Aaron Soanes, Treefarm Operations Manager for Timbercorp Forestry, walked between rows of one-year-old blue gum (*Eucalyptus globulus*) trees while a strong wind blew overhead. “They’re growing well,” he said of the trees, most of which were already far taller than himself. He was visiting this property to examine the health and growth of the trees, and to discuss leasing further areas of land from the property owner for future tree farm expansion.

This tree farm is near the town of Hamilton in southwest Victoria, and there are many others like it nearby. They have been established on land previously used for other agricultural enterprises, primarily grazing. In both the “Green Triangle” region of southwest Victoria and southeast South Australia, and in the southern part of Western Australia, large areas of blue gum have been established over the past 10 years by a number of companies.

Plantation companies have had to develop many skills since tree farms began being established on a large scale in the early 1990s. As one of the leading plantation companies in Australia, Timbercorp has been continuously developing improved establishment and management methods, as well as learning how to be a good neighbour in the rural communities where it establishes tree farms. The seemingly innocuous rows of trees Mr Soanes was examining have been the subject of considerable controversy in many rural communities, where the introduction of tree farming has not always been viewed favourably.
“I guess that, before tree farming was introduced to agricultural landscapes, foresters in Australia didn’t often interact with rural communities. We’ve had to learn a lot very quickly about being a good neighbour,” Mr Soanes stated.

**Timbercorp Ltd.**

Timbercorp Ltd is currently Australia’s largest agribusiness investment management company. It raises capital from investors through managed investment funds, and uses the money to establish and manage tree farms, olive groves and almond plantations on behalf of its investors. Timbercorp Forestry, a subsidiary of Timbercorp Ltd, establishes and manages blue gum tree farms in southwestern and southeastern Australia. Timbercorp has expanded rapidly from its first planting of 1 000 hectares of blue gums on farmland in 1991. The company currently manages over 70 000 hectares of blue gum plantations.  

In January 2003, Timbercorp began harvesting its first eucalypt plantations, producing woodchips for export to Japanese customers. This first harvest was a milestone for the company.  

“Our investors have long awaited this event,” said Robert Hance, the Chief Executive Officer of Timbercorp. “It demonstrates in the most tangible way that Australian plantation hardwood chips are in demand and that projected investor returns can be achieved.”

Since the early 1990s, the area of eucalypt plantations established by the private sector in Australia has expanded considerably. This has been a result of policies such as the 2020 Vision for Plantation Forestry — a joint agreement between Commonwealth and state governments and the forest industry launched in 1997 — which sets a goal of trebling the area of plantations in Australia by 2020. Plantations have also expanded because many view them as a “green” environmentally friendly investment which helps to revegetate previously cleared land.

Timbercorp has aimed to be a leader in the field of eucalypt plantation management in Australia, since it started planting trees in 1991. When AusIndustry — the Australian Government’s business assistance agency — awarded Timbercorp an “Innovation Certificate” in 2002, this was recognition of the company’s commitment to research and development. “This Innovation Certification acknowledges the multi-million dollar investment Timbercorp has made in research and development to improve the returns to our growers and shareholders,” Mr Hance explained.

**Best practice**

Timbercorp promotes plantations as a sustainable investment option to prospective investors — and the company has to ensure it lives up to this promise.
It needs to produce an economically competitive product that provides investors with a financial return, as well as ensuring it does so in a sustainable manner. This requires that Timbercorp constantly updates its practices — to reflect changes in knowledge and understanding of what constitutes “best practice.” Learning from experience, and changing practices when existing methods are shown to be outdated or inadequate, have been core parts of the company’s approach to improving plantation management. The company’s approach to achieving best practice is centred on sound and appropriate technology.

“New technology is something all our staff are involved in — and it’s a key part of doing the best for our investors each day we’re out on the farms,” Mr Soanes said.

Timbercorp uses a combination of staff training, research and innovation, and independent certification of practices to achieve management improvement. The focus is on developing technological solutions to solve management challenges in an economically efficient, environmentally sustainable and socially acceptable manner.

In particular, Timbercorp’s management strategies are based on the principles of precision farming. Precision tree farming can be defined as the matching of the application of resources and silvicultural practices with site attributes and the requirements of the tree crop, as these vary within and between farms. In other words, precision tree farming means applying the right management at the appropriate scale.

To understand Timbercorp’s approach to best management practices, it is necessary to look at the practices employed at the various stages of growing and harvesting a tree farm.

