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Cultivating Excellence: Arboriculture in New Zealand, a Case Study

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DATE: 30 May 2025

SKILLS

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Acknowledgements

This case study was developed through consultation with industry professionals from across the arboriculture sector in New Zealand. We extend our gratitude to all participants who generously shared their time, expertise, and insights to inform this research.

The perspectives shared by arborists, trainers, business owners, and industry representatives have provided an insightful view of the arboriculture sector in New Zealand. Their willingness to discuss both successes and challenges has enabled this analysis of the industry's workforce development needs and potential solutions to move forward.

We also acknowledge the New Zealand Arboricultural Association (NZ Arb) for their role in supporting this research and their ongoing advocacy for the arboriculture profession in New Zealand.

List of Acronyms

Acronym	Description
ADHD	Attention Deficit Hyperactivity Disorder
CoVE	Centre of Vocational Excellence
LiDAR	Light Detection and Ranging
ISA	The International Society of Arboriculture
ITO	Industry Training Organisation
ITP	Institute of Technology and Polytechnic
MBIE	Ministry of Business, Innovation and Employment
MIT	Manukau Institute of Technology
NZ Arb	New Zealand Arboricultural Association
NZQA	New Zealand Qualification Authority
RoVE	Reform of Vocational Education
TEC	Tertiary Education Commission
Te Pūkenga|NZIST	New Zealand Institute of Skills and Technology
WDC	Workforce Development Council

Introduction

The arboriculture sector in New Zealand represents a specialised field focused on the care and maintenance of trees in urban and suburban environments. As cities expand and climate change initiatives promote increased tree planting, the demand for skilled arborists continues to grow. However, this essential industry faces some challenges in workforce development, training infrastructure, and professional recognition.

This case study explores the current state of arboriculture in New Zealand, examining the industry's structure, workforce needs, skill gaps, training pathways, and strategic opportunities for growth. By understanding these elements, stakeholders can better support the professionalisation of the industry, ensuring it meets the demands of a changing environment while providing sustainable career pathways for practitioners.

Purpose of this case study

This case study provides an analysis of the arboriculture industry in New Zealand, with particular focus on vocational education and training pathways. It seeks to:

1. Document the current state of the arboriculture sector, including its size, structure, and significance to New Zealand's urban environments and infrastructure.
2. Identify key challenges facing the industry in relation to workforce development and skills needs.
3. Analyse the existing education and training landscape, including qualification frameworks, delivery models, and accessibility.
4. Explore opportunities for enhancing industry recognition, improving training pathways, and addressing workforce needs.
5. Provide recommendations for strengthening the arboriculture sector's capacity to meet growing demand while maintaining high professional standards.

The findings and insights presented are intended to inform policy development, guide education providers, support industry advocacy efforts, and assist employers in strategic workforce planning.

Methodology

This case study draws on multiple sources of information to provide a current picture of the arboriculture industry in New Zealand:

1. **Industry consultation**: Semi-structured interviews (n=4) were conducted online with industry professionals, representing employers, trainers, and consultants with decades of combined experience in the arboriculture sector. Their insights provide firsthand perspectives on industry challenges and opportunities.
2. **Industry research and data**: Statistical information on workforce demographics, qualification levels, and regional distribution was analysed to identify trends and patterns within the sector. We also reviewed research reports and articles focussed on arboriculture in New Zealand.

3. **Consultation documents**: Submissions and position papers from the New Zealand Arboricultural Association (NZ Arb) were examined to understand industry perspectives on policy and regulatory matters.

We acknowledge the limited sample of interviewees from the arboriculture industry, however our interviews with these experienced practitioners still provide valuable qualitative insights into the industry's workforce challenges and opportunities. The consistency of themes across these interviews, combined with their alignment with broader industry data, suggests these perspectives reflect genuine patterns within the New Zealand arboriculture sector.

All interviewee contributions have been anonymised to protect privacy while preserving the authenticity and value of their insights. All quotes in this paper are attributed to the participating interviewees. The analysis presented aims to be balanced and objective, acknowledging both the strengths and challenges within the current system.

