Climate Statements

FY 2025

ArborGen HOLDINGS

Welcome to our FY25 Climate Statements

As a horticultural business, ArborGen Holdings Limited's (**ArborGen, "we" or "our"**) operations are inherently linked with climate. Climate change presents both risks and opportunities for our business. Identifying, monitoring, mitigating and responding to climate-related events forms an integral part of ArborGen's strategy and operations. ArborGen uses climate related risk and opportunities to understand how we serve people, customers and shareholders, govern the company and protect the natural environment.

This report contains our second climate statements under the Aotearoa New Zealand Climate Standards and covers ArborGen's financial year from 1 April 2024 to 31 March 2025.

We have provided our current assessment of the climate-related impacts, risks, and opportunities material and relevant to ArborGen's business. This report is a point-in-time assessment based on assumptions regarding the future which are inherently uncertain, often outside our control and likely to change. Where relevant, these limitations are set out in this report.

We will continue to monitor the potential impacts of climate change on our business.

For this year, ArborGen has elected to use the following adoption provisions:

Adoption provision	Commentary
Adoption provision 2: Anticipated financial impacts	A qualitative description of the anticipated financial impacts has been provided for the identified climate-related events.
Adoption provision 4: Scope 3 GHG emissions	Scope 3 emissions have not been reported in our second reporting period.
Adoption provisions 6 and 7: Comparatives and trends	ArborGen has provided one year of comparative information for each metric.
Adoption provision 8: Scope 3 GHG emissions assurance	ArborGen is not required to have an assurance engagement over its Scope 3 GHG emissions.

ArborGen confirms these climate statements comply with the Aotearoa New Zealand Climate Standards.

David Knott
Chairman of the Board

George Adams
Chair Climate Committee

31 July 2025

Governance

Board of Directors

The ArborGen Board is responsible for the oversight of climate-related impacts, risks and opportunities. Due to the size and nature of the business, the whole Board takes overall responsibility for sustainability and climate-related risks and opportunities. The Board also reviews ArborGen's ESG and sustainability policies regularly.

The ArborGen Directors possess competencies in this area and all Directors are responsible for continuous training and keeping themselves informed on relevant climate issues. ArborGen's Board competency framework includes skills and experience relating to climate risk as a relevant consideration. The Board will continue to have information from relevant climate experts as part of the Board schedule to monitor new developments.

To assist the Board, the Audit and Risk Committee (**ARC**) identifies and considers all relevant climate matters at least annually and as significant risks and opportunities arise. ArborGen has also engaged external experts to provide additional knowledge and assist with disclosures and reporting.

The Board generally meets at least four times per year and receives recommendations and insights from management and the ARC, including on climate-related issues. The Board reviews these reports and ensures proper implementation of internal controls and risk management processes. As part of its annual strategy review, the Board considers the influence of climate change and devises strategies for the short, medium and long term.

ArborGen is at the early stage of its climate reporting journey and will continue to consider appropriate targets and initiatives.

Management's role

Day-to-day responsibility for identifying and implementing strategic initiatives related to climate risk and carbon emissions sits with the executive team.

ArborGen's VP of Operations has delegated responsibility from the CEO to identify, manage and report climate-related issues.

Management report to the ARC, and the Board, on climate-related risks and opportunities on a quarterly basis. Management is responsible for assessing the impact of climate on the business and ensuring mitigation plans are in place.

Board

- Oversight and governance

Audit and Risk Committee

- Additional risk assessment of climate related activities
- Review appropriate countermeasures to mitigate risks

Management

- Vice President of Operations – ensures overall climate risks are continuously assessed and reviewed. Ensures controls are in place to mitigate risks
- Chief Financial Officer – ensures compliance to policies, ensure risks are appropriately assessed and scenario analysis is financially assessed and reported.

Each business unit is also tasked with identifying climate-related risks and opportunities relevant to their function. ArborGen's risk register is updated with any new material information.

Strategy

ArborGen is the leading provider of advanced genetics seedlings for the forest industry. We use our technology platform, production capabilities and sales and marketing to transform forest productivity.

ArborGen is committed to conducting business in the right way, ethically and in line with legal and regulatory obligations, to ensure we add long term value to staff, contractors, shareholders and other stakeholders. Our ESG principles provide meaning beyond just commercial gain, and look to how we serve our stakeholders, govern the company and protect the natural environment for now and the future.

Current climate-related impacts

As a horticultural business, climate risks are inherent to the sector. Managing these risks is a critical part of business management and a specific item in our risk register. In addition, the increasing emphasis on the role trees can play in offsetting carbon emissions through sequestration is creating new climate-related opportunities for ArborGen.

Currently ArborGen has sites across the southern part of the United States (Alabama, Arkansas, Georgia, Florida, Texas, and South Carolina) and multiple locations in Brazil (mainly in the southern regions).

As our business operates mostly outdoors, we face risks from excessive rains, hail, freezing, hurricanes, drought and excessive heat. In the past, we have had entire crops destroyed at individual locations due to extreme weather events. In the current reporting year, ArborGen experienced impacts from several extreme climate-related events across its sites and areas of business, which have been qualitatively and quantitatively measured using available data. Therefore, ArborGen knows what extreme weather can do to our business.

Climate and weather and the impacts it can have on our business are, and have been, ingrained into our business practices for more than 30 years. We feel confident that we have already taken many steps to protect our assets from extreme weather, in particular excessive rains.

Table 1: Current climate-related impacts

Business area	ArborGen's current physical and transition climate-related impacts for FY25
Business model (including operations) and value chain	A series of extreme weather events across ArborGen's Southern US operations caused varying degrees of damage to nurseries and orchards. Significant events included Hurricane Helene, which affected several Southern US sites, drought, flooding and extreme rainfall in Brazil. This impacted ArborGen's planting and production practices that are both critical for timely growth of seedlings and fulfilling customers' orders. Further detail is provided below.
Operating costs	The impact of extreme weather events on ArborGen has resulted in increased insurance claims and operational costs due to damaged nurseries, orchards and other infrastructure. While it isn't a material impact in this current reporting year, ArborGen will continue to monitor insurance claims related to climate-related events. ArborGen has acknowledged that the costs incurring from damage to our key infrastructure and product, could be material in the future.

Based on this history, and our current strategy, we consider that we are well positioned to mitigate risks and respond to opportunities arising from the transition to a low-emissions, climate resilient future.

Table 2: ArborGen's current climate-related impacts and financial impacts

Climate-related event	Current impacts	Financial impact	Supplementary methods, assumptions and limitations
Hurricane Helene	In September 2024, ArborGen experienced the impacts of Hurricane Helene across several of its Southern US sites, causing varying degrees of damage to nurseries and buildings. The hurricane impacted some of ArborGen's customers in Southern US, particularly South Carolina and Georgia. In response to damage caused to customers' properties and plantations ArborGen saw an additional 2-3 million seedling sales immediately following the hurricane.	The impact on ArborGen caused by Hurricane Helene resulted in insurance costs of US$82,000 to repair damaged buildings. The increased sales of seedlings driven by customer demand to replenish damaged stock provided ArborGen with an additional revenue of ~ US$325,000 - $488,000. ArborGen experienced a loss of 35.7 million MCP seedlings from the impact of Hurricane Helene on its Newington and Vidalia Georgia orchards which are near the coastline. The quantity of lost seedlings results in a US$7 million loss in revenue for ArborGen's sales next year.	Estimates and modeling were used to determine the impacts financially of the hurricane or, as in the case of the insurance information, known actual losses were available. As estimates, they have limitations such as the availability of information, the assumptions applied and the judgment of management. Users should be aware that estimates are subject to change as new information becomes available or as circumstance evolve. In these estimates, the most up to date and current information was utilised in preparation.

Climate-related event	Current impacts	Financial impact	Supplementary methods, assumptions and limitations
Drought in Brazil	From July to Oct 2024, ArborGen experienced a prolonged drought that led to a significant reduction in ArborGen's production capacity and severely affected its customers' ability to plant. The impact to production resulted in a loss of 2,542,881 eucalyptus seedlings sold during the drought period. The drought impacted ArborGen's ability to grow its next rotation of seedlings due to a lack of space and labour. The impact was further exacerbated by extreme rainfall during the La Niña season in the southeast and northeast regions of Brazil and led to a seedling shortage of 1,978,000 from January to March 2025. ArborGen anticipates that it will recover the revenue lost from reduced sales during the drought in FY26. ArborGen had to discard 1,600,000 seedlings across its nurseries in Brazil because of the drought; they didn't meet market requirements. Although the cost for water supply wasn't substantial, to maintain a sufficient supply of water to its sites, ArborGen invested in building additional water tanks and hired water trucks to ensure a continuous supply of water for several days.	ArborGen experienced an overall financial impact of R$7,079,705.12 (US$1.2 million) from the impact to its production and sales caused by the drought. ArborGen has invested approximately R$470,000 this current reporting year to build new water tanks and complete other improvements for resilience against water scarcity in Brazil.	ArborGen has determined the total financial impact caused by the drought by identifying the impacts to revenue from unsold seedlings (R$2,037,719.45), the impact to cost in production, discarded seedlings (approximately 1,600,000 seedlings) and seedlings sold at a higher unitary cost (R$5,041,985.68). The impact on ArborGen's revenue and production costs caused by the drought are those effects not related to inflation or changes in planning processes made by deliberate decision-making. ArborGen cannot determine the exact impact of the lack of labour availability during and following the drought period, but correlation between customers that were unable to plant during the drought and a surge in demand for planting following the drought resulted in a lack of labour for ArborGen to continue producing new seedlings.

Climate-related event	Current impacts	Financial impact	Supplementary methods, assumptions and limitations
Flooding and extreme rainfall events in Brazil	During April and May 2024, Southern Brazil experienced significant flooding, causing a delay in sales. ArborGen recovered the lost revenue in the following months once shipments resumed. The flooding did not have a major impact on ArborGen overall, but it did result in the loss of approximately 300,000 eucalyptus seedlings. Northeast Brazil and Minas Gerais state experienced extreme rainfall events during the La Niña season in December 2024 and January 2025. The rain events that followed a prolonged drought impacted the growth of seedlings and resulted in 1,978,000 less seedlings available to sell.	The impact to revenue from the unavailable seedlings was R$2,544,770.	The impact to revenue and production costs on ArborGen's operations in Brazil has resulted from the cascading effect of drought and extreme rainfall during the La Niña season, therefore ArborGen cannot disclose the impacts of each event in isolation.

Climate scenario analysis

To prepare our first climate statements under the Aotearoa New Zealand Climate Standards, we conducted a standalone climate scenario[1] analysis process in FY24 to identify material climate-related impacts, risks and opportunities across three different futures and test our business. Scenario analysis is a strategic tool for understanding and exploring how the future may develop under conditions of uncertainty. The outcome of this process was used to inform ArborGen's strategy. Full details of ArborGen's climate scenario analysis can be found in Appendix 2.

ArborGen continues to believe that this scenario analysis is appropriate for its business at this time.

Impact assessment of climate-related risks and opportunities

The key climate issues and related physical and transition impacts for ArborGen are in Appendix 3.

We will continue to monitor and consider these risks and opportunities as part of our internal capital deployment and funding decisions. Climate related risks and risk mitigation is one of the criteria for capital deployment and funding decisions as it is a key for risk mitigation. For example, we are currently reviewing investments in key locations both in South America and the Southern US to ensure production is diversified across the region. Additionally, ensuring production is split across a diverse area will mitigate not only weather-related events, but also ensure supply chain risks are mitigated. All funding decision are made by the ArborGen leadership team, which includes the CEO, CFO, Vice President of Operations, and the Sales Director. All investments are also taken to the Board for approval.