**Seed collection**

The seed used to grow Timbercorp’s trees is grown and collected in seed orchards owned and managed by the company. The Southern Tree Breeding Association (STBA), a cooperative research group of which Timbercorp has been a long-term member, produces the seed being used.

Timbercorp decided to own and manage its own seed orchards because of the importance of high-quality seed for overall operations. Ian Bail, project manager of Timbercorp Technologies, a division of Timbercorp, believes this degree of control is necessary. “This is an area that requires long-term investment and direct management, to make best use of advances in tree breeding and production,” he stressed.

Once seed has been collected, cleaned and graded for size and specific gravity, it is delivered to nurseries that are contracted to grow the seeds into seedlings. The nurseries are provided with detailed specifications on how the seedlings are
Regular quality assurance checks are carried out to ensure seedlings are being grown to specified standards. Plants are rejected if they do not meet defined standards for factors such as height, diameter, root development and nutritional status.

Timbercorp uses the latest research to improve the specifications given to nurseries. In 2000, for example, Timbercorp conducted a collaborative research trial with the Cooperative Research Centre for Sustainable Production Forestry on physical and nutritional aspects of blue gum seedlings. While all seedlings grown in the trial met current “industry standard” quality specifications, there was wide variability in actual seedling quality. The study examined the differences and found that initial nitrogen status and the container type used to grow seedlings significantly affected growth. Timbercorp decided to incorporate this knowledge into its seedling production.

“We incorporated the new specifications as part of our requirements for contracting nurseries,” noted Mr Bail. “In the field, seedlings selected based on these new specifications showed a significant increase in growth — sometimes up to 40 percent volume growth over those planted previously.”

### Selection of sites for planting

Careful selection of appropriate land for its tree farms is one of Timbercorp’s priorities. The company has developed a land selection process based on a combination of scientific knowledge, spatial mapping and flexibility.

To be eligible for use as a Timbercorp tree farm, land must have been cleared of native vegetation for at least five years. This restriction aims to ensure Timbercorp does not provide incentives for landowners to clear native vegetation. Timbercorp also has a policy of leasing land, rather than purchasing it outright, wherever possible. “It’s better for us financially and better for the community,” Mr Bail pointed out.

Members of some local communities have expressed concerns about new tree farms being established in their areas. These have ranged from concern over the social impacts of plantations replacing other agricultural enterprises, to apprehension over aerial spraying of chemicals on plantations. Concerns over loss of population have been expressed where land has been purchased, rather than leased, since it is common for previous owners to move off the land when it is sold for tree farming. When only part of a property is leased, the landowner often continues grazing or cropping on the remainder.

When landowners call Timbercorp, to enquire if their land might be suitable for tree farming, the company uses a careful screening process. Timbercorp has developed a spatial mapping system in which a range of characteristics relevant to tree farming — including climate, geology, topography, existing vegetation,
and distance to port — are mapped. These characteristics are used to determine a land-capability rating which identifies areas that meet Timbercorp’s land criteria. The initial investment in developing this spatial system has rapidly resulted in savings by reducing the amount of time spent investigating land. Up to a third of enquiries are rejected immediately because the land is located in an area classed as unsuitable according to Timbercorp’s criteria.

If the land is not rejected at the initial screening stage, Timbercorp sends staff to physically inspect the property. Timbercorp employs several soil scientists and they work to identify various soil types on the property. The productivity of different soil types is calculated and averaged across the property to determine whether overall productivity is sufficient, and whether the land is otherwise suitable for tree farming. This rigorous site-selection process ensures Timbercorp can grow the highest quality plantations and thereby maximize returns to its investors.

Once land has been chosen for tree farming, the operational planning for establishing the tree farm can begin. One of the first priorities for Timbercorp is to talk with the people who previously managed the land, to find out as much as possible about potential land management issues that may be faced. A simple conversation with the previous land manager can result in significant cost savings.

**Plantable land**

One of the first priorities is to identify the “plantable land” on each new tree farm. There are usually areas that will not be planted with blue gums. These may be areas where planting is not allowed under government legislation, or under voluntary management guidelines such as those established by the Forest Stewardship Council, an international organization that sets standards for certifying forest management practices. Non-plantable areas include remnant patches of vegetation, which the company protects and actively manages to preserve habitat and environmental attributes. Riparian zones must also be protected by establishing buffer zones between the edges of the tree farm and any waterways that pass through.