The Arboriculture Industry in New Zealand

The arboriculture sector in New Zealand represents a specialised field focused on the care and maintenance of trees. Arborists are responsible for tasks including pruning, planting, and removing trees, as well as diagnosing and treating tree diseases. The profession combines elements of horticulture, forestry, environmental science, infrastructure maintenance, and regulatory compliance requiring both technical and theoretical knowledge and practical skills.

The New Zealand Arboricultural Association (NZ Arb) serves as the national industry association representing arboriculturists and urban foresters in the tree care industry. With over 349 individual and corporate members collectively employing several thousand arborists across the country, NZ Arb functions as an industry champion for professional tree care and advocates for tree preservation and protection. The organisation provides industry guidance on best practices for tree care.

Workforce Demographics and Trends

The arboriculture industry in New Zealand comprises approximately 3,000 practitioners nationwide, with only about 624 members part of the industry association. This relatively small workforce faces a growing skills shortage at all levels, from entry-level positions to senior roles requiring advanced qualifications and experience.

As one industry veteran notes, there has been a *'significant shortage over the two years of skills, and qualified arborists.*' This shortage is exacerbated by an aging workforce, with many experienced professionals transitioning out of hands-on roles.

> ***"The ones that pioneer, the titans, are now retiring .... we have very little coming through to replace them".***

Another interviewee elaborated on this challenge noting that the biggest issue is the loss of experienced workers who are now retiring or moving into management, consultancy or contractor roles. This is resulting in less skilled workers available for the practical, physical work. Consequently, the industry has struggled to train enough people to keep up with the exodus.

Even during economic downturns, the demand for arborists remains strong.

> ***"Throughout this, we still haven't had enough workers to do what we need to do."***

This persistent shortage indicates a structural problem rather than a cyclical one, requiring strategic intervention at all levels from Government, education providers and employers.

The arboriculture workforce in New Zealand demonstrates interesting demographic patterns. According to data from Muka Tangata, the food and fibre Workforce Development Council (WDC) for Arboriculture, Māori are well-represented in the industry, with 19% of arborists identifying as Māori in 2018. This percentage is higher than the representation of Māori across all other occupations (13%) and comparable to their representation across food and fibre industries[1] overall (17%) (Muka Tangata, n.d.).

Approximately 5% of arborists identify as Pasifika, and a substantial portion of the industry is based in rural communities, though precise figures for rural representation were not available (Muka Tangata, n.d).

The qualification profile of the arboriculture workforce has improved over time. In 2006, approximately one-fifth of arborists reported having no qualifications. By 2018, this proportion had fallen to just 10%. Furthermore, a high percentage (33%) of arborists held Level 4 qualifications in 2018, significantly exceeding the proportion among all other workers (9%) and workers across food and fibre industries (10%), (Muka Tangata, n.d.).

This trend towards higher qualification levels can be attributed to several factors, including the requirements of the Registered Master Arborist programme and the increasing demand from local authorities and commercial organisations to employ qualified arborists for their projects.

While Māori and Pacific peoples are well-represented at entry level, industry experts note they are not progressing to higher levels at the same rate.

Similarly, gender diversity remains a challenge with most arborists being male with very few female arborists (3% in 2018). (Muka Tangata, n.d)

Anecdotally there is a desire to employ more women in the industry, as one interviewee observes –

> ***"We are getting better with the female uptake in arboriculture... it is still a slow process. It's still very male-oriented."***

Diversity at all levels represents both a challenge and an opportunity for the industry's future development.

Significance of Urban Trees

Urban trees contribute to creating vibrant and liveable spaces by cooling communities, improving air quality, diverting rainwater, and boosting human health. Despite growing evidence that urban trees support healthier and more resilient societies, their economic, social, and environmental benefits are often not prioritised in planning and development (New Zealand Arboricultural Association, 2024).

Data indicates a concerning trend of declining urban green space over time. Between 1980 and 2016, green space per person fell by at least 30% in Auckland and at least 20% in Hamilton. (Parliamentary Commissioner for the Environment, 2023) This loss occurred predominantly on private residential land, highlighting a significant reduction in the availability of green spaces for urban residents. This decline poses challenges for urban planning and public health, emphasising the need for strategies to preserve and enhance green spaces in rapidly growing cities.

