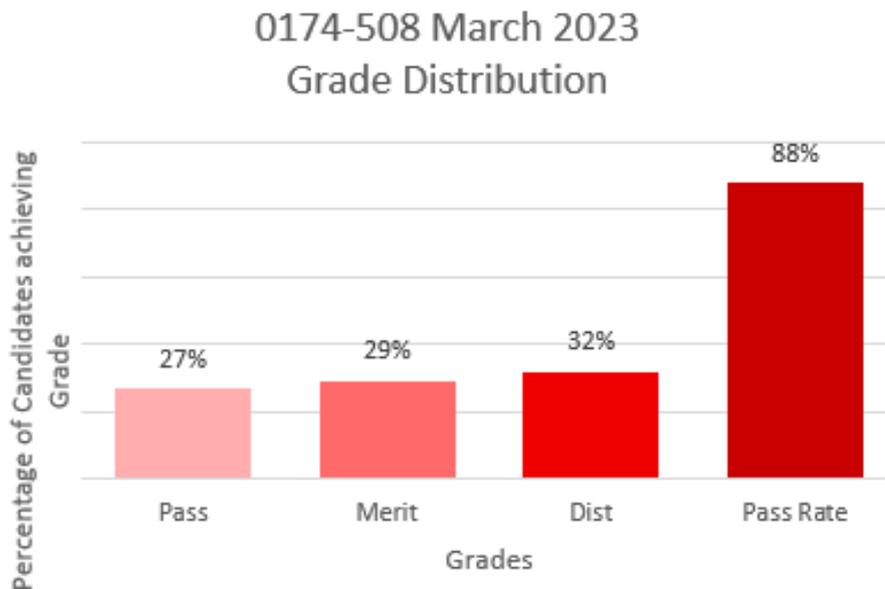
Grade Boundaries

Assessment: 0174-008/508
Series: March 2023 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	25
Merit mark	33
Distinction mark	42

The graph below shows the approximate distributions of grades and pass rate for this assessment:

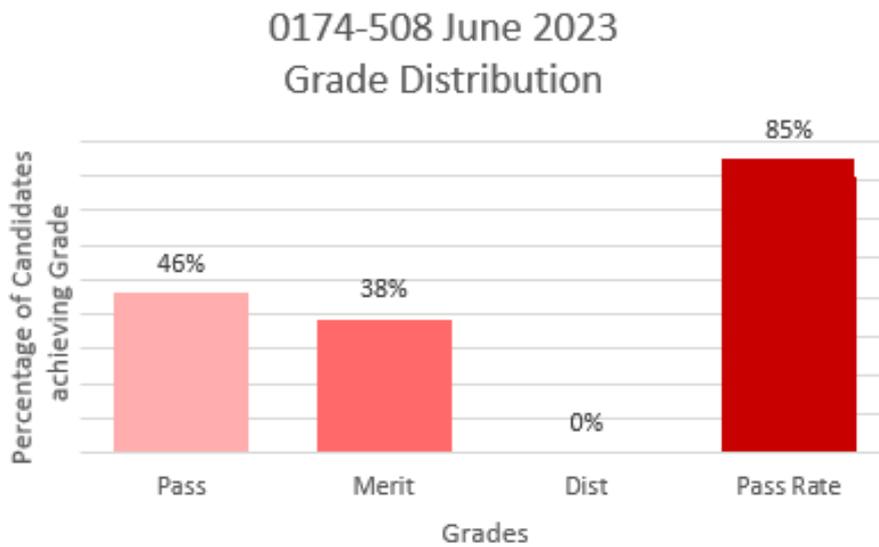


Assessment: 0174-508
Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	25
Merit mark	33
Distinction mark	42

The graph below shows the approximate distributions of grades and pass rate for this assessment:



Chief Examiner Commentary

0174-008/508 Level 3 Horticulture - Theory exam (2)

Series 1 – March 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year.