[1] Climate scenarios are plausible and challenging descriptions of how the future might look; they are not predictive or probabilistic. Scenario pathways are developed based on a coherent and internally consistent set of assumptions about key driving forces and relationships covering both physical and transition risks in an integrated manner.

Transition Planning

ArborGen's transition planning identified priority strategic actions and pivots to prepare for and respond to its climate-related risks and opportunities identified above. These actions also address critical uncertainties affecting its business model and strategy. ArborGen has identified actions to support the company in building resilience to critical uncertainties, manage its risks and position itself to seize opportunities.

Table 3: Key actions to respond to climate-related risks and opportunities

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
Weather related events including excessive sudden rain, freeze events, drought conditions, hurricanes	ArborGen uses Key Performance Indicators (KPIs) to monitor the performance and resilience of orchards and nurseries. These measures indicate when a site isn't producing high quality or quantities of seedlings; this may trigger investigation into the impact of climate-related events and how ArborGen might respond to increase protection. To protect exposed sites, ArborGen implements practices where possible, such as switching products and soil mixes and keeping a secure seed inventory. This provides a rich nutrient base for seedlings to grow and allows flexibility to move around nurseries to replenish damaged sites. ArborGen regularly implements crop rotations to support the condition of the soil – and thus the quality of the seeds it produces.	**Technology** Technology and smart machinery can support ArborGen's resilience and preparedness for climate risks. ArborGen has invested in a GPS program that enables the company's tractors to operate following drainage mapping of natural and constructed drainage systems within ArborGen's sites. This reduces the risk of disrupting water courses and increases the quality of the soil to support successful seedling development. ArborGen will monitor developments in and availability of technologies that provide more capability to protect orchards and nurseries from extreme weather, such as freeze protection for seedlings. Freeze events can impact ArborGen's seed volumes and harvests, particularly in South Carolina.	**Technology** Capital deployment: ArborGen has invested US$112,500 in improving the GPS mapping capabilities for 15 of its tractors. **Diversification** ArborGen is investing R$1,884,500.00 in the current reporting year to develop new growing areas across its nurseries in Martinho Campos (Southeast Brazil), Ribas do Rio Pardo (Central West Brazil) and Teresina (Northeast Brazil). This will allow ArborGen more space to manage its seedlings in case of future extended dry seasons, improve seedling quality, and also expand production capacity in case of no drought.

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
		Climate change risk assessment Future impacts of climate change on ArborGen's sites are uncertain. ArborGen needs a clearer path on its mitigation strategy to support its direction and decision-making. To achieve this, ArborGen will investigate completing physical climate change risk assessments for its sites. This will increase ArborGen's understanding and awareness of where its greatest vulnerabilities lie across its operations, informing where it prioritises investment to increase resilience and develop response plans. **Diversification** ArborGen will continue to monitor the market for investment and diversification opportunities to reduce its risk and isolated exposure to extreme weather, particularly for its Brazilian operations. When considering a new investment, feasibility assessments of locations include analysing data on climate, weather and topography maps. This provides ArborGen with an understanding of the level of risk and exposure to climate hazards and to inform the suitability for a nursery or orchard. By keeping a diverse portfolio of orchards and nurseries, ArborGen may increase the level of resilience in its seedling supply. For ArborGen's existing sites that are most exposed to extreme weather, ArborGen is investigating parametric insurance to provide protection against the risk of catastrophic weather events.	

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
Climate change disrupts supply chain including labour	ArborGen prioritises ethical employment relations. All of ArborGen's employee contracts have policies for ethical practices and employee arrangements and incentives. Labour in the US is mostly outsourced through agreements with suppliers. These labour supply agreements allow ArborGen greater security in the supply of labour during peak seasons, but as climate change exacerbates the competition for labour ArborGen must be prepared to adapt to shortages in supply.	**Automation** While many of ArborGen's operations are manual activities requiring labour, the opportunities to automate processes with machinery and technology can enable ArborGen to increase efficiencies and provide greater business continuity during extreme weather events where accessibility of labour is impacted. For example, drone technology can provide more efficient data of seed inventories and crop condition. This can contribute positively to ArborGen's production and harvests.	**Automation** ArborGen has invested US$140,000 in drone technology that provides greater efficiencies in crop management and can support ArborGen's resilience in its productions and harvests.

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
Failure to meet customer and stakeholder expectations regarding climate risks and their management	ArborGen is actively assessing and managing its climate-related risks and greenhouse gas (GHG) emissions, driven largely by New Zealand's climate-related disclosures reporting regime. While climate reporting is becoming more common globally, regulation for climate risk reporting is not yet mandated in the US or Brazil. This gives ArborGen an uplift against competitors in these countries by providing primary users with information on how it is responding to its climate-related risks and opportunities and integrating climate into strategic planning and repositioning. The potential for regulations and other factors to shift may change demand for ArborGen's core range of seedlings and require a significant change to ArborGen's business model. Increased costs may also be incurred from shifts in customer preference towards Forest Stewardship Council (FSC) certified products.	**Resource conservation** Where possible, ArborGen is implementing practices to conserve resources and respond to customer expectations by demonstrating its commitment to environmentally conscious practices and managing climate risks. Initiatives can be identified across ArborGen's operations, production, supply chains and other key areas of its business. ArborGen follows recommended best practice to minimise soil runoff and erosion and use of chemicals. Planting cover to protect crops from harsh weather like heat, extreme winds and rain minimises erosion and reliance on synthetic fertilisers. Water scarcity in Brazil can impact ArborGen's operations. ArborGen will explore what initiatives it could implement to minimise consumption and re-use water to increase ArborGen's resilience during drought or supply shortages. Unreliable energy generation and power supply in Brazil mean ArborGen must respond and build resilience against energy shortages from the grid. ArborGen will investigate the feasibility of generating its own supply of energy at its orchards and nurseries through installing solar panels and other methods of energy generation to provide more resilience.	ArborGen has invested approximately R$470,000 this current reporting year to build new water tanks and complete other improvements for resilience against water scarcity in Brazil.

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
		Long term planning and risk assessment ArborGen recognises the value of integrating climate risk and using climate-related metrics to inform its long-term planning. Applying climate-related metrics to monitor performance and assess the preparedness of its orchards and nurseries is something ArborGen will explore as a tool to increase stakeholder confidence particularly investor expectations. **Industry partnering** ArborGen is a member of various industry groups including the Forest Resources Association. ArborGen actively monitors market and regulatory updates through its relationships with industry groups. Through its involvement with associations like the American Forest Foundation, ArborGen is able to advocate for and influence policy for reforestation and uptake of advanced genetic tree seedlings. Active partnerships with carbon project developers can leverage ArborGen's ability to contribute to researching the carbon credit market and advancing the role of carbon sequestration to increase customer demand. ArborGen will investigate opportunities to increase market awareness for its product and the important role it plays in increasing carbon sequestration.	

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
Increased demand for advanced genetics seedlings which have greater resistance to disease, weather and pests	ArborGen is strategically allocating resources towards the cultivation of a diverse range of seedlings and investing into research and development (R&D). This aims to enhance and broaden the product portfolio, thereby positioning the company to better meet the market's increasing demand for seedlings with resistance to disease, weather and pests. As the market shifts towards reforestation and afforestation projects and sustainable materials, ArborGen could obtain a greater market share and enhanced competitive advantage for its product.	**Industry partnering** ArborGen intends to prioritise partnerships with projects and organisations to collaboratively increase investment into R&D. ArborGen has an existing partnership with an international not-for-profit tree breeding organisation – Camcore. This partnership leverages ArborGen's ability to be actively involved in tree breeding, gene conservation and environmental stewardship. ArborGen will prioritise its relationship with Camcore to increase its presence and accessibility into the market and participate in research and development to improve seedling quality. Industry collaboration can support ArborGen with brand awareness and customer engagement. ArborGen recently co-hosted a carbon credit conference which enabled ArborGen to demonstrate its presence to the market and its important role in the uptake of carbon capture projects. Continuing to focus on opportunities to increase brand awareness can support ArborGen to position itself to respond to increasing customer demand. **Carbon credit market** ArborGen is actively monitoring growth in the carbon credit market and currently has one active partnership with a carbon developer and will continue to investigate what further partnerships it could form with carbon project developers.	ArborGen has invested US$2.4M in FY25 and for FY26 will invest another US$2.7M.

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
		As awareness and demand for this market increases in the US and Brazil, ArborGen will explore the feasibility of establishing a dedicated team to track and identify these opportunities. Having a dedicated resource to develop relationships and secure contracts within the carbon credit market can strengthen ArborGen's position and reputation. ArborGen will investigate opportunities to promote and advocate for the carbon credit market in the US and Brazil to leverage its response to increasing customer demand. Changes in policy and regulation that strengthen carbon market incentives and provide the private sector access to carbon capture incentives can significantly grow ArborGen's customer base. **Genetic research and development** ArborGen has a strategic focus on product development and continuously improving the genetics of its seedlings including developing greater resistance to specific climate stressors and diseases. ArborGen is introducing new selection techniques, testing and analysis to increase its capabilities to respond to customer demand. ArborGen's R&D team will explore sustainable forestry practices, such as reducing chemical usage, minimising soil erosion, and optimising resource use. Actions to prioritise conservation aligns with investor expectations for ESG performance.	

Risk / opportunity	Description of monitoring risks/opportunity	Key actions	Capital deployment
Financial incentives for reforestation and promoting sustainable forest management practices eg, carbon credits	ArborGen is monitoring the impact of financial incentives for reforestation and promoting sustainable forest management practices. ArborGen will explore adopting sustainable finance incentives such as green bonds, sustainability-linked loans and impact investments to increase the sustainable management and operations of its businesses, as well as contribution to the industry. ArborGen is aware and analyzing financial instruments to attract investors, some of these instruments are prioritising ESG (environment, social and governance) considerations, diversifying funding sources, and potentially reducing borrowing costs.	**Partnerships** To access and grow funding and finance for sustainable projects in the US and Brazil, ArborGen may pursue further partnerships with carbon project developers and other large reforestation projects as well as not-for-profit organisations. ArborGen plays a key role in sustainable forestry and the carbon market and can influence access to sustainable finance instruments providing dual benefits for reforestation efforts and demand for ArborGen's product.	ArborGen invested US$800k in coolers specifically for hardwoods to utilise with our carbon partners.

Risk Management

To identify and assess risks, ArborGen draws on our internal forestry specialists, external consultants, and current published scientific literature from various universities, USDA, EPA, NOAA, PNA and other National Forestry related entities. Assessment of these risks is conducted on a quarterly basis.

We assess our risks across all aspects of our value chain using the following time-horizons:

Table 4: Time horizons

Time horizon	Year	Rationale
Short term	2025-2032	1-7 years, aligned with seedling production cycle
Medium term	2033-2042	7-15 years, reflecting seedling maturation and the increasing uptake of advanced genetics in the market across the US and Brazil forestry sector
Long term	2043-2050	>15 years

Our risk assessment process considers the likelihood of the risk occurring and the likely severity of its consequences. Given the evolving impacts of climate change, ArborGen also assesses the vulnerability of the business to gradual and progressive impacts. We consider the hazard, exposure to the hazard, and the vulnerability of the system or process to the hazard.

Climate related risks are integrated into ArborGen's Risk Management Framework. This means that climate change risks are tested and prioritised using the same methodology as all other risks.

Management reports on these risks to the ARC and the Board on at least a quarterly basis, including for incorporation into ArborGen's Risk Management Framework if necessary.