[1] See Appendix 1

Arboriculture enhances human health by improving air quality, reducing heat stress, improving mental well-being, encouraging physical activity (shading areas for exercise), and lowering disease risks associated with pollution and urban environment.

The Environmental Commissioner has underscored the impact of housing and the trend towards larger houses on smaller sections: ***'The changes we are making to the shape and form of our cities are largely irreversible. We must make sure the underlying environmental services that green spaces provide are taken into consideration. Once they are gone, they are difficult to get back.'*** (Parliamentary Commissioner for the Environment, 2023)

Despite the importance of trees in urban areas, industry experts feel that councils are not adequately funding or prioritising tree care and maintenance.

"planting trees without proper maintenance planning can lead to poor outcomes and wasted resources".

This creates a disconnect between environmental aspirations and the practical resources needed to achieve them.

Industry Classification

The arboriculture industry was classified as an essential service during the COVID-19 lockdowns in New Zealand. Arborists played a vital role in keeping the power on and roads clear during this period, highlighting the sector's importance to critical infrastructure maintenance and public safety.

This essential service designation reflects the broader significance of arboriculture work beyond its aesthetic and environmental contributions. Arborists maintain trees that interact with roads, power lines, and other utilities, preventing disruptions to essential services and infrastructure.

Despite this recognition, the industry continues to face challenges in broader public and policy recognition of its essential role in maintaining urban environments and infrastructure. A fundamental challenge is the classification of arboriculture in government systems. Arboriculture sits under the food and fibre category for education and training purposes; however, some Arborists believe that it is better suited under an infrastructure category.

"I myself and a lot of arborists don't believe we actually sit under the food and fibre sector, that we sit under infrastructure, because everything we do is infrastructure."

This potential misclassification affects funding, policy involvement, and industry recognition in so far that sector classifications determine eligibility for targeted government funding, shapes which policy frameworks and regulations apply, and influences how the industry is perceived and supported within national economic and infrastructure planning.

Misclassification can lead to inadequate funding allocation, reduced influence in policy decisions relevant to infrastructure, and diminished visibility and credibility of arboriculture as a distinct and essential industry.

This lack of public awareness and understanding contributes to recruitment challenges and undervaluation of professional arboricultural services. Addressing these perception issues is important for the industry's long-term sustainability and growth.

Current Industry Challenges and Opportunities

The arboriculture industry in New Zealand faces a complex set of challenges that impact its ability to meet growing demand while maintaining high professional standards. However, these challenges also present opportunities for strategic development and growth. This section explores the key issues facing the sector and potential pathways for addressing them.

Skills and Workforce Development

Like many small industries in New Zealand the arboriculture industry is not widely recognised as a job of choice, leading to difficulties in recruitment. Interviewees felt that there is a general lack of understanding about the industry among potential workers. Employee turnover presents another challenge, with industry knowledge often lost when workers leave.

The sector experiences a shortage of industry employees at a regional level, though not nationally. This geographic disparity creates localised skills gaps that are difficult to address. Training uptake is lower than desired, and university pathways for further specialisation are only available overseas, limiting career progression for New Zealand arborists.

This shortage is exacerbated by an aging workforce, with many experienced professionals transitioning out of hands-on roles. Interviewees felt that this shortage of skilled workers is their biggest issue.

"we've lost over the last probably 8 years now, a massive amount of our experienced aged workers who have moved into management, consultant, or contractor roles".

This has created a vacuum that the industry has struggled to fill, as they haven't been able to recruit and train enough people to meet the workforce need.

With just 1,614 arborists recorded in the 2018 census (Careers New Zealand, 2024) and over 200 current job vacancies nationwide for either active arborists or arboriculture related roles (SEEK, 2025), the industry appears on all regional skills shortage lists (Immigration New Zealand, 2024) indicating a strong demand for more qualified arborists.