The candidates who achieved higher marks were able to demonstrate breadth and depth of knowledge, backed up by relevant examples and including explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers. There was evidence of candidates not fully reading questions, which meant they missed out on marks by not responding in the way needed or providing the level of detail required to access the full range of marks available. Candidates did not always engage with the command verbs, for example simply stating rather than explaining, this meant that candidates did not always provide enough detail when asked for explanations or descriptions.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall, candidates showed strength in:

- Unit 308- Health benefits of horticulture
- Unit 310- Practical constraints applicable to hard-landscape projects
- Unit 317- Tree and shrub maintenance and factors linked to the science underpinning this.

Candidates appear to require further support in:

- An understanding of **all** aspects of the business environment including insurance, charitable status, competition, cash management and production efficiency.

Extended Response Question (ERQ)

The extended response question allowed candidates to apply their knowledge and understanding across an area of their own choice, specifically a named horticultural business or organisation. The nature of the question, about how the business or organisation might attract new customers, meant that the most common type of business used was a garden centre. All candidates gained marks, with those gaining the most considering a breadth of options such as websites, loyalty schemes, discounts, special offers and extension of the offering e.g. to include tea rooms and restaurants, but then also expanding the responses to explain how this was effective and possible limitations.

With this question focused on an aspect of business focused on the customer, it was clearly much better-understood than other areas of business where questions consider the topic from the perspective of the owner or manager.

Series 2 – June 2023

The question paper was balanced and covered an appropriate level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper slightly lower than previously seen, and with none achieving Distinction on this paper.

The candidates who achieved higher marks were able to demonstrate reasonable breadth and depth of knowledge, backed up by relevant examples and including explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers.

There was evidence of candidates not accurately reading, or failing to comply with, instructions as to the number of examples to be provided. Also, of candidates not always engaging with the command verbs, for example simply stating or listing instead of explaining. The consequence was a reduction in marks that could be gained.

Overall, candidates showed some strength in:

- Unit 308- Awareness of the Equality Act 2010 and the basics of Health and Safety Legislation
- Unit 310- Practical constraints applicable to hard-landscape projects
- Unit 317- Tree and shrub maintenance and factors linked to this.

Candidates appear to require further support in:

- An understanding of all aspects of the business environment including data protection, competition and business records.

Extended Response Question (ERQ)

This question was for the most part poorly answered with few candidates providing the breadth and depth of knowledge required for the higher bands and none providing an answer that met the criteria for band 3. The question specifically asks for the candidate to discuss health and safety issues relevant to a garden newly opening to the public. Whilst some factors relating to the workforce are relevant, there are considerably more that apply to public safety. Few candidates quoted relevant legislation, and none mentioned a site risk assessment that would highlight issues to be considered.

Centres are reminded of the City & Guilds '**Exam Guides**' available here:

<https://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/horticulture/0174-technical-in-horticulture-and-forestry-arboriculture#tab=documents>

Candidates are strongly advised to be familiar with the command verbs they may encounter during examinations and to be prepared for the different structure of questions, as well as the need to read each question carefully and to respond clearly to the question given in the depth required.

Synoptic Assignments – Year 1

0174-36 Level 3 Advanced Technical Diploma in Horticulture (540)