Once the plantable area has been identified, Timbercorp maps out individual “woodlots” (ranging from 1 to 1.2 hectares in size) that are identified as “belonging” to individual investors. The plantable area is identified on a map — with woodlots demarcated — to facilitate the process of obtaining necessary planning approval.

The types of activities for which permission is required vary between local governments. For example, in some regions Timbercorp might need to seek approval to establish the tree farm. In others, it may need only to have a fire management plan approved by relevant authorities.
Initially, Timbercorp had no formal policies or staff training for interacting with local government and other authorities. The company did not actively communicate with local governments about its activities until required to by planning processes. Over time, however, Timbercorp has learned a great deal about improving communication and interacting with local government, effectively turning the situation around.

**Various concerns**

A lack of effective communication initially contributed to a sometimes combative and aggressive atmosphere in which disagreements occurred between Timbercorp and local authorities. Local governments were hesitant to give approval to activities that were causing considerable concern in the local community, and believed Timbercorp was not adequately responding to community concerns.

Mr Bail reported that Timbercorp did not realize how difficult it was for local communities to get information about the plantation industry: “Ignoring people and assuming they know all about forestry is a really bad plan. We didn’t realize it, but people didn’t know or understand enough about what we were doing. If you want to be a long-term manager you need to invest in getting community understanding of forestry.”

Bill Luke, a Shire Councillor for the Victorian Shire of Moyne, in western Victoria, when Timbercorp began establishing tree farms in the region, has first-hand experience of the problems. Members of his local community brought him many concerns about plantations, but he found it difficult to get information that would help him analyse and come to a decision about plantation impacts. Meanwhile the local government felt it was not adequately consulted about what constituted a major land-use change in the region. “Local government felt disadvantaged — we seemed to have little or no control,” he explained.

As communities expressed concerns through the local media and at local meetings, Timbercorp became aware that its lack of adequate communication was contributing to poor community perceptions of its business. Since that realization, the company has actively incorporated a range of communications initiatives and actions into its management programme.

**Improved communication**

At the local government level Timbercorp has worked to build relationships with representatives that allow exchanges of views in a productive, rather than combative, manner. Timbercorp ensures it gives local government advanced information of activities and plans — inviting local government for discussion sessions to review its plans and answer questions about particular issues. By taking local government representatives and employees into the field and
explaining the rationale behind its tree-farming activities, Timbercorp is improving knowledge and understanding of its business. Local government, in turn, is enabled to make better-informed decisions about the tree farm industry.

Better communication has been effective in improving relations and has resulted in improved management. Mr Luke has seen this change clearly: “There are still a few ups and downs, but Timbercorp has been prepared to acknowledge and address issues and I think the community and local government have responded in kind.”

Mr Bail agreed: “We tell people why we’re here, we tell them what we’re doing and we demonstrate that we’re here to stay. Now that we’re doing this, people are prepared to ask us questions first — rather than just criticize.”

Timbercorp has learned that good management is not just about implementing the best practices in the field — it is about ensuring people are informed so they understand the company’s business objectives and practices. This allows others to make informed decisions about Timbercorp’s business, as well as to suggest areas for improvement.

“It’s a two-way street,” Mr Soanes noted. “We learn a lot of methods for improving our practices from other organizations, and opening ourselves up to that is very important.”

**Internal planning**

Timbercorp’s operating procedures are specified in a Standard Operating Manual (SOM) that prescribes best practice guidelines for all aspects of tree farm establishment and management. The SOM ensures that existing knowledge about best practices is communicated to all staff, and consistency of standards is achieved right across the company’s plantation estate.

SOM procedures are applied to all of Timbercorp’s operations nationally, and thus need to be flexible enough to adapt to the range of situations where Timbercorp establishes plantations. Every tree farm has unique management challenges and Timbercorp’s plantation estate is spread across three different states — Victoria, South Australia and Western Australia. Each state has different land management legislation and regulations. Moreover, individual local governments also apply different planning regimes.

The SOM has been designed so it can be constantly updated to reflect the latest knowledge on best-management practices. Mr Bail is closely involved in ensuring that the SOM is adaptable. “The way that we carried out Quality Assurance checks three years ago was different to procedures two years ago — and different again, last year. We are constantly looking at new research and the results of our field practices, and changing systems where needed.”
For every operation on every tree farm, a job-safety analysis and an environmental impact assessment (EIA) are undertaken. The job-safety analysis identifies all potential safety risks for operators on the property. The EIA identifies all the environmental sensitivities on the property that need to be taken into account in operations. All staff and contractors are made aware of — and are required to sign an agreement to manage the tree farm with regard to all health and safety hazards and environmentally sensitive areas on the property. Quality Assurance checks are used to ensure compliance.