Helping to drive this demand further are changes in the sector like the 2024 Electricity (Hazards from Trees) Amendment Regulations requiring vegetation clearance around power lines (Ministry of Business, Innovation and Employment [MBIE], 2024), as well as nearly all major councils aiming to increase the number of trees as part of their climate adaptation strategies.

Industry experts interviewed warn of potential "sector collapse" with workers retiring faster than new entrants can be trained, and safety requirements limiting on-job training capacity. This supply-demand imbalance is projected to worsen through 2030, with the forestry sector needing 5,000 additional workers by 2025 (Ministry for Primary Industries, 2020) while arboriculture competes for this limited talent pool.

Recruitment of Potential Employees

The interviews suggest several promising approaches to addressing workforce shortages through targeted recruitment. Examples include:

School to work: Despite the industry's involvement in the TEC Inspiring Futures programme, recruitment of school leavers remains challenging as arboriculture has limited visibility in schools and career expos, with most people entering the profession by accident rather than through deliberate career pathways from secondary school education.

Second-Chance Learners: The industry attracts many second-chance learners: Interviewees noted many arborists report they failed in traditional education but find they excel in practical, hands-on work.

Neurodivergent Individuals: Multiple interviewees reported the industry attracts neurodivergent individuals and people with learning differences, ADHD, dyslexia, and other conditions. With appropriate support and understanding they find these individuals excel in the field.

Increasing Diversity: There is potential to increase gender and cultural diversity in the industry. While Māori are well-represented in the industry, anecdotal evidence suggests they are not progressing to higher levels. As noted earlier, female arborists are rare, constituting only a small portion of the arboriculture workforce in New Zealand.

Career Changers: The practical nature of arboriculture makes it suitable for career changers seeking outdoor work with clear progression pathways.

While the industry has identified key demographics for recruiting new employees, it requires more effective mechanisms to attract them. With proper resourcing, NZ Arb could play a greater role in promoting arboriculture as a career pathway, complemented by support from government organisations like TEC's careers function, other similar industries like forestry, irrigation, plant nurseries etc as well as other educational institutions to raise the profile of arboriculture as a viable career option.

Training and Education Landscape

Qualification Framework

The arboriculture sector in New Zealand has a structured qualification framework designed to develop the skills required at different levels of the profession:

- NZ Certificate in Arboriculture (Level 3)
- NZ Certificate in Arboriculture (Level 4)
- NZ Certificate in Arboriculture (Level 5) - Technical Operations
- NZ Diploma in Arboriculture (Level 6)

Additionally, for Utility Arborists, there are specialised qualifications:

- New Zealand Certificate in Electricity Supply (Level 2)
- New Zealand Certificate in Electricity Supply (Utility Arboriculture) (Level 3)

Most arborists train to Level 3 and 4 qualifications, which are practical levels requiring outdoor learning in small groups with specialist equipment. These qualifications form the backbone of the industry's technical workforce.

Materials provided by Arb NZ (Overview of the Arborist Sector, n.d) show enrolment data for various arboriculture qualifications from 2020 to 2023:

- NZ Certificate in Arboriculture (Level 3): Enrolments ranged from 40-70 students per year through Industry Training Organisations (ITOs).
- NZ Certificate in Arboriculture (Level 4): Enrolments ranged from 40-65 students per year through ITOs.

- New Zealand Certificate in Arboriculture (Level 5): Approximately 5-20 students per year through polytechnics.
- New Zealand Diploma in Arboriculture (Level 6): Approximately 20-25 students per year through polytechnics.
- NZ Apprenticeship - Arboriculture (Complex) (Levels 3 & 4): Significantly higher enrolments, ranging from 330-565 students per year through ITOs.

The above figures highlight the popularity of apprenticeship pathways in arboriculture and the relatively small numbers progressing to higher-level qualifications.

Data Collection and Workforce Tracking

However, accurately measuring the arboriculture workforce size and composition can be challenging. With training data showing approximately 435-565 new entrants annually through various pathways, the industry should theoretically see substantial workforce growth. However, this growth isn't reflected in official statistics, suggesting either:

- Systematic undercounting in census data due to occupational misclassification
- High attrition rates among trainees and early-career arborists
- Movement of qualified arborists into related fields where they're counted differently

This data gap can make workforce planning and advocacy challenging for the industry.