Key operational risks, including climate risks, form part of the annual risk management plan approved by the Board.

Our Risk Management Framework implements risk mitigation procedures for climate risks including:

- the geographical spread of production,
- tiling and field topography improvements,
- SOPs for soil moisture and other types of controls,
- irrigation systems, and
- the use of nets and other equipment to combat weather issues.

Metrics and Targets

ArborGen's greenhouse gas (GHG) emissions

ArborGen's primary source of Scope 1 and 2 GHG emissions is electricity use and transport fuel emissions associated with orchard equipment and business travel.

Table 5: Summary of ArborGen's FY25 Scope 1 and 2 emissions

Scope	Category	FY25 Emissions (tCO2-e)	FY24 Emissions (tCO2-e)
Scope 1: Direct emissions	Fuel – Diesel	1,258.91	990.2
	Fuel – Petrol / Gasoline	735.99	690.8
	Fuel - Other	55.26	94.7
	Fertilisers	279.30	
	Subtotal Scope 1	2,329.37	1,775.7
Scope 2: Indirect emissions (location-based)	Purchased Electricity Consumption	1,658.32	2,071.2
	Subtotal Scope 2	1,658.32	2,071.2
TOTAL Scope 1 and 2 emissions		**3,987.69**	**3,846.90**

Full details of ArborGen's GHG emissions inventory, the methodology, data limitations, and exclusions can be found in Appendix 4.

ArborGen has elected to rely on adoption provision 4 and not disclose its Scope 3 emissions at this stage because it is continuing to work on improving the availability of quality data on its Scope 3 emissions.

Recorded Scope 1 and 2 emissions have increased from FY24 to FY25 due to the inclusion of fertiliser data this year. On a like for like basis, ArborGen's reported Scope 1 and 2 emissions decreased from FY24 to FY25.

Assurance

ArborGen's Scope 1 and Scope 2 GHG emissions have been the subject of a limited assurance engagement. The details of that engagement and the assurance opinion are provided in Appendix 5.

GHG emissions intensity

US$63.2m / 3,987.69= US$15,849 of total sales revenue (from ArborGen's FY25 Annual Report and Financial Statements) per tCO_2-e (Scope 1 and Scope 2 as per the inventory above). The FY24 figure was US$17,416.62 per tCO_2-e.

US$18.2m / 3,987.69 = US$4,564 of gross profit (from ArborGen's FY25 Annual Report and Financial Statements) per tCO_2-e (Scope 1 and Scope 2 as per the inventory above). The FY24 figure was US$6,238.78 per tCO_2-e.

The emissions intensity figures have increased due to reduced total sales revenue and gross profit this financial year.

ArborGen's metrics for managing its climate-related risks and opportunities

Climate reporting within the forestry sector is still developing. We are not aware of industry-based metrics for measuring and managing climate-related risks and opportunities beyond our GHG emissions. However, we are monitoring developments in this space and will consider new metrics in future reporting years.

ArborGen has not yet set specific KPIs to measure and manage climate-related risks and opportunities. Our current strategic pillars have many aspects of our business strategy which could be said to align with climate-related risks, including relating to ArborGen's expansion in Brazil, optimising productivity, and a focus on market-driven genetics in the future.

Climate related metrics are not currently incorporated into ArborGen's remuneration policies. The Remuneration Committee will consider incorporating climate-related performance metrics for relevant roles, if appropriate.

ArborGen has not yet developed an internal emissions price.

Assets vulnerable to transition risks

We consider that all of our facilities are vulnerable to the transition risks including supply chain disruptions to varying degrees. In the absence of past and projected data relating to supply chain disruptions, ArborGen has assessed the financial impact of reduced labour following the impacts of COVID-19.

Our Riba di Rio Pardo nursery experienced significant reduction in labour levels during COVID-19, reducing production volumes by 10 million seedlings and increasing total cost of production. Therefore, ArborGen's total lost sales equated to over US$613,000 (R$3.1 million) per year.

The estimation can be used as a rough proxy to represent supply chain disruptions that may occur in the future due to climate-related impacts.

For FY25, ArborGen considers that this remains a useful metric and has made no change to its assessment of assets vulnerable to transition risks.

Assets aligned with climate-related opportunities

ArborGen's assessment of assets aligned with climate-related risks and opportunities reveals that approximately 75% of our assets are aligned with climate-related risks. 50% of our intangible assets are aligned with 50% of our opportunities. This is based upon the direct correlation of where are assets are located and the exposure of risk they have related to climate events.

For FY25, ArborGen has no significant change to this assessment.

Targets

ArborGen has not yet set climate-related targets and are continuing to assess which targets may be appropriate for its business.

Table 6: Capital expenditure deployed towards climate-related risks and opportunities

FY24	FY25
US$300,000 for climate-related capital expenditure.	US$652,000 for climate-related capital expenditure (as outlined above).
US$3.7 million in research and development of which approximately 48% is associated with advanced genetic seedlings which have greater resistance to disease, weather and pests. These dollars are associated with our R&D spend in the product families with these specific trait characteristics.	US$2.4 million was spent on R&D of which approximately 50% would have been for advanced genetic seedlings.

This financial year has seen an increase in climate-related capital expenditure and a decrease in R&D spending (due to ArborGen's sale of its invitro business).

Physical risk exposure assessment

In 2024, WSP New Zealand Limited conducted an exposure assessment[2] of ArborGen's sites across the Southern United States and Brazil impacted by the physical risks of drought and flooding due to climate change. This work was not a physical risk assessment – the vulnerability of ArborGen's sites was not assessed at this stage. Detail on the methods, assumptions and limitations of the exposure assessment is set out in Appendix 1 to this report

That assessment has been updated for these climate statements. In FY25, ArborGen acquired a new site in Teresina, Brazil which has been included in the assessment for FY25.

In preparing these climate statements, ArborGen became aware that its Shellman Nursery, Georgia, site was inadvertently excluded from the exposure assessment conducted last year. ArborGen has restated the physical metrics for FY24 to include the Shellman Nursery site.

Drought

The exposure assessment of ArborGen's nurseries located in the US and Brazil to drought in 2050 used data from the World Bank Group Climate Change Knowledge Portal. Exposure to drought was assessed in ranges using the Standardised Precipitation- Evapotranspiration Index (SPEI)[3]. The SPEI is a multiscalar drought index based on climatic data. It is used to determine the onset, duration and severity of drought conditions compared to normal conditions. A higher SPEI index means decreased drought conditions and a lower SPEI index means increased drought conditions.

The assessment was based on the IPCC's Sixth Assessment scenarios SSP2-4.5 and SSP3-7.0 consistent with ArborGen's 'Too Little, Too Late' scenario and 'Hot House' scenario.

[2] Exposure is defined as: "The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected" (XRB Climate-related Disclosures Staff Guidance, pg. 25 in reference to IPCC, 2022 Full Report, p.43). Exposure is one component of assessing physical climate risk. A physical climate risk assessment typically assesses both exposure and vulnerability.

[3] The SPEI is a multiscalar drought index based on climatic data. It is used to determine the onset, duration and severity of drought conditions compared to normal conditions. A higher SPEI index means decreased drought conditions and a lower SPEI index means increased drought conditions.

The World Bank Group Climate Change Knowledge Portal updated its metadata in 2025.[4] This means the data available on its portal when accessed in May 2025 is different (more recent) than the data accessed for the FY24 exposure assessment completed in July 2024. WSP has repeated the exposure assessment for ArborGen's FY24 portfolio using the latest data available from the Climate Change Knowledge Portal. WSP has used the latest data available from the Climate Change Knowledge Portal to also complete an exposure assessment for ArborGen's FY25 portfolio.

Results of the drought exposure assessment have been presented in the following tables using ranges (e.g. 0 to 1, 1 to 2, etc.). The World Bank data used for the assessment is of a higher resolution.

The results have been simplified so they are easier to present visually but still provide a useful output. This simplification means the maps do not show small differences (<1.0 SPEI index change) between the scenarios.

The results provided here help ArborGen to better understand the projected future exposure of its nurseries to drought in the geographies in which it operates.

USA

Table 7: Percentage of ArborGen's US sites exposed to SPEI drought index ranges

SPEI index range	Too little, too late scenario*, 2050				Hot house scenario*, 2050			
	Number of US ArborGen nurseries located in range		Percentage (%) US ArborGen nurseries located in range†		Number of US ArborGen nurseries located in range		Percentage (%) US ArborGen nurseries located in range†	
	FY24‡	FY25	FY24‡	FY25	FY24‡	FY25	FY24‡	FY25
1 to 2	0	0	0%	0%	0	0	0%	0%
0 to 1	3	3	37%	37%	1	1	12%	12%
-1 to 0	5	5	63%	63%	7	7	88%	88%
-2 to -1	0	0	0%	0%	0	0	0%	0%

*Data based on SSP2-4.5 and SSP3-7.0 was used for the 'Too little, too late' and 'Hot house' scenarios respectively.

†Percentage (%) figures have been rounded to the nearest whole number.

‡FY24 figures have been restated in accordance with NZ CS 3 paragraphs 44-46. The FY24 figures now include the Shellman Nursery, Georgia, US site that was inadvertently excluded from the assessment in ArborGen's FY24 Climate Statement. The methodology for assessing ArborGen's FY24 portfolio was also updated to use the latest metadata (2025) available from World Bank Group.

Analysis of key trends – USA

No material change in exposure to fluvial flooding has been determined for ArborGen's US portfolio between FY24 and FY25.

[4] World Bank Group (2025) Metadata: Climate Change Knowledge Portal (CCKP)

Brazil

Table 8: Percentage of ArborGen's Brazil sites exposed to SPEI drought index ranges

SPEI index range	Too little, too late scenario*, 2050				Hot house scenario*, 2050			
	Number of Brazil ArborGen nurseries located in range		Percentage (%) Brazil ArborGen nurseries located in range†		Number of Brazil ArborGen nurseries located in range		Percentage (%) Brazil ArborGen nurseries located in range†	
	FY24‡	FY25	FY24‡	FY25	FY24‡	FY25	FY24‡	FY25
1 to 2	0	0	0%	0%	0	0	0%	0%
0 to 1	1	1	4%	4%	5	5	21%	21%
-1 to 0	23	24	96%	96%	19	20	79%	80%
-2 to -1	0	0	0%	0%	0	0	0%	0%

*Data based on SSP2-4.5 and SSP3-7.0 was used for the 'Too little, too late' and 'Hot house' scenarios respectively.

†Percentage (%) figures have been rounded to the nearest whole number.

‡FY24 figures have been restated in accordance with NZ CS 3 paragraphs 44-46. The FY24 figures now include the Shellman Nursery, Georgia, US site that was inadvertently excluded from the assessment in ArborGen's FY24 Climate Statement. The methodology for assessing ArborGen's FY24 portfolio was also updated to use the latest metadata (2025) available from World Bank Group.

Analysis of key trends – Brazil

The acquisition of a new nursery in Teresina, Brazil has shifted the exposure of ArborGen's overall portfolio in Brazil. Overall, ArborGen's Brazil portfolio now has a larger proportion of nurseries at a higher SPEI Index range (meaning lower exposure to drought). No other materials changes in key trends have been identified.

Fluvial Flooding

The assessment of ArborGen's sites applied data from Aqueduct Floods to carry out a high-level desktop based exposure assessment of its sites to 1 in 100 year fluvial (riverine) flooding event in 2050. It does not cover coastal flooding or pluvial (rain) flooding. Coastal flooding was not covered since none of ArborGen's nurseries or partner nurseries are located near the coast. Pluvial flooding was not covered due to a lack of readily available, suitable data to assess this hazard for the US or Brazil.