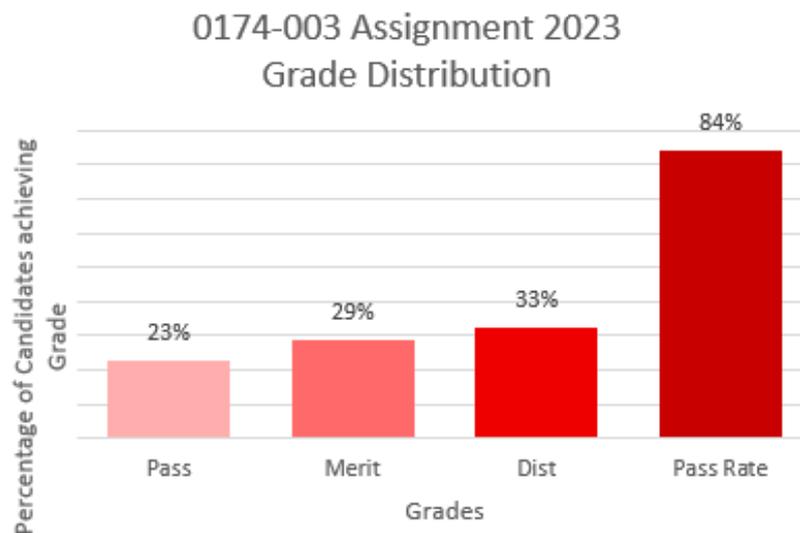
Grade Boundaries

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0174-003
Series: 2023

Total marks available	60
Pass mark	27
Merit mark	35
Distinction mark	44

The graph below shows the approximate distributions of grades and pass rate for this assessment:



Principal Moderator Commentary

The assignment was, in general, assessed effectively; however, the context of the 'Assignment Brief' was integral to tasks 1 and 4, but this was not provided consistently across centres. The 'Assignment Brief' set the context as being 'a consultant horticulturist employed by a Community Garden'. Where the context was fully embedded, responses were relevant in terms of plant selection, but this was not the case most instances. There was some confusion between a theoretical context for the choice of plants to meet the brief and a practical aspect of matching plant selection to the site that was surveyed. These issues are expanded upon below.

Task 1 has four linked components, and again, these were addressed in varying ways across centres. On occasions it did not appear that the Centre Guidance for this task was being followed. The breadth of factors considered in the soil analysis were sometimes lacking in the basics, notably infiltration rate (guidance states soil investigation covers a maximum of pH, texture, drainage/structure and infiltration rate) as well as including laboratory activities which are clearly indicated as being not within the scope.

The identification of 'taught/not taught' plants was also variable, particularly notable being the absence of descriptive content as to how 'not taught' plants were identified. Guidance in the assignment of the types of resources which should be available is clearly stated in the assignment, and how this is used by candidates to gain correct identification of 'not taught' plants is very important in making decisions based on the marking grid. Positive credit can be gained in AO2 and AO4 for correctly using keys or other sources even if the actual identification is not accurate but is plausible.

Plant recommendations were also inconsistent, with good examples showing clear relevance to a Community Garden, and poor examples only considering the site conditions that were surveyed.

Task 4 required that candidates consider the potential threats from non-native weeds, pests and diseases; how they might arrive and how these could be minimised in a Community Garden setting. As with Task 1, where this was fully embedded in terms of the brief, there were very good responses seen, linking what the threats might be with a site largely managed by volunteers. Good consideration was shown for 'quarantine' to both enable volunteers to contribute at the same time as doing so responsibly. Most given 'potential threats' were Japanese Knotweed, Himalayan Balsam, Asian Longhorn Beetle, Processionary Moths and Xylella Fastidiosa. Most of these were relevant, though less-obviously so in respect of Himalayan Balsam unless linked to specific local factors.

Centres are asked:

- To include areas for improvement on the Candidate Record Form (CRF) unless the mark awarded is in the excellent band.
- To carefully check the addition of the total marks on the CRF.
- To annotate on candidate's work, incorrect statements and the quality of the work, e.g. areas which are good or lacking detail.
- When using dictation software to carefully check what has been typed.
- To upload all the forms and evidence as one document.

Synoptic Assignments – Year 2

0174-37 Level 3 Advanced Technical Extended Diploma in Horticulture (1080) Professional Horticulture pathway