Current Skill Levels and Gaps

The arboriculture workforce in New Zealand demonstrates varying levels of skills and qualifications. The industry has a qualification framework that includes Levels 3-6, with Level 3 being the foundational qualification typically taking about six months to complete, followed by 12-14 months to reach higher qualifications.

However, significant skill gaps exist across the sector. One interviewee described the current education in the industry as *'woefully inadequate,'* highlighting insufficient knowledge transfer as experienced professionals retire. Another noted young professionals in urban forestry or council roles often lack the necessary knowledge, tools, and resources to succeed.

Interviewees identified several specific skill gaps:

- Limited analytical and academic thinking skills within the industry
- Insufficient understanding of tree biology and ecosystem management
- Gaps in project management and business skills
- Limited expertise in emerging technologies like LiDAR and drone applications

These skill gaps are concerning given the increasing complexity of arboricultural work, which encompasses not just tree maintenance but also urban planning, environmental management, and infrastructure protection.

Higher-level qualifications (Degree/Master level) could be considered to improve industry credibility and create advanced career pathways. Currently, New Zealand's arboriculture qualifications only go up to Level 6 Diploma, whereas other countries such as the US, Canada and the UK offer Bachelor Degrees in urban forestry.

New Zealand arborists can also achieve internationally recognised certification such as the International Society of Arboriculture (ISA) Certified Arborist credential. This certification provides arborists with professional validation, in alignment with industry best practices, enhancing their job prospects and adding to the professionalisation of the industry.

Training Provision and Models

Arboriculture training in New Zealand is delivered through two main channels:

1. **Provider based training**: Provided through Te Pūkenga - Otago Polytechnic and Wintec located in Dunedin and Hamilton respectively offer arboriculture programmes.
2. **Workplace-Based Learning**: Most arboriculture training is conducted via work-based, on-job learning, particularly in regions where ITP courses are not available. This model allows trainees to earn while they learn and gain practical experience in real-world settings. This is also currently offered by Te Pūkenga under their work-based learning subsidiary Primary Industry Training Organisation.

The reliance on work-based learning for arboriculture training across New Zealand reflects both the practical nature of the skills required and the limited geographical availability of institutional training options.

Despite the clear need for more trained professionals, the industry's capacity to support training is constrained. Due to practical limitations and health and safety risks, companies can only accommodate a specific ratio of trainees to qualified workers.

"We can run up a truck of 3 workers, one fully qualified, one that's time qualified and then a trainee, and we cannot deviate from that. Otherwise, it just creates too many safety issues or limitations."

This operational constraint fundamentally limits how many new workers can be brought into the industry, regardless of demand. Even larger companies are limited by the number of trainees they can take on, while smaller companies with only 2-3 crews typically can only train one apprentice at a time.

Nevertheless, there is evidence of significant investment in training by some in the industry. One interviewee described how their company had implemented a 3-month pre-apprenticeship programme with an investment of approximately $20,000 per person. This demonstrates a willingness to invest in training when the right structures are in place.

The industry also shows appetite for changing the approach to training. One interviewee suggested initiating more class-based delivery to get trainees through their foundation training more efficiently. This could include face to face classes or online delivery to support rurally based workers. This would allow companies to bring on workers with baseline skills they could then develop further through on-the-job experience.

"We need to be more efficient; we do this through good training and good education and provide good support for those people. The long-term ramification of reduced training is a reduction in skills and experience which has a direct relationship to being productive."

The interviews revealed the education sector can support employees by:

- Providing clear career progression pathways
- Offering opportunities for specialisation in areas like utility arboriculture or urban forestry

- Building confidence and professional identity
- Creating networks and connections within the industry
- Developing core transferable skills that increase earning potential

However, the current system falls short in many of these areas. As one interviewee notes, there has been

"significant deterioration over the last 5 years: The quality of training has dropped substantially, with reduced government support and funding."

Future Pathways for Industry Growth

As the arboriculture industry faces increased demand, the need for growth and development becomes increasingly important. This section explores potential pathways for improving the current system, enhancing its professional standing, and addressing the workforce and training needs identified in previous sections.