**Quality control**

The company’s Quality Assurance systems apply both to contractors and to activities undertaken directly by Timbercorp. Contractors are trained in Quality Assurance approaches and are required to self-check their own activities, while also being monitored by Timbercorp staff.

For example, Tony Roache and Mick Fallon are the owner-operators of Accurate Agriculture Pty Ltd, a company that currently derives approximately 75 percent of its revenue from contracts for weed control with Timbercorp. “Timbercorp is very demanding with its contractors,” Mr Roache explained. “The company’s quality control systems are first class, ensuring that we work to tight guidelines with a high-quality result.”

Once site preparation activities are completed, it is time to plant. Planting is a critical moment, as Mr Soanes observed: “The 2 or 3 seconds it takes to plant a tree can make all the difference 10 years later.”

Mr Bail agreed: “We spend a lot of time ensuring we have the highest quality seedlings and highest quality site preparation. The time when we bring these together — at planting — is critical.”

Planting contractors are carefully trained in tree-planting techniques, and self-check their work. Timbercorp staff then conduct Quality Assurance on the tree planting. Timbercorp ensures it discusses with contractors not just *what* it wants them to do, but *why* it is important. Mr Soanes indicated that the best systems for Quality Assurance will not work unless all staff and contractors know why it is important to do things in a specified way.

“When people can see a better result from implementing a new practice, they are willing to keep doing it — and to keep looking for innovation. You have to make sure the people are the most important part of the system, not the technology,” said Mr Soanes.

Once the tree farm is planted, it must still be managed for 10 years before being harvested for woodchips. A first task is to ensure that there is adequate seedling survival. The newly planted tree farm is inspected at a minimum of
every seven days after planting, and two months after planting a survival count is done. Any necessary replanting is undertaken.

To achieve a high quality final crop the trees must be monitored and, where necessary, treated to manage pests and nutrition during the 10-year rotation. Timbercorp has developed a system for monitoring and managing its plantations that combines the latest technology, research and development, and staff training.

To achieve maximum growth rates, the trees need correct nutrition. One year after planting, leaf samples are taken from farm stands and analysed to check if the trees have adequate levels of key nutrients such as copper. This nutritional sampling is a key component of Timbercorp’s Quality Assurance process. It identifies any nutrient deficiencies at a point in the growing cycle where these can be easily treated with fertilizer applications, so that growth problems can be corrected.

Timbercorp has developed a highly innovative system for collecting and analysing nutrition information. This system has been so successful that Timbercorp has since expanded its use to a range of other field-based activities.

**Geographic positioning system**

Timbercorp staff are issued with hand-held Palm™ personal digital assistants (PDAs), which are linked to hand-held geographic positioning system (GPS) receivers that can provide spatial coordinates for any geographic location. Field staff locate sampling points with exact geographic coordinates given by the GPS receivers, and record these in the PDAs. Leaf samples are collected and taken for analysis. Back at the office, data are uploaded from the PDAs into the central computer system. The data are automatically entered into a database linked to a spatial mapping system. Once the results of the sampling are produced, it is possible to display on a map the nutrient status of all the sample points.

*Intensive management of tree farms produces impressive yields (courtesy Ian Bail).*
Box 1. Problem solving — using spatial mapping

When this system was initially used, the resulting spatial map showed some clear regional patterns of copper deficiency in one-year-old plantations. Clearly, some unknown factor was causing copper deficiency in certain areas. If Timbercorp could identify the problem, costs could be reduced by enabling prediction of where copper supplementation would be needed without having to wait for visible symptoms of deficiency.

The spatial mapping and database system enabled many variables (including geological data and soil profile information) to be included in the database and compared using mapping overlays. The results showed that copper deficiencies tend to be correlated with particular soil types. As a result of this analysis, Timbercorp can now predict with a high level of accuracy where it will have to overcome copper deficiency.

Mr Bail realized that Timbercorp had developed not just an efficient system for recording information, but a powerful tool for analysing data and enhancing the efficiency of plantation management. “What we thought would just automate our data management was letting us manage for particular problems at scales that hadn’t previously been possible. Now we could see copper deficiency as a regional-scale phenomenon, not just as something that happened in odd patches on some of our tree farms,” Mr Bail commented.