No modelling or GIS spatial analysis was conducted. ArborGen sites were deemed to be exposed to fluvial flooding if the site location overlapped with a flood depth of any amount >0 decimetres. Fluvial flood exposure has only been quantified for the 1 in 100-year flood frequency under two climate scenarios. The exposure results do not show ArborGen's maximum fluvial flood exposure. Some locations could be exposed to fluvial flood hazard for return periods greater than 1 in 100 years under each climate scenario.

The following tables indicate ArborGen's exposure of its sites within the flood plain of a 100-year return flooding events for both RCP4.5 and RCP8.5 scenarios for FY25 with comparative data from the FY24 assessment.

The data used to assess fluvial flood exposure is based on the IPCC's Fifth Assessment scenarios: RCP4.5 and RCP8.5. This was the best flood data available given the time available at the point of assessment. Data based on the RCP scenarios is still appropriate for a high-level exposure assessment.

USA

Table 9: Percentage of ArborGen's US sites exposed to 1 in 100 year return period fluvial flood event

Scenario	Too little, too late scenario†, 2050		Hot house scenario†, 2050	
	FY24	FY25	FY24	FY25
Number of ArborGen nurseries exposed to flood hazard*	1 of 8	1 of 8	1 of 8	1 of 8
Percentage (%) of ArborGen nurseries exposed to flood hazard*	12.5%	12.5%	12.5%	12.5%

*Calculated based on exposure to a 1 in 100 year return period fluvial (river) flood event.

†Data based on RCP4.5 and RCP8.5 was used for the 'Too little, too late' and 'Hot house' scenarios respectively.

‡FY24 figures have been restated in accordance with NZ CS 3 paragraphs 44-46. The FY24 figures have been corrected to include the Shellman Nursery, Georgia, US site that was inadvertently excluded from the FY24 metrics disclosed in ArborGen's FY24 Climate Statement.

Analysis of key trends – USA

The assessment has not identified any material changes in the exposure of ArborGen's US portfolio between FY24 and FY25.

Brazil

Table 10: Percentage of ArborGen's Brazil sites exposed to 1 in 100 year return period fluvial flood event

Scenario	Too little, too late scenario†, 2050		Hot house scenario†, 2050	
	FY24§	FY25	FY24§	FY25
Number of ArborGen nurseries exposed to flood hazard*	1 of 24	2 of 25	2 of 24	3 of 25
Percentage (%)‡ of ArborGen nurseries exposed to flood hazard*	4%	8%	8%	12%

*Calculated based on exposure to a 1 in 100 year return period fluvial (river) flood event.

†Data based on RCP4.5 and RCP8.5 was used for the 'Too little, too late' and 'Hot house' scenarios respectively.

‡FY24 figures have been restated in accordance with NZ CS 3 paragraphs 44-46. The FY24 figures have been corrected to include the Shellman Nursery, Georgia, US site that was inadvertently excluded from the FY24 metrics disclosed in ArborGen's FY24 Climate Statement.

§FY24 figures have been restated in accordance with NZ CS 3 paragraphs 44-46. The FY24 figures have been corrected to include the Shellman Nursery, Georgia, US site that was inadvertently excluded from the FY24 metrics disclosed in ArborGen's FY24 Climate Statement.

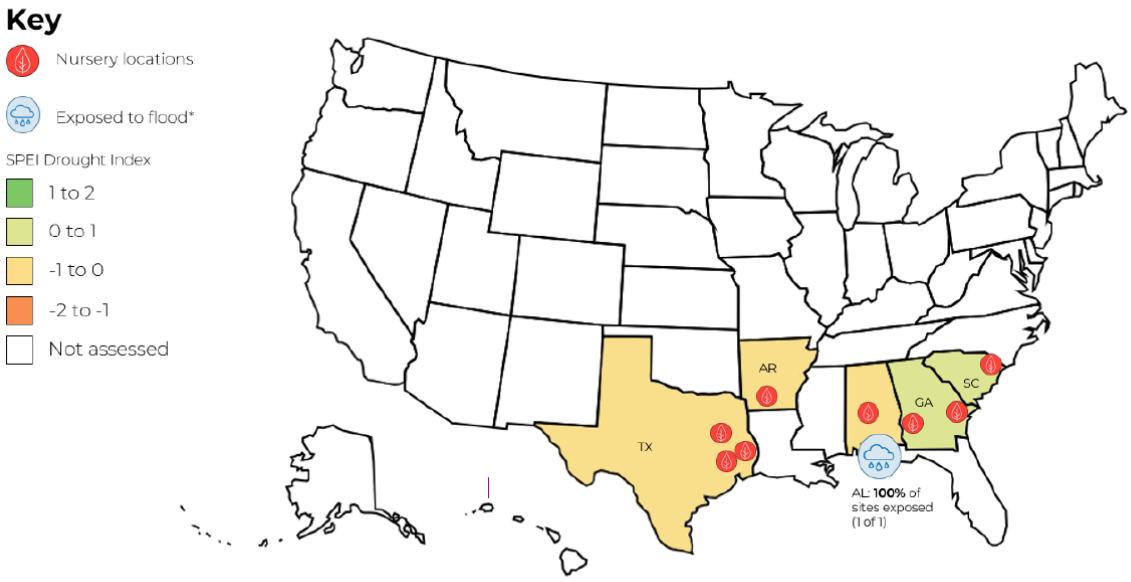
Analysis of key trends - Brazil

The assessment has identified a small increase in the exposure of ArborGen's Brazil portfolio to fluvial (river) flooding. This is due to the acquisition of a new site in Teresina, Brazil that is exposed to fluvial flooding as per the assessment methodology. ArborGen should note that while this acquisition has increased the Brazil portfolio exposure to fluvial flood risk it has also decreased the portfolio exposure to drought – a hazard that is significant for Brazil and has resulted in material financial impact within the current reporting period.

Exposure assessment - Maps

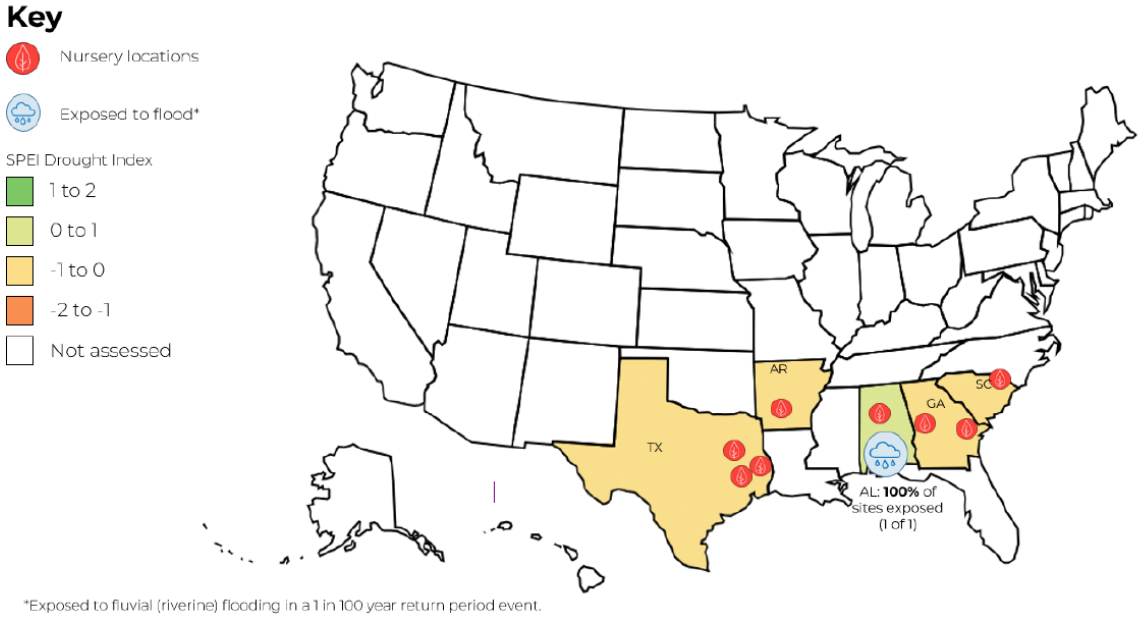
The following maps identify where ArborGen's most exposed sites are for two climate scenarios aligned with ArborGen's climate scenario analysis: 'Too Little, Too Late' and 'Hot House'. They supplement the tables above.

FY25 climate-related metrics
USA: Too Little, Too Late scenario, 2050



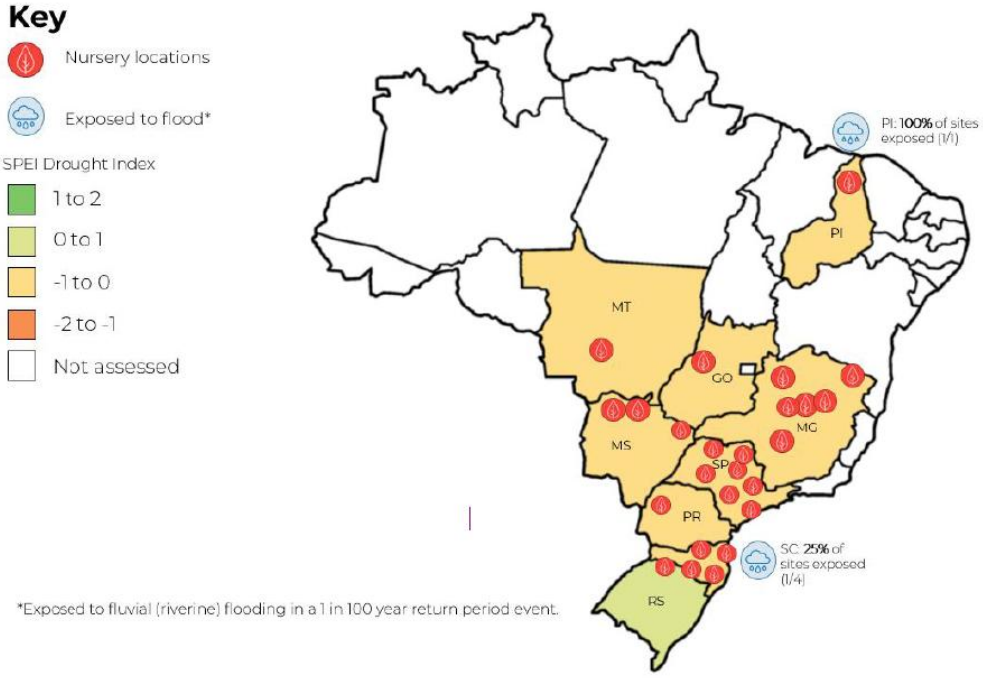
*Exposed to fluvial (riverine) flooding in a 1 in 100 year return period event.