The current training and education landscape for arboriculture requires interventions to address the perceived inadequacies, skills gaps and workforce shortages. Several potential approaches emerged from the industry consultation and analysis.

Flexible Training Approaches

To support the training of more arborists, flexible and accessible training models should be considered.

Training delivery models could include:

1. **Blended Learning Models**: Combining online theoretical instruction with in-person practical training to increase accessibility while maintaining hands-on skill development.
2. **Block Course Delivery**: Intensive periods of provider-based training interspersed with workplace learning, allowing trainees to gain foundational skills quickly before applying them in real-world settings.
3. **Regional Training centres or Mobile training**: Satellite training centres in key regions, complemented by mobile training units, could address the geographic barriers that prevent many potential arborists from accessing formal education. These could be supported by industry in partnership with providers.
4. **Pre-employment Training**: Developing short, intensive courses that provide basic skills and safety awareness to prepare individuals for entry-level positions, addressing the industry's need for workers with baseline competencies. Technologies like Virtual Reality could also be considered to support those in pre-employment training, giving them a taste of what it is like to work in the industry before they fully enter the workforce.

Limited access to training options has resulted in some employers creating and funding their own pathways into apprenticeships. However, these employer-led programmes are costly and only benefit individual companies, not the wider industry. Government funding for pre-employment training could help more employers adopt this approach.

Strengthening Higher-Level Qualifications and Further Skills Development

While the industry has a relatively high proportion of workers with Level 3 and 4 qualifications, there is a need to strengthen pathways to higher-level qualifications (Levels 5 and 6) and potentially develop advanced specialisations.

Opportunities for advanced training may include:

- Tree biology and ecosystem management
- Project management and business skills
- Emerging technologies including LiDAR and drone applications
- Climate change impacts on urban forestry

Developing these higher-level skills would not only enhance the quality of arboricultural practice but also create clearer career progression pathways, potentially improving retention within the industry.

The interviews also revealed a need for more leadership and core skills development[2] within the industry. Interviewees identified the need for leadership workshops specifically designed for younger workers to build confidence in safe environments, recognising these skills as essential for career progression.

This combined with more training to increase analytical thinking, project management, and business acumen may better support career progression and lead to greater professionalisation across the sector.

International Connections and Standards

Given the limited availability of advanced arboriculture education in New Zealand, strengthening connections with international training providers and professional bodies could provide valuable opportunities for knowledge exchange and professional development.

Industry professionals note that university pathways for further specialisation are currently only available overseas, limiting career progression for New Zealand arborists and may affect New Zealand's ability to attract international arborists or international students looking to study arboriculture at a higher level. Establishing formal partnerships with international institutions or developing distance learning options could help address this gap.

Interviewees also reported that recruiting experienced arborists from overseas can be difficult due to complex immigration settings despite arboriculture being on the skills shortage list. As noted above, arborists appear on Immigration New Zealand's regional skill shortage list, indicating a strong demand for services (Immigration New Zealand, 2024).

Supporting a Diverse Workforce

Many of those interviewed expressed the arboriculture industry seems to attract workers who often haven't succeeded in traditional educational settings.

The practical nature of tree work may suit individuals with ADHD, dyslexia, and other learning differences. These workers find success in an environment that values physical skills and problem-

[2] Core skills for arboriculture refers to skills like problem solving, communication, teamwork and other skills fundamental to workplace success.

solving over classroom performance. Implementing strategies recommended in the report on appreciating and supporting neurodiversity in VET (Martin, 2024) may further help these types of workers. This creates both an opportunity and a responsibility.

Strategies like scenario-based assessments that mirror real-world tree work, portfolio assessments that showcase practical skills over time, and structured mentoring programmes that pair neurodiverse learners with experienced arborists are examples of interventions recommended in the above-mentioned report. It is worth noting however, that some of these are already being done within the industry.

By developing these types of targeted support systems, including visual learning resources, and flexible training approaches the industry could further harness this workforce. The sector can then position itself as an inclusive employer that recognises different strengths and provides pathways for those who learn differently.