Pest management

Timbercorp has also made use of the new technology in its pest management programme. Using the PDAs, and results of the latest research on pest populations and management, Timbercorp has developed decision-support software to determine the type of pest management needed. Staff regularly carry out sampling surveys for particular pests. At each sample point, they enter any signs of pest activity into the PDAs. The software processes the information and provides instruction on whether more sampling should be carried out, or if management to reduce pest activity is needed. The system is very cost efficient and greatly reduces the time spent on pest management, both in the field and in the office. It also ensures pest control is undertaken only when necessary.

Methods of pest management in plantations have been a controversial issue in some regions, with local communities expressing concern about the use of aerial spraying of insecticides in particular. Timbercorp is responding to concerns about the use of chemicals by funding and undertaking research into alternative methods of pest control. Using systems that reduce or eliminate the need for chemicals is an important goal for the company for both environmental and economic reasons. Timbercorp is working towards certification of its operations by the Forest Stewardship Council, whose principles and criteria for sustainable forest management include an ultimate objective of no chemical use.
Timbercorp Forestry: attention to detail pays off

Timbercorp has had success in developing new pest control methods in conjunction with the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia’s main scientific research agency. For example, in Western Australia, the African black beetle is a common pest of young seedlings. The beetle, which effectively “ring barks” the seedling by eating away at its base, has caused hundreds of thousands of dollars of damage to young eucalypt plantations each year. Timbercorp originally applied insecticides to control the beetle. However, research trials undertaken by Timbercorp and CSIRO found that placing a small mesh sleeve around the base of each seedling prevented beetle damage in almost 100 percent of the seedlings.

“This is a very exciting outcome!” exclaimed Dr James Bulinski, a member of the Timbercorp Technologies group and one of the key researchers on the project. “It means we now have a very effective way of stopping beetle damage without having to use chemical insecticides.”

He also believes using research partnerships is a valuable way of achieving practical research outcomes. “People often don’t realize that commercial tree farming companies like Timbercorp are working with research organizations such as CSIRO and really putting a lot of effort into developing cost-effective alternative approaches to pest management.”

Land management

While Timbercorp has improved consultation with local governments, it has also worked to improve its consultation and interaction with its neighbours. Timbercorp works collaboratively to ensure its activities do not have adverse impacts on neighbouring landholders. Timbercorp maintains a database of the types of land management activities undertaken on land neighbouring its tree farms. Where neighbouring enterprises may be sensitive to particular activities, Timbercorp tries to find mutually acceptable management solutions. For example, Timbercorp will use a different chemical regime on tree farms bordering aquaculture enterprises, because some chemicals have the potential to adversely affect the fish. Before any operations are undertaken, neighbouring landholders are informed, and given contact details of Timbercorp staff to call with any concerns or queries.

Timbercorp has found that early consultation and discussing the company’s plans with neighbours has reduced concerns about its activities. For example, Timbercorp uses aerial topdressing to apply copper because young trees absorb the element more readily through leaves rather than roots. Timbercorp’s consultation policies now inform neighbours ahead of time about planned aerial fertilization and it has noticed a sharp drop in the level of expressed concerns. Consulting and informing before activities are undertaken have helped the company build trust in the local community.
Linkages with other organizations

Timbercorp and Greening Australia, a revegetation organization, have joined forces on one tree farm in western Victoria. The Nigel Tree Farm has a large riparian zone, which had very little native vegetation cover when Timbercorp established the tree farm. Timbercorp and Greening Australia combined efforts to use direct seeding to achieve revegetation with a mix of native plant species in the riparian zone. This project allows Timbercorp to manage an area of land that might otherwise have become invaded by weeds; to develop the area to provide wildlife habitat and corridors; and to keep the waterway in good condition.

“The work forms part of the Greater Glenelg Biolink, a Natural Heritage Trust-funded project, which is connecting remnant vegetation across the landscape,” explained Dave Warne, of Greening Australia. The Natural Heritage Trust is a government-funded trust that provides funding to help restore natural vegetation across the Australian landscape.

On another property, Timbercorp has restored a wetland area by rebuilding a natural dam in an area that was drained by the previous land manager and assisting regeneration of native vegetation.

Timbercorp is currently revegetating 300 hectares with native species in a number of areas. The company prefers to work on revegetation projects in partnership with other organizations. These include local Landcare groups, which are groups of land managers and members of the rural community that undertake environmental improvement.

Harvesting methods

After 10 years of growing and managing blue gums, the first harvesting began in January 2003. The company has placed a strong emphasis on the development of harvesting systems that are sustainable and that maximize returns to investors. An in-field processing system that has been co-developed by Timbercorp provides a good example of the use of research and development to address economic, environmental and social challenges in plantation harvesting.