FY25 climate-related metrics
USA: Hot House scenario, 2050

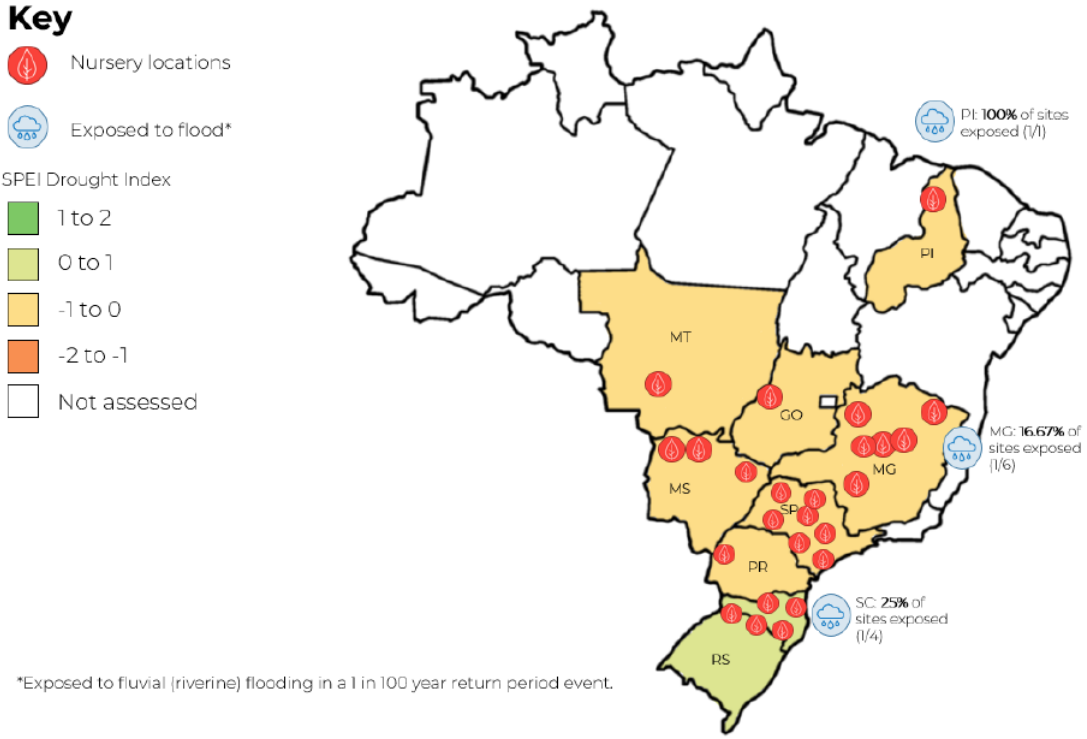


*Exposed to fluvial (riverine) flooding in a 1 in 100 year return period event.

FY25 climate-related metrics
Brazil: Too Little, Too Late scenario, 2050



FY25 climate-related metrics
Brazil: Hot House scenario, 2050



Appendix 1:

Methods, assumptions and limitations

Methods, assumptions and limitations of exposure assessment

General

The exposure assessment is a high-level, desktop assessment covering ArborGen's nurseries and partner nurseries. It does not cover any other aspects of ArborGen's value chain, such as export lines or customer locations.

WSP chose nurseries within ArborGen's geographies of operation in the Southern US and Brazil by using the organisation's website to locate nurseries. Using the nursery addresses, WSP was able to assess the exposure of these sites to the climate hazards using the respective climate data.

The maps are informed by data publicly accessible and are made as an early spatial visualisation. No GIS spatial analysis, modelling or in-person site assessments have been conducted to inform this assessment.

ArborGen acknowledges that higher resolution data could exist at a subregional level and that it intends to investigate the availability of such datasets for use in future assessments.

WSP selected a dataset for flooding and a separate dataset for drought to apply across both the Southern US and Brazil. This maintained a level of consistency used across ArborGen's geographies of operation.

The climate datasets utilised in this assessment for drought and flood adopt different IPCC assessments. World Bank Group applies the IPCC's Sixth Assessment Report and the SSP-RCP scenarios. The Aqueduct Flood model applies the IPCC's Fifth Assessment Report and the RCP scenarios. These two datasets are relevant and have been aligned appropriately with ArborGen's climate scenarios.

The exposure assessment was conducted out to 2050, as this is the endpoint for ArborGen's climate scenarios. ArborGen acknowledges that the most significant divergence in physical climate hazard exposure is projected to occur towards the end of the century (post 2050). An assessment beyond 2050 would show a significant divergence in exposure between scenarios.

Drought

To assess ArborGen's exposure to drought across the Southern US and Brazil, WSP used the World Bank Group Climate Change Knowledge Portal to measure the projected exposure of ArborGen's sites to drought by 2050.

- The Climate Change Knowledge Portal utilises data from the Coupled Model Inter- comparison Projects (CMIP6). The CMIP6 supports the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report.
- To measure drought exposure, the Standardized Precipitation Evapotranspiration Index (SPEI) Drought Index was selected as a measure for determining drought. To align with ArborGen's climate scenarios the assessment utilised the SSP2-4.5 (Too Little Too Late) and SSP3-7.0 (Hot House World) scenarios for the time range of 2040-2059 aligned with ArborGen's long-term time horizon.
- Exposure for each site was determined by the given SPEI Index value for the respective state across the US and Brazil as shown in the maps above.

Results of the drought exposure assessment have been presented using ranges (eg 0 to 1). The World Bank data used for the assessment is of a higher resolution. The results have been simplified so they are easier to present visually but still provide a useful output. This simplification means the maps do not show small differences (<1.0 SPEI index change) between the scenarios.

Fluvial flood

To assess the exposure of areas where ArborGen's US and Brazil nurseries are, WSP conducted via a desktop assessment using visual inspection of the Aqueduct Floods datasets to measure the extent of fluvial (riverine) flood exposure in 2050 for a 1 in 100-year return period event. Aqueduct Floods is an open-source tool that uses peer reviewed data to map flood exposure.

The Aqueduct Floods dataset allows users to select a climate projection model appropriate for the scope of the assessment to project flood inundation. For this exposure assessment, WSP used the Geophysical Fluid Dynamic Laboratory Earth System Model (GFDL ESM2M) developed by the National Oceanic and Atmospheric Administration (NOAA).

The exposure of ArborGen's sites to fluvial (river) flooding was assessed. ArborGen sites were deemed to be exposed to fluvial flooding if the site location overlapped with a flood depth of any amount >0 decimetres.

No modelling or GIS spatial analysis was conducted.

The dataset utilises the IPCC Fifth Assessment Report to produce data on future scenarios (RCP4.5 and RCP8.5) which align with ArborGen's climate scenarios.

The assessment of flood exposure is limited to fluvial (riverine) flooding. It does not cover coastal flooding or pluvial (rain) flooding. Coastal flooding was not covered since none of ArborGen's nurseries or partner nurseries are located near the coast. Pluvial flooding was not covered due to a lack of readily available, suitable data to assess this hazard for the US or Brazil.

Fluvial flood exposure has only been quantified for the 1 in 100-year flood frequency. The exposure results do not show ArborGen's maximum fluvial flood exposure. Some locations could be exposed to fluvial flood hazard for return periods greater than 1 in 100 years under each climate scenario.

Other physical risk exposures

ArborGen acknowledges that the physical risk metrics provided cover only a subset of its priority physical climate risks. While these metrics give an indication of its exposure to drought and fluvial (river) flooding, they do not capture exposure to other key hazards for ArborGen, such as pluvial (rain) flooding, hurricanes, cyclones, storm events, and frost. These other hazards were excluded from the assessment due to the lack of readily available, suitable data to perform an exposure assessment.

Climate change disrupts to supply chain (including labour)

The method used to develop this metric began with analogising past events causing disruptions to ArborGen's supply chain to infer the potential impact on business activities of a significant event in the economy. By referring to COVID-19, ArborGen has selected an illustrative example of non-directly-climate-related supply chain impact on its business. Analogising the impacts of COVID-19 on ArborGen's supply chain to climate-related impacts provides some information, but ArborGen recognises the uniqueness of the potential disruptions of climate-weather related events which will not be transferrable from COVID-19. Understanding the full extent of the financial impact of a supply chain disruption is complex as it is multifaceted issue, requiring extensive data and financial reporting, as well as a deepened understanding of ArborGen's supply chain and how it operates. ArborGen acknowledges that more data and information may exist in relation to its supply chain. We intend to mature our assessment in future reporting years for future assessments (ie for FY25 reporting) to include other aspects of the supply chain, such as logistics and distribution lines.

Opportunity metric (R&D)

R&D spend for genetic materials associated with traits in disease, weather and pests were pulled by product families currently being developed with these genetic characteristics. These traits, regardless of climate change issues, are the big three traits that are consistently sought after in the industry and by ArborGen's customers. Product families are developed that are more resistant to these traits over many generations of breeding and advanced selection processes. Because these traits are largely sought after, the competitive advantages, the associated spending for the trait selections and breeding and other key information associated with these traits can be discerned from ArborGen's annual R&D investments. It should be noted that specific trait characteristics costs cannot be segregated easily if it is combined with other traits within one product family.

GHG emissions data collection, quantification and uncertainties

All GHG emissions data provided is captured by ArborGen's finance and accounting team, in separate files for US sites and for sites in Brazil. All emissions calculations were carried out in Microsoft Excel. The supplied source data was multiplied using the relevant emissions factor. Unless otherwise stated, all emissions factors were sourced from the EPA Emissions Hub 2024.

All measurements and data are based on supplier invoices and records housed in ArborGen's finance and administration system and are largely complete and reliable. Overall accuracy of the emissions profile depends on:

a) how well the accounting codes reflect the nature of the activities they are designed to cover;

b) how consistently ArborGen's finance and accounting team apply the accounting codes; and

c) how accurately and consistently the operational boundaries have been applied to the various accounting codes.

Scope 3 data is more difficult to collect as it includes emission reporting for third parties, for transactions where the emission source is not directly purchased by ArborGen or where the requirement is to capture emissions associated with the use of a natural resource. Scope 3 emissions include business travel, third party freight carriers, refrigerated vans leased by ArborGen and rented to our customers, water usage from wells, lakes, etc, and waste generation. Most of the items in Scope 3 will require that the emissions be extrapolated from a measurement that can be used to estimate emissions. For business travel, we will use SAP Concur, which is our travel and entertainment reporting software, to capture additional data related to expense reporting such as mileage for transportation and number of nights purchased for accommodations. For logistics, we invoice van rentals at a daily rate so we can capture days used. We will also track freight mileage through a combination of spreadsheet documentation and/or requesting that freight vendors include mileage on their invoices. We also currently track water usage at some of our sites and will need to investigate our options for putting meters on other water sources where usage is not currently tracked. We are still trying to determine the best measurements for waste which includes everything from office waste to MCP bags. Again, measurements will vary with accounts payable transactions providing the most readily available data. Beyond that, we will look at using the number of employees to extrapolate waste generation, bag counts to extrapolate MCP bag waste, etc.

Appendix 2 – ArborGen's scenario analysis

ArborGen's scenario analysis process in FY24 involved:

- Engaging external consultants (**WSP New Zealand Ltd**) to support our climate scenario analysis, our identification and assessment of climate-related risks and opportunities, and the development of some metrics for vulnerability to climate-related physical and transition risks.

- Running a series of workshops with its staff and executive management (Chief Executive, Chief Financial Officer, Vice President of Operations, and General Manager of Operations (Brazil)), which involved:

  - starting with publicly available information for the agricultural sector;
  - defining scenario parameters for ArborGen's climate scenarios;
  - aligning ArborGen's climate scenarios with the Aotearoa New Zealand Climate Standards and accompanying guidance from the External Reporting Board (**XRB**) and Financial Markets Authority;
  - refining ArborGen's scenario narratives and climate-related risks and opportunities; and
  - identifying metrics for physical and transition risks, and climate-related opportunities.

- Board review, consideration, and approval of the scenario analysis process and outcomes.

We have not conducted any modelling, nor quantitative financial impact assessments.

We consider that the scenarios below are the most relevant and appropriate to assessing ArborGen's resilience and strategy because they are built on widely-used, international baselines adapted to ArborGen's primary production areas.