Grade Boundaries

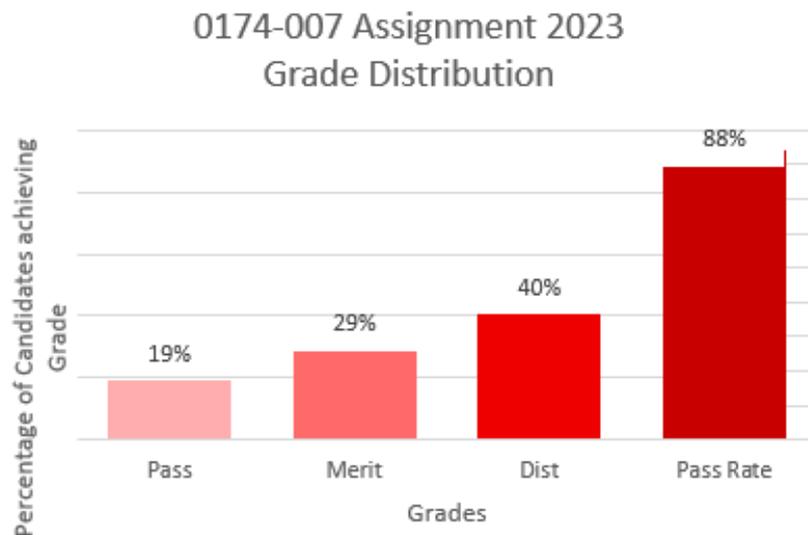
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0174-007

Series: 2023

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

The graph below shows the approximate distributions of grades and pass rate for this assessment:



Principal Moderator Commentary

The assignment was in general assessed effectively, though with some difficulties during moderation linked to how activities were documented.

The assignment consisted of four tasks: Task 1 was to create promotional material for specific roles in the horticultural industry. Tasks 2 and 4 were practical activities and Task 3 a practical identification test for weeds, pests, diseases and disorders.

Task 1 required candidates to be clear, focused and fully aware of specific industry roles, and where this was evident high marks in band 3 were achieved across all AO1, AO2 and AO5. Lower achieving candidates provided limited detail linked to industry roles, with confusion between roles indicating a lack of real understanding. Suggested experience to undertake the roles, possible progression, training opportunities and salary levels varied considerably and did not always reflect reality. An understanding of how to present the material was also not fully considered, with some candidates mainly engaged in presentation and providing inadequate content, and others failing to engage potential users by an absence of visual attraction. Markers did not consistently take into account these factors, or that each career path should be on a single A4 sheet, with no comments seen when this ran to two or more sides.

Task 2, a marking-out exercise, required detailed planning and consideration by candidates before beginning the process. Limited assistance could be available from a fellow-candidate, subject to careful explanation of the limits of involvement by the marker(s) and subsequent close monitoring. This gave candidates additional opportunity to show higher-level teamworking skills and this was sometimes reflected in marker commentary on the PO form. It was also evident that candidates reviewed and re-positioned lines during the task, giving markers the opportunity to utilise the full extent of AO2 to AO5. Neither of these opportunities were consistently taken. Centres should consider the benefit of submitting a photograph of the completed work for each candidate. Good marker commentary focusing on clarity was valuable, for example 'measurement of diagonals showed accuracy to within 25mm rather than less-clear descriptions such as 'reasonably accurate'.

Task 3, the practical identification test, gave opportunities to assess AO1 to AO5. Effective moderation required that clarity of marking was present throughout, which was not always the case. A list of what the pests, diseases etc should have been submitted with the evidence to enable effective moderation. This activity was observed by moderators on synoptic visits and where this was the case, seen to be carried out very effectively,

Task 4 was a straightforward practical task and was generally well-managed and appropriately marked. There was, however, considerable variation in what was presented to candidates to be worked on. Ideal examples were seen in which mixed areas of planting were available, candidates asked to assess the situation and describe what was required and why, before carrying out pruning. On other occasions this was given limited consideration and the evidence presented seemed to be very simple with only a single shrub pruned, of the same species for each candidate.

Centres are asked:

- To include areas for improvement on the Candidate Record Form (CRF) unless the mark awarded is in the excellent band.
- To carefully check the addition of the total marks on the CRF.
- To annotate on candidate's work, incorrect statements and the quality of the work, e.g. areas which are good or lacking detail.
- When using dictation software to carefully check what has been typed.
- To upload all the forms and evidence as one document.