Timbercorp faced two highly significant challenges in developing its harvesting system:

- Plantation growers have traditionally sold trees as unprocessed logs. Timbercorp recognized that if it developed a system to process logs into woodchips before sale, this would increase returns to investors. The challenge was to develop an economically efficient woodchipping system.
Log transportation was another challenge. Establishing a network of roads within a tree farm to support harvesting is very expensive. It was, therefore, extremely important that the harvesting system minimize the extent of road construction within plantations, while also reducing impacts on external roads.

Timbercorp has developed an on-site woodchipping system to meet these challenges, as well as ensuring the entire harvesting system utilizes best practices to minimize negative environmental impacts.

When trees are harvested, the bark, leaves and small branches are left at the harvest site as slash. This allows recycling of the nutrients back into the soil. It also enhances soil stability and reduces post-harvest erosion risks.

Logs are left in whole-tree lengths and taken by a forwarder to the edge of the plantation, where a specially designed machine chips them directly into storage containers. The closed containers are transported by truck to port, ready for export. About 120 trees can be harvested and chipped every hour.

Tim Browning, General Manager of Forestry for Timbercorp, indicated that the efficiency gains are significant. “This harvesting system adds 40 percent to grower returns over conventional systems,” he observed.

Robert Hance explained the advantages of a mobile in-field chipping system: “Each time we install a chipping machine it works flat out from day one. A million-tonne static mill takes many years to become efficient and over time gets further away from the forest. Our operation is efficient from day one.”

By taking on the harvesting process itself, Timbercorp has captured another stream of revenue for its investors that otherwise would have gone to external contractors.

Timbercorp is committed to using external certification processes to achieve best practices. In 2001, its Forestry Division’s environmental management system was accredited under ISO14001. ISO certification focuses on ensuring that the management processes used are appropriate, and Timbercorp was able to improve its Quality Assurance systems significantly through the accreditation process. The process also encouraged development of improved consultation and communication with the community.

Currently, Timbercorp is working towards achieving certification under the Forest Stewardship Council (FSC) programme. FSC certification is granted after an audit process to assess a company’s ability to maintain a well-managed forest. A pre-certification “gap analysis” has been completed for Timbercorp’s operations, and has identified areas needing improvement before FSC certification can be granted. The next stage entails an audit by an FSC-sanctioned certifier to determine that the identified improvements have occurred. Gaining FSC certification will be an important verification that Timbercorp is achieving sustainable outcomes in its tree farm management.
Future challenges

Timbercorp faces a number of challenges as it expands to harvesting operations. The issue of road maintenance and safety is becoming particularly challenging. Rural communities are worried about the increasing number of log trucks on the roads.

Bill Munro, the Mayor of Glenelg Shire in Victoria described community concerns: “They are worried about the potential for damage to the roads, their own safety on the road, and about the potential for noise and pollution. This is a problem faced not just by Timbercorp, but by the plantation industry in general.”

The town of Portland, from which woodchips are exported overseas, is in Mr Munro’s Shire and, as tree farm harvesting expands, he has to plan for increased truck movements on both major and minor roads.

Local government is also concerned that it has to allocate scarce funding to upgrade roads used by the plantation industry. Developing solutions to the challenges of road maintenance requires negotiations among local government, the plantation industry and other road users.

Similarly, there are other large-scale issues with the tree farming industry that are still to be resolved. These include ensuring that local government has the appropriate skills and resources to effectively monitor the management activities it is required to regulate on tree farms. These types of challenges cannot be solved by Timbercorp on its own, but require a consolidated approach from the entire industry and other stakeholders.

“For some of these issues there are no easy answers,” said Mr Bail. “We need to work together to develop answers to some of the challenges that result when a new industry grows as rapidly as this one has.”

Aaron Soanes, inspecting the one-year-old tree farm near Hamilton, is confident that Timbercorp will find solutions to existing and future challenges.

When asked what the key elements of Timbercorp’s future success will be, he affirmed: “As long as we have the right processes in place, and we’re willing to listen to people within and outside the organization — we’ll keep on improving and changing when we need to.”

About the author

Jacki Schirmer is a researcher at the School of Resources, Environment and Society of the Australian National University. She has worked for several years examining the ways in which improved processes can be developed to productively transform conflicts over the management of plantations in Australia, the United Kingdom and Ireland.