Time horizons

We selected three time-horizons for our climate scenarios and climate-related risks and opportunities aligned with our production lifecycles for our seedlings and forecasted adoption of advanced genetics.

Table 11: Time horizons

Time horizon	Year	Rationale
Short term	2025-2032	1-7 years, aligned with seedling production cycle
Medium term	2033-2042	7-15 years, reflecting seedling maturation and the increasing uptake of advanced genetics in the market across the US and Brazil forestry sector
Long term	2043-2050	>15 years, through to 2050

Data sources

To develop climate scenarios relevant to ArborGen's operational geographies in South America and the Southern US (the states of Alabama, Arkansas, Georgia, Florida, Texas, and South Carolina), we selected the Intergovernmental Panel on Climate Changes (**IPCC's**) SSP-RCP[5] global scenarios and pathways.

[5] Shared Socio-economic Pathways (**SSPs**) are baseline narrative scenarios that identify socio-economic assumptions, geopolitical assumptions and economic and technological trends. These form the basis for modelling the IPCC's SSP-RCP scenarios, which combine the baseline SSP scenarios with radiative forcing levels from the Representative Concentration Pathways (**RCPs**) to impose global warming targets.

ArborGen uses weather and climate data from the United States federal agency the National Oceanic and Atmospheric Administration (**NOAA**) for its Southern US operations and Probable Futures for operations in Brazil.[6] Through these data sources, ArborGen can assess exposure to climate hazards across its sites. This can be used for the long term planning and as a tool within ArborGen's risk management framework for its physical climate-related risks and opportunities.

Table 12: Scenario archetypes used to construct ArborGen's scenarios

Scenario archetypes	Orderly	Too little, too late	Hot house world
Shared Socio-economic Pathways (SSP-RCP)	SSP1-1.9: Sustainability, very low GHG emissions	SSP2-4.5: Middle of the road, low GHG emissions	SSP3-7.0: Regional Rivalry, high GHG emissions
Representative Concentration Pathways (RCP)	RCP2.6	RCP4.5	RCP8.5

Temperature outcomes and emissions reduction pathways

ArborGen's climate scenarios focus on three temperature outcomes and emissions pathways aligned with the requirements of the XRB. These support us in exploring the diverging risks and opportunities of each scenario pathway.

Table 13: Temperature outcomes and emissions pathways for each scenario

Scenario archetypes	Orderly	Too little, too late	Hot house world
Temperature outcome (2100)	1.5°C	2.7°C	>3.0°C
Temperature outcome at endpoint (2050)	1.6°C	2.0°C	2.1°C
Emissions pathway	SSP1–1.9: "The world shifts gradually, but pervasively, toward a more sustainable path, emphasising more inclusive development that respects perceived environmental boundaries."	SSP2–4.5: "The world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns. Development and income growth proceeds unevenly, with some countries making relatively good progress while others fall short of expectations."	SSP3–7.0: "A resurgent nationalism, concerns about competitiveness and security, and regional conflicts push countries to increasingly focus on domestic or, at most, regional issues. Policies shift over time to become increasingly oriented toward national and regional security issues."

[6] With limited climate science and data publicly available for Brazil, ArborGen has referenced the Probable Futures data on climate projections for Brazil. Probable Futures is a not-for-profit climate literacy initiative that uses a simulation framework: CORDEX-CORE(8). The scale of data provided through this source creates a notable degree of confidence.

Underlying assumptions

ArborGen's scenarios draw on the underlying assumptions of the IPCC SSP-RCP scenarios and emission reduction pathways. These scenarios cover the assumptions required to be disclosed by the XRB, including: policy and socioeconomic assumptions; macroeconomic trends; energy pathways; carbon sequestration from afforestation and nature-based solutions and technology assumptions including negative emissions technology. ArborGen's intention is to ground its selected scenarios in credible and commonly adopted assumptions to create logical climate scenarios for primary users to compare against others in the same sector. The IPCC's scenarios qualify.

ArborGen's scenario narratives

Development of ArborGen's scenario narratives was informed by an understanding of driving forces that have the greatest influence in shaping future outcomes for ArborGen.

These tables provide narrative descriptions of ArborGen's three climate scenarios.

Table 14: Orderly scenario

End of century global temperature outcome	Relative level of physical impacts	Relative level of transition impacts	SSP-RCP scenario
1.5°C	Moderate (in the short-medium term)	High (in the short term)	SSP1-1.9

The world moves deliberately toward prioritising the health of the planet. Governments work together to achieve the Paris Agreement's Net Zero 2050 pledge and the commitments of the Kunming-Montreal Global Biodiversity Framework. Biodiversity and the wellbeing of people significantly improves. ArborGen encounters generally stable economic and environmental conditions and continues to work in an orderly manner to adapt to climate change.

Consumer behaviour shifts, prioritising both sustainability and re-use of materials as well as an increased focus on carbon sequestration. ArborGen experiences increased sales to supply stock for reforestation and afforestation projects. Forestry remains an attractive sector to work in. ArborGen benefits from this and promotes itself as an employer of choice in an environmentally conscious society.

The increasingly challenging climate grows demand for trees with increased resistance to climate and pathogens. ArborGen invests in research and development to diversify its seedling varieties. Technology advancement eases the pressure of labour shortages as the adoption of automated methods makes ArborGen's operations more efficient and resilient.

The physical impacts of climate change still present challenges to ArborGen in an Orderly scenario, including periods of drought and flooding events. Climate events occur periodically but due to active investment in resilient materials for the infrastructure of its orchards and nurseries, ArborGen is prepared and anticipated impacts are manageable.

Banks and other lenders prioritise sustainability. This creates significant opportunities for ArborGen to utilise green bonds and sustainability linked loans (SLLs). Many of ArborGen's customers also have increased access to capital associated with sustainability linked lending.

Strong land-use change regulation is enforced to protect ecosystems. Deforestation is eliminated completely in some regions and vastly restricted in others. ArborGen's customers are incentivised to scale up reforestation and afforestation projects with the prioritisation of sustainable materials (timber) and new policy for carbon sequestration and reforestation. This demand generates more sales for ArborGen.

Table 15: Too little, too late scenario

End of century global temperature outcome	Relative level of physical impacts	Relative level of transition impacts	SSP-RCP scenario
>2.0°C	Moderate (in the short-medium term) - High (in the long term)	Moderate (in the short term) – Severe (in the medium term)	SSP2-4.5

Uncoordinated policy ambition and unsuccessful transition planning globally sees worsening physical climate change impacts and geopolitical tensions. Abrupt policy changes in the medium to long term exacerbate inequalities in society, sectors, and regions. Political parties globally eventually coordinate priorities and efforts to deal with climate change, but displacement and impact has been realised for and on communities, ecosystems, and industries.

Under this scenario, ArborGen's business faces increased extreme weather events and related challenges. Some growing seasons shift, impacting ArborGen's distribution cycles while changing regional climates require ArborGen to relocate some orchards and nurseries. Adaptation methods are implemented for both ArborGen's infrastructure and processes, including modified growing methods and continued research into advanced genetics to create seedlings better suited to the evolving climate. ArborGen invests in resilient materials for the infrastructure of its orchards and nurseries to reduce the impact of extreme weather events. After 2050 physical climate change impacts worsen.

Unlike farming and other industries in the primary industries sector, forestry incentivises jobs and the desirability to work through its known contribution to the bioeconomy and carbon sequestration. This creates greater opportunity for ArborGen to become an employer of choice and increases the supply of available labour and labour flexibility to ArborGen.

Consumer behaviour shifts towards prioritising carbon sequestration as a positive mitigation for the transition towards a low carbon world in the late 2030s. This increases demand from ArborGen's customers for seedling stock.

The role of carbon sequestration and reforestation becomes prominent in attempts to stabilise carbon emissions. To match this demand, ArborGen invests in technologies for developing genetically advanced seedlings that maximise carbon sequestration. ArborGen experiences a significant uptake in sales to boost forestry. The increasing necessity for resilience in trees sees ArborGen invest in technologies to strengthen the adaptability of its seedlings.

Table 16: Hot house world scenario

End of century global temperature outcome	Relative level of physical impacts	Relative level of transition impacts	SSP-RCP scenario
>3.0°C	Moderate - High (by the medium term) – High (in the long term)	Low (with a slow but steady increase over time)	SSP3-7.0

The world continues with business as usual for the coming decades. Globally, an economic and social development focus built on fossil-fuel intensive growth yields little climate regulation.

ArborGen is frequently impacted by extreme weather events including flooding, hurricanes, and drought, leading to possible supply chain disruptions and changes in customer buying behaviour. To cope with the severity of events ArborGen invests in resilient materials for the infrastructure of its orchards and nurseries to reduce the impact of extreme weather events. After 2050 physical climate change impacts worsen significantly.

Severe flooding events erode soil and ArborGen's bare root seedlings are exposed, leading to damage. Hurricanes and flooding drive ArborGen to diversify its locations across the US and Brazil to increase the security of its stocks. Drought sees increasing restrictions on water and changes to soil composition which are vital components for successful seedling growth. The conditions become increasingly favourable for pests and pathogens.

The need for adaptation and resilient infrastructure re-builds sees an increase demand for building materials including timber. ArborGen is a key player in this increase. Distribution times may be impacted by seedling production and supply chain disruptions through climate-related events. Input costs associated with carbon are likely to increase.

In the long term, access to labour is impacted as migrant workers are disrupted by extreme weather events and the inability to travel. ArborGen's Brazil operations rely on migrant workers, and productivity is negatively impacted.

The frequency and severity of extreme weather events spotlights the advantage of genetics technology to increase the adaptability of seedlings and trees to unfavourable conditions. The US government reconsiders its stance on biotechnology in the forestry sector and creates incentives to financially sustain the sector.

ArborGen invests into technologies to both strengthen the resilience of its seedlings and increase the carbon capture capacity, gaining a competitive advantage.

Appendix 3 – ArborGen's impact assessment for climate-related risks and opportunities

Table 17: Impact assessment for FY25

Risk / opportunity	Type	Potential business impacts	Risk rating	
Weather related events including excessive sudden rain, freeze events, drought conditions, hurricanes	Physical risk	Climate-related risks and weather events are material risks within ArborGen's existing Risk Management Framework. The nature of ArborGen's operations make climate and weather an integral part of its business operations across all geographies. ArborGen's seedling production cycle is highly dependent on consistent weather, with extreme weather events (such as hurricanes, drought and heavy rainfall) causing significant damage. Sudden heavy rainfall within the first 4-6 weeks post-planting can wash out seeds and damage seedlings, while pre-lifting heavy rain creates anaerobic conditions that harm seedling roots. Freeze events before and during lifting can cause root damage and freeze events that occur during pollination reduce annual seed volumes and harvests. Increased hurricane frequency leads to large-scale damage to orchards and nurseries, potentially necessitating relocation. Higher temperatures cause early seedling development, shortening seasons and can affect the timing of flower bagging - while hot, dry conditions negatively impact seed germination. Additionally, weather impacts also affect ArborGen's critical infrastructure causing delay and disruption to business activities.	Short term	Medium
			Medium term	High
			Long term	Very High