"It requires people comfortable with physically demanding outdoor work and attracts those who 'think differently' and can adapt to the ever-changing nature of working with living trees."

Such an approach would not only address workforce shortages but also create a more resilient and diverse industry that draws talent from underutilised populations often overlooked by other sectors.

Strategic Industry Positioning

The arboriculture industry in New Zealand has an opportunity to strengthen its position through strategic advocacy, improved public awareness, and clearer articulation of its value proposition.

The NZ Arb operates with significant resource constraints that limit its advocacy capacity. The association is reliant on volunteers from industry members rather than dedicated full-time employees.

This volunteer-based model, while demonstrating industry commitment, inherently limits the association's ability to engage consistently in policy discussions, conduct comprehensive research, or maintain the sustained presence needed for effective advocacy.

Interviewees expressed frustration about the limited influence the industry has in shaping policies that directly affect their work.

“The profession is often misunderstood; people think it's just pruning trees”.

Despite these challenges, the NZ Arb does its best to advocate for the industry's interests. The association has been actively engaged in vocational education reform discussions, providing feedback on proposed changes and emphasising the importance of workplace-based learning for the sector. It has also successfully advocated for changes to the National Occupations List.

"These small victories highlight how much work remains to achieve proper recognition of the profession"

These resource limitations mean that despite recent progress in gaining visibility through WDC engagement, the association struggles to maintain the professional advocacy presence that larger, better-funded industry bodies can afford.

Increasing membership in industry associations and developing clear, evidence-based policy positions would continue to strengthen the sector's voice in relevant policy discussions. Collaboration with allied industries and stakeholders, such as urban planners, environmental organisations, and infrastructure providers, could also amplify the industry's influence.

Climate Change Response

As climate change impacts become more pronounced, the role of urban trees in mitigating heat island effects, managing stormwater, and sequestering carbon is increasingly recognised. Arborists have a critical role to play in selecting, planting, and maintaining appropriate tree species for changing climate conditions.

Developing specialised knowledge and skills in climate-adaptive tree management could create new service offerings and market opportunities for arboriculture businesses. Highlighting arboriculture's positive impact on climate change could act as a unique selling point for attracting young people with a particular passion for environment protection into the industry. This could also strengthen the case for increased investment in training for urban forestry and professional tree care.

The arboriculture industry is uniquely positioned to contribute to environmental sustainability and climate change adaptation in New Zealand's urban environments. This positioning offers opportunities for industry growth and enhanced recognition.

Enhancing Public Awareness

Increasing public understanding of the arboriculture profession and its importance to urban environments and infrastructure could also help address recruitment challenges and strengthen support for the industry.

Low public awareness of arboriculture as a career option means people typically enter the industry by chance rather than design. This lack of awareness limits the pool of potential trainees.

Potential strategies include:

- Targeted promotional campaigns highlighting the environmental and social benefits of professional tree care
- School outreach programmes to introduce young people to arboriculture as a career option

These could also be run in conjunction with complementary sectors that have limited public awareness, for example plant nurseries and related businesses, irrigation, sports turf industries.

Developing more sophisticated approaches to quantifying and communicating the economic, social, and environmental benefits of urban trees could strengthen the case for investment in professional arboricultural services.

Research partnerships with academic institutions or other complementary industries to document these benefits in the New Zealand context could provide valuable evidence for advocacy efforts and help shift perceptions of arboriculture from a cost centre to an investment in urban resilience and wellbeing.

Arboriculture enhances human health by improving air quality, reducing heat stress, promoting mental well-being, encouraging physical activity, and lowering disease risks associated with pollution and urban environment. Quantifying these benefits in economic terms could significantly strengthen the case for investment in professional arboricultural services.

Recommendations

The arboriculture industry in New Zealand plays a pivotal role in maintaining urban environments, protecting infrastructure, and enhancing environmental sustainability. However, the sector faces many challenges in workforce development, training provision, and industry recognition. The following recommendations are proposed to strengthen the arboriculture industry and address these challenges.