Risk / opportunity	Type	Potential business impacts	Risk rating	
Climate change disrupts supply chain including labour	Physical and transition risk	Climate change can significantly impact ArborGen's supply chain and labour forces, primarily through extreme weather events. Disruptions such as flooding, and droughts can damage infrastructure, delay transportation, and interrupt production schedules, leading to increased costs and inventory shortages. There are periods of production where ArborGen requires increased labour levels, and there is a likelihood of climate weather events disrupting the flow of labour and resources to orchards and nurseries throughout the US and Brazil. For the geographically isolated nurseries and orchards, particularly those in Northern Brazil, accessibility may be limited in the case of extreme weather events restricting supply. In Brazil, the already limited window of planting could be disrupted if the supply chain is implicated, resulting in late deliveries to key customers.	Short term	Low
			Medium term	Low – Medium
			Long term	Medium
Failure to meet customer and stakeholder expectations regarding climate risks and their management	Transition risk	ArborGen has a responsibility to its stakeholders and customers to uphold their expectations when it comes to climate risk and management. Failure to meet these expectations could lead to reduced investor confidence and potentially lower stock valuations. Inaction or ineffective action to take steps to improve ArborGen's climate responsibility may also impact customer perception of the brand and the confidence they have in the ArborGen product. Failure to comply with new and developing climate regulations set in the USA and Brazil, is likely to diminish stakeholder confidence.	Short term	Low
			Medium term	Low
			Long term	Medium

Risk / opportunity	Type	Potential business impacts	Risk rating	
Introduction of industry-related regulations and other market complexities influencing consumer and customer demand	Transition risk	The demand for ArborGen's seedlings can change due to various factors, including shifts in consumer preferences, larger economic trends and regulatory changes. The market for ArborGen products may also face turbulent periods in times of regulatory change in areas aimed at biodiversity protections, reducing deforestation and other sustainability practices. ArborGen has invested in the production of a core range of seedlings, therefore, if regulations and other factors were to cause shifts in demand for those seedlings this would require a significant change to ArborGen's business model. Increased costs may also flow from a shift in customer preference towards FSC certified products. Increased costs will be incurred in obtaining this certification and maintaining it. Acute weather events and chronic climatic changes, potentially reducing supply, will have an impact on general market demand and prices for seedlings. Where the demand fluctuates, there is a risk that ArborGen may not have the required inventory levels.	Short term	Low
			Medium term	Low
			Long term	Low
Increased demand for advanced genetics seedlings which have greater resistance to disease, weather and pests	Opportunity	There is an opportunity for ArborGen to continue increasing investment into research and development in its pursuit of breeding seedling varieties with greater resistance and adaptability to disease, weather and pests. Product diversification will help to protect ArborGen from any potential changes in the market for its core product offerings. There is potential to partner with other projects and companies to strategically increase investment into R&D. Partnerships can also provide an opportunity whereby partners can produce ArborGen's own genetic material – without requiring a need for expanding ArborGen's own nurseries and orchards. As customer demand and preferences for sustainable products increases over time, there is an opportunity to increase investment and production of genetic material in seedlings with enhanced carbon sequestration.	Short term	Medium
			Medium term	Medium
			Long term	Medium - High

Risk / opportunity	Type	Potential business impacts	Risk rating	
Increased customer demand for seedlings for afforestation and reforestation	Opportunity	As the market increasingly shifts towards reforestation and afforestation projects and sustainable materials, ArborGen could obtain a greater market share and enhanced competitive advantage for its product. ArborGen can respond to changing customer and consumer behavior and preferences through its R&D investment. There is an opportunity for ArborGen to continue to actively engage with carbon project developers who are pursuing large scale afforestation and reforestation projects in the Southern US and Brazil. Currently, ArborGen has one long term supply arrangement to provide both advanced genetics pine seedlings and hardwood seedlings. ArborGen should aim to continue seeking out similar long-term supply contracts.	Short term	Low
			Medium term	Medium
			Long term	High
Financial incentives for reforestation and promoting sustainable forest management practices eg, carbon credits	Opportunity	ArborGen will consider integrating sustainability into its operations to access a broader range of financing options, including green bonds, sustainability-linked loans, and impact investments. These financial instruments often attract investors who prioritise ESG considerations, thereby diversifying funding sources and potentially reducing borrowing costs. In the US forestry industry, financial incentive arrangements geared towards sustainability measures are currently allocated and targeted to not for profits, but this could change over time. There is an opportunity for private sector companies like ArborGen to potentially access more.	Short term	Low
			Medium term	Low – Medium
			Long term	High

Appendix 4 – GHG emissions inventory

The FY25 GHG inventory has been prepared in accordance with The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (GHG Protocol), and the United States Environmental Protection Agency (EPA) Scopes 1, 2 & 3 Emissions Inventorying and Guidance 2025 GHG Emission Factors Hub, with reference to the Ministry for the Environment (MfE) Measuring emissions: A guide for organisations 2024 Emission factors workbook.

ArborGen's baseline inventory measures emissions in the reporting years 2023 and 2024, which represents ArborGen's FY24 inventory, and their first GHG inventory. The base year has not been recalculated for the FY25 inventory, and a base year recalculation policy has not yet been developed.

The reporting period is in line with ArborGen's financial reporting period, this inventory covers ArborGen's emissions from 1 April 2024 to 31 March 2025.

Organisational Boundary

The organisational boundary for ArborGen's GHG reporting has been set using the GHG Protocol. All facilities and locations have been included in this report. ArborGen has used the operational control consolidation approach to define its organisational boundary, which includes all operations that ArborGen has operational control over. Direct control is determined by ArborGen's capacity to enact operational decisions for an emissions source. All emissions that ArborGen has direct control over in its own head office in Ridgeville, South Carolina; nurseries, seed orchards, distribution and research facilities located throughout Unites States, and Brazil are covered in this inventory. There are no facilities or operations that have been excluded from this inventory and/ or report.

The boundary follows the same approach as the organisational boundary in ArborGen's FY24 inventory. It is noted that one additional site has been acquired in Brazil during FY25.

Operational Boundary

Operational boundaries relate to the GHG emission sources and the extent to which the organisation can control them. ArborGen has chosen to include Scope 1 and Scope 2 emissions in the operational boundary for the FY25 GHG inventory.

The scope of emissions considered for ArborGen's FY25 inventory is summarised in Table 18.

Table 18: Scope of emissions reported in ArborGen's FY25 GHG inventory

Scope	Definition	Sources
Scope 1: Direct emissions	Direct emissions that occur during the FY from sources owned or controlled by ArborGen.	• Stationary fuel consumption • Mobile fuel consumption • Fugitive emissions (refrigerants) • Fertilisers
Scope 2: Indirect emissions	Indirect emissions from the generation of electricity that is purchased by ArborGen during the FY.	• Electricity consumed in buildings, facilities, and plant equipment

Scope 1 emissions are direct GHG emissions that occur from sources owned by ArborGen. Scope 1 emissions have been accounted for based on data received from ArborGen's records and invoices from sources directly owned and controlled by ArborGen. These include:

- Transport fuel emissions from diesel combustion from the use of tractors, pumps, generators; petrol combustion from vehicles (pickups and utv); stationary combustion from peerless dryers;
- Fertilisers.

Scope 2 emissions are indirect emissions from the generation of purchased electricity, measured by location-based monthly invoices, consumed by ArborGen, including:

- Electricity consumed in all offices;
- Electricity consumed in nurseries;
- Electricity consumed in seed orchards;
- Electricity consumed in distribution centres;
- Electricity consumed in research centres.

Data from ArborGen's GHG Reporting FY25 workbook has been used as the source data for calculating GHG emissions. The facilities measured, data collection unit, data collection methodology and uncertainty rating are summarised in Table 19.

Table 19: FY25 Scope 1 and 2 GHG Emissions

Source	GHG Emissions Source	Facilities Measured	Data Collection Unit	Data Collection	Uncertainty and Data Quality
Scope 1: Direct Emissions	Fuel – Diesel	All sites (US and Brazil)	Gallons and litres	Invoices/records – monthly totals recorded in ArborGen GHG Reporting FY25 workbook	Low uncertainty and high data quality – for US data quantities provided monthly per location. Brazil data quantities provided monthly.
	Fuel – Petrol/Gasoline	All sites (US and Brazil)	Gallons and litres	Invoices/records – monthly totals recorded in ArborGen GHG Reporting FY25 workbook	Low uncertainty and high data quality – for US data quantities provided monthly per location. Brazil data quantities provided monthly.
	Fuel - Propane	All sites (US and Brazil)	Gallons	Invoices/records – monthly totals recorded in ArborGen GHG Reporting FY25 workbook	Low uncertainty and high data quality – for US data quantities provided monthly per location. Brazil data quantities provided monthly.
	Fuel – Natural Gas	All sites (US and Brazil)	Cubic feet	Invoices/records – monthly totals recorded in ArborGen GHG Reporting FY25 workbook	Low uncertainty and high data quality – for US data quantities provided monthly per location. Brazil data quantities provided monthly.

Source	GHG Emissions Source	Facilities Measured	Data Collection Unit	Data Collection	Uncertainty and Data Quality
	Fuel - LPG	All sites (US and Brazil)	Kilograms	Invoices/records – monthly totals recorded in ArborGen GHG Reporting FY25 workbook	Low uncertainty and high data quality – for US data quantities provided monthly per location. Brazil data quantities provided monthly.
	Fertilisers	Seven US sites and Brazil	Kilograms	Quantities reported in ArborGen Fertiliser and Pesticide usage plan 2025 workbook	High uncertainty, low data quality – activity data directly measured by usage (gallons) reported for US states but assumptions. Activity data for Brazil reported in one figure for media and fertiliser (kg) but assumptions made for % Nitrogen calculations.
Scope 2: Indirect Emissions	Purchased electricity from the grid	All sites (US and Brazil)	Kilowatt-hour	Monthly invoices – totals recorded in ArborGen GHG Reporting FY25 workbook	Emission factors sourced from State-specific E-Grid emission factors (US) and sourced from OWID for national consumption in Brazil. Low uncertainty and high data quality – for US data quantities provided monthly per location. Brazil data quantities provided monthly.

Emission Factor Selection

For ArborGen's FY25 GHG inventory, most emission factors were sourced from the Environmental Protection Agency (EPA) GHG Emission Factors Hub, with the latest available data for 2025.

The emission factor for LPG measured in emissions per unit in kilograms was sourced from the Ministry for the Environment (MfE) New Zealand's latest emission factors workbook (2024).

The emission factor selection sources are summarised in Table 20.

Table 20: Scope 1 and 2 emissions factors

Source	GHG Emissions Source	Facilities Measured	Data Collection Unit
Scope 1: Direct Emissions	EPA 2025	Motor gasoline / petrol – Mobile Combustion	8.78 $kgCO_2$ / gallon
	EPA 2025	Diesel – Mobile Combustion	10.21 $kgCO_2$ / gallon
	EPA 2025	Diesel – Stationary Combustion	10.24 $kgCO_2$ / gallon
	EPA 2025	Natural Gas – CNG	0.0545 $kgCO_2e$ / ft^3
	EPA 2025	Propane	5.74 $kgCO_2e$ / ft^3
	MfE 2025	LPG	2.97 $kgCO_2e$ / kg
	MfE 2025	Non-urea nitrogen fertiliser	4.84 kgCO2e / kg N
	MfE 2025	Urea nitrogen fertiliser not coated with urease inhibitor	4.72 kgCO2e / kg N
	MfE 2025	Limestone	0.36 kgCO2e / kg
Scope 2: Indirect Emissions	EPA 2025	Electricity by Subregion (US) – SRVC	590.28 $lbCO_2e$ / kWh
	EPA 2025	Electricity by Subregion (US) – SRSO	840.96 $lbCO_2e$ / kWh
	EPA 2025	Electricity by Subregion (US) – SRMV	739.45 $lbCO_2e$ / kWh
	EPA 2025	Electricity by Subregion (US) – ERCT	738.09 $lbCO_2e$ / kWh
	EPA 2025	Electricity by Subregion (US) – FRCC	801.94 $lbCO_2e$ / kWh
	Our World in Data (OWID)	Electricity (Brazil, 2023)	0.098 $kgCO_2e$ / kWh

Global warming potential

The following global warming values were used to calculate emissions relative to carbon dioxide (CO_2), which includes emissions from carbon dioxide (CO_2), methane (CH_4), and nitrous oxide(N_2O). The global warming potentials sourced from the EPA 2025 GHG emission factors data workbook represent the figures published by the Intergovernmental Panel on Climate Change (IPCC) 5th report, however the updated figures used for the FY25 inventory have been sourced from the IPCC latest 6th report.[7]

Table 21: Global warming values

Major Greenhouse Gas (GHG)	Chemical Formula	Fifth Assessment Report (AR5)	Sixth Assessment Report (AR6)
Carbon Dioxide	CO_2	1	1
Methane – non-fossil	CH_4	28	27
Nitrous Oxide	N_2O	265	273

[7] https://ghgprotocol.org/sites/default/files/2024-08/Global-Warming-PotentialValues%20%28August%202024%29.pdf

Fertilisers

To calculate fertiliser emissions from US sites:

Data was reviewed from ArborGen's 'Fertiliser and Pesticide usage plan 2025' workbook and a list of all the reported fertilisers from each tab were collated to measure total usage per product across all eight reported US sites:

- Bullard and Jasper, Texas
- Bellville, Georgia
- Blenheim, South Carolina
- Bluff City, Arkansas
- Shellman, Georgia
- Selma, Alabama.

The total quantities of each product were assigned a % Nitrogen value based on two assumptions:

- %N taken from the N-P-K ratio of the product name (e.g. '16-2-4');
- The product was searched online to find the concentration of N.

For those fertilisers in a liquid state, a density conversion of the pounds per gallon of fertiliser used was applied. This density was estimated as 11.5 lb / gal based on the Bluff City Arkansas data. It is assumed this conversion is applicable for the fertilisers used on the other US sites reported, and therefore 11.5 lb / gal was used for all US liquid fertiliser calculations.

The liquid fertiliser quantities (reported in gallons) were multiplied by the density factor (11.5 lb / gal) to estimate the quantity of fertiliser used (in pounds). This was then multiplied by the % Nitrogen value to establish the weight of the nitrogen content in each product. The weight of the N content was then converted from pounds to kilograms.

The kilogram of N content were then multiplied by the emission factor sourced from the Ministry for the Environment (NZ) MfE Measuring Emissions: A guide for organisations – 2025 Emission Factor Workbook, 'Agriculture' tab, 'Fertiliser use'. After a review of available data online, it was decided that these emission factors were the most appropriate, available emission factor for fertilisers at the time.

To calculate fertiliser emissions from Brazil sites:

The total quantity of 'growing media and fertiliser' (2,125,724 kg) reported as activity data was used to estimate the proportion of fertiliser (kg) within this total quantity. ArborGen estimated that a proportion of fertiliser within this total quantity would be approximately 5%.

From this 5% (106,286 kg), the % N content was estimated as 16%, which is slightly lower than the average of all % N contents of the US sites (19%).

It is assumed that the fertiliser is in solid form, and therefore the % N content was calculated in kilograms, using 16% of the 106,286 kg.

The kg of N was then multiplied by the emission factor sourced from MfE Measuring Emissions: A guide for organisations – 2025 Emission Factor Workbook, 'Agriculture' tab, 'Fertiliser use'.

To test the proportionality of these results, WSP performed a high-level analysis comparing the proportion of fuel consumption of diesel fuel for Brazil with the proportion of estimated fertiliser emissions for Brazil. Out of the total diesel fuel consumption of combined Brazil and US sites (sites reporting fertilisers), the Brazil fuel quantity makes up approximately 24% of the total. Out of the total emissions of combined Brazil US sites (sites reporting fertilisers), the estimated Brazil fertiliser emissions make up approximately 29% of these which shows relative alignment of fertiliser emissions against fuel activity.

Exclusions

The emissions sources that have been excluded from the FY25 GHG inventory are shown in Table 22.

Table 22: Exclusions from ArborGen's FY25 GHG inventory

Source	GHG Emissions Source	Facilities Measured	Reason for Exclusion
Scope 1	Fugitive emissions	US, Brazil	ArborGen has identified minimal use of equipment or machinery is used that would require refrigerants and hence fugitive emissions are excluded.
	Transport fuel – Premium petrol	Brazil	No emissions reported – data received for Feb-25 and Mar-25, total of 106.5 L = 0.256 tCO2e, which is deemed not-material to this inventory (<0.001%)
	Bioethanol	Brazil	No emissions reported – data received for Jul- 24, Aug-24 and Nov-24. GHG Protocol Standard indicates biofuel and biomass emissions excluded from Scope 1 greenhouse gas inventory.
	Wood	Brazil	No emissions reported – data received for Aug-24. GHG Protocol Standard indicates biofuel and biomass emissions excluded from Scope 1 greenhouse gas inventory.
	Herbicides and pesticides	US (estimated Brazil)	Emissions from herbicides and pesticides have been excluded due to lack of available industry data and research on the emissions from the application of these products and volatilization of the chemicals. Majority of online sources of emission factors (e.g. emission factor for Glyphosate) are more likely reflective of the Scope 3 emission (manufacturing etc.) not the application and emissions from volatilization of the chemical. No quantities reported for Brazil therefore these would be estimated based on no activity data. Initial calculation of emissions from herbicides and pesticides using quantities reported in ArborGen Fertiliser and Pesticide usage plan 2025 workbook and an emission factor sourced from Ecoinvent equated to 30 tCO2e (15 tCO2e for US sites and doubled to estimate Brazil). This makes up approximately 1% of ArborGen's Scope 1 emissions and is therefore considered immaterial.

Appendix 5 – Independent assurance report

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Independent Assurance Report

Independent Assurance Report on ArborGen Holdings Limited's Greenhouse Gas ('GHG') Disclosures included within the Climate Statements for the year ended 31 March 2025.

To the Directors of ArborGen Holdings Limited

Our Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the gross GHG emissions, additional required disclosures of gross GHG emissions, and gross GHG emissions methods, assumptions and estimation uncertainty ('GHG disclosures'), within the scope of our limited assurance engagement (as outlined below) included in the Climate Statements for the year ended 31 March 2025, are not fairly presented and not prepared, in all material respects, in accordance with Aotearoa New Zealand Climate Standards ('NZ CSs') issued by the External Reporting Board (XRB), as explained on page 2 of the Climate Statements.

Scope of Assurance Engagement

We have undertaken a limited assurance engagement over the following GHG disclosures on pages 17 and 37 to 42 of the Climate Statements for the year ended 31 March 2025:

- Gross GHG emissions, in metric tonnes of carbon dioxide equivalent (tCO_2-e), classified as:
  - Scope 1
  - Scope 2 (calculated using the location-based method)

- Additional disclosures per paragraph 24 (a) to (d) of Aotearoa New Zealand Climate Standard 1: Climate-related Disclosures ('NZ CS 1'):
  - The statement describing that GHG emissions have been measured in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) ('the GHG Protocol') to the extent this pertains to Scope 1 and 2 emissions.
  - The statement that the GHG emissions consolidation approach used is the operational control approach, to the extent this pertains to Scope 1 and 2 emissions.
  - Sources of Scope 1 and 2 emission factors and the global warming potential ('GWP') rates used or a reference to the GWP source.
  - The summary of specific exclusions of Scope 1 and 2 emissions sources, including facilities, operations or assets with a justification for their exclusion.

Our assurance engagement does not extend to any other information included, or referred to, in the Climate Statements. We have not performed any procedures with respect to the excluded information and, therefore, no conclusion is expressed on it.

Key Matters to the GHG assurance engagement

Based on the procedures performed, we did not identify any key assurance matters that require communication in this report.

Other Matter – Comparative Information

The comparative GHG disclosures (that is GHG disclosures for the period ended 31 March 2024) have not been subject to assurance. As such, these disclosures are not covered by our assurance conclusion.

Director's Responsibilities for the GHG Disclosures

The Directors are responsible for the preparation and fair presentation of the GHG disclosures in accordance with the NZ CSs, which includes determining and disclosing the appropriate standard or standards used to measure the Company's GHG emissions. This responsibility includes the design, implementation and maintenance of internal controls relevant to the preparation of GHG disclosures that are free from material misstatement whether due to fraud or error.

Inherent Uncertainty in Preparing GHG Disclosures

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our Responsibilities

We are responsible for:

- Planning and performing the engagement to obtain the intended level of assurance about whether the GHG disclosures are free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our conclusion to the shareholders of ArborGen Holdings Limited.

As we are engaged to form an independent conclusion on the GHG disclosures prepared by management, we are not permitted to be involved in the preparation of the GHG information as doing so may compromise our independence.

Our Independence and Quality Management

We have complied with the independence and other ethical requirements of NZ SAE 1 *Assurance Engagements over Greenhouse Gas Emissions Disclosures*, issued by the XRB, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. We have also complied with the following professional and ethical standards:

- Professional and Ethical Standard 1: *International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand)*;
- Professional and Ethical Standard 3: *Quality Management for Firms that Perform Audits or Reviews of Financial Statement, or Other Assurance or Related Services Engagements* which requires the firm to design, implement and operate a system of quality management including policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements; and
- Professional and Ethical Standard 4: *Engagement Quality Reviews*.

Our firm is the statutory auditor of the financial statements of ArborGen Holdings Limited. These services have not impaired our independence as assurance practitioner for this engagement. The firm has no other relationship with, or interest in, the Group.

Summary of Work Performed

Our limited assurance engagement was performed in accordance with NZ SAE 1, and ISAE (NZ) 3410 *Assurance Engagements on Greenhouse Gas Emissions*. This involves assessing the suitability in the circumstances of ArborGen Holdings Limited's use of Aotearoa New Zealand Climate Standards (NZ CSs) as the basis for the preparation of the GHG disclosures, assessing the risks of material misstatement of the GHG disclosures whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the GHG disclosures.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.
The procedures we performed were based on our professional judgement and included enquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. In undertaking our limited assurance engagement on the GHG disclosures, we:

- Obtained, through enquiries, an understanding of ArborGen Holdings Limited's control environment, processes and information systems relevant to the preparation of the GHG disclosures. We did not evaluate the design of particular control activities, or obtain evidence about their implementation;
- Evaluated whether ArborGen Holdings Limited's methods for developing estimates are appropriate and had been consistently applied. Our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate these estimates;
- Performed analytical procedures on particular emission categories by comparing the current period's emissions activity to prior periods to understand fluctuations in activity data and made enquiries of management to obtain explanations for any significant differences we identified; and
- Selected a judgmental sample of activity to test the accuracy of emissions factors applied by the Company to the underlying activity data;
- Tested the completeness of emissions activity data by selecting a judgmental sample of items expected to be included in the GHG emissions calculation and verifying their proper inclusion;
- Considered the presentation and disclosure of the GHG disclosures.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Inherent limitations

Because of the inherent limitations of an assurance engagement, together with the internal control structure, it is possible that fraud, error or non-compliance may occur and not be detected.

Restrictions on use of our report

This report is made solely to the ArborGen Holdings Limited's Directors, as a body. Our assurance work has been undertaken so that we might state to them those matters which we are required to state in our assurance report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the ArborGen Holdings Limited and its Directors, as a body, for our work, this report or for the conclusions we have formed.

Grant Thornton New Zealand Audit Limited

Grant Thornton

Yasin Mohammed

Auckland

31 July 2025

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