Recommendations for Local and Central Government and Policy Makers

1. **Recognise arboriculture as a distinct industry**: consider arboriculture's classification within central government education and labour frameworks, acknowledging the unique skill requirements and professional context that support food and fibre as well as infrastructure.
2. **Support regional training provision**: Develop strategies to improve access to arboriculture training in regions currently underserved by institutional providers, potentially through satellite campuses, mobile training units, or technology-enabled distance learning with practical components.
3. **Integrate arboriculture expertise in urban planning**: Develop policy frameworks that require meaningful consultation with arboriculture professionals in urban development processes to address the concerning decline in urban green space.

Recommendations for Training Providers

1. **Develop flexible delivery models**: Implement blended learning approaches that combine online theoretical instruction with in-person practical training to increase accessibility while maintaining hands-on skill development.
2. **Strengthen pathways to higher qualifications**: Enhance opportunities for progression to Level 5 and 6 qualifications, potentially through partnerships with international institutions for advanced specialisations not currently available in New Zealand.
3. **Engage with industry on curriculum development**: Ensure that training content addresses identified skill gaps, including tree biology, ecosystem management, project management, and emerging technologies.
4. **Consider developing pre-employment training**: Develop short, intensive courses that provide basic skills and safety awareness to prepare individuals for entry-level positions, addressing the industry's need for workers with baseline competencies.

Recommendations for Industry and Employers

1. **Support a strengthened industry association**: Increase membership and engagement with industry associations to amplify the sector's voice in policy discussions, advocacy efforts and workforce development initiatives. This could be done through transitioning toward professional staffing funded through increased membership fees or industry sponsorship.
2. **Develop strategic workforce planning**: Implement long-term workforce planning strategies at both individual business and industry levels to address succession challenges as experienced professionals retire.

3. **Enhance public awareness**: Develop coordinated promotional campaigns via the industry association or with other similar industries to increase public understanding of the arboriculture profession and its importance to urban environments and infrastructure.
4. **Quantify and communicate benefits**: Invest in research to document the economic, social, and environmental benefits of professional arboriculture in the New Zealand context to strengthen the case for investment in the sector. This could be done in conjunction with similar sized and complimentary food and fibre industries.
5. **Foster innovation in training support**: Explore innovative approaches to supporting trainees, such as shared apprenticeship schemes among smaller businesses, similar food and fibre industries or industry-wide mentoring programmes.

Conclusion

The arboriculture industry in New Zealand faces a mix of pressures and opportunities. Skill shortages, an aging workforce, limited training options, and poor industry recognition create real problems for the sector. At the same time, rising demand for tree services and growing awareness of the industry's importance offer clear pathways for expansion and improvement.

The increasing recognition of urban trees' contribution to environmental sustainability, public health, and infrastructure protection creates a strong foundation for the industry's future. The trend towards higher qualification levels among arborists and the industry's essential service status demonstrate the sector's growing professionalisation and importance.

Addressing the challenges identified in this case study will require coordinated action from government agencies, training providers, industry associations, and individual employers. By considering the recommendations outlined above, stakeholders can support the sustainable growth of the arboriculture industry, to meet the demands of a changing environment, provide rewarding career pathways for practitioners and cultivating excellence in New Zealand's arboriculture industry for the benefit of current and future generations.

"People who will not sustain trees will soon live in a world that will not sustain people." –

***Bryce Nelson** (Award winning Journalist and Professor)*

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APPENDICES

Appendix 1: Food and Fibre industries represented by Muka Tangata WDC

Industry Category	Description
1	Dairy
2	Sheep, beef, and deer,
3	Poultry, pigs, and other livestock farming
4	Arable farming
5	Vegetables growing
6	Fruit growing
7	Viticulture and winemaking
8	Forestry
9	Seafood
10	Apiculture
11	Equine, greyhounds and racing
12	Veterinary
13	Nursery, turf and gardening
14	Food and fibre support industries

Note: Arboriculture falls within the support industries category.

Muka Tangata coverage comprises of the food and fibre industries specified in the Australia and New Zealand Standard Industrial Classification 2006 (ANZSIC) that are set out in their Orders in Council.

Appendix 2: Diagram of career pathways for Arborist in New Zealand

Source: NZArb