



Planex Sustainability Report 2025

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MANAGEMENT COMMITMENT

Planex has been designing and manufacturing specialized steel storage systems since 1973. Our move in 2002 to a purpose-built facility in Hallam, Victoria, marked a significant step in our environmental journey. Designed with sustainability in mind, the factory plant features passive climate design elements such as a north-facing orientation, wide eaves, rooftop solar power, and native landscaping to support local birdlife.

This relocation also initiated a comprehensive review of our operations - including product design, manufacturing, logistics, and installation - to reduce our environmental impact across every stage of our business.

Planex's approach to systems management is externally acknowledged through certification to ISO9001 and ISO14001 standards, maintained since initial certification on August 28, 1996, and 2007 respectively. Additionally, Planex is part of the UNGC and commits to its Ten Principles of the UN Global Compact; in particular, for recycling and betterment of the environment.

Planex's [Business Partner Code of Conduct](#) is based on those Ten Principles.

Over the years, Planex has adhered to Furntech AFRDI Blue Tick product testing and Good Environmental Choice for a range of products since 2009. In 2018, Planex achieved AFRDI Green Tick at Platinum level (AFRDI 150 Sustainability Standard) certification for xLocker2 and Linea sliding door cabinets (recognized as GBCA Green Star Level A), marking a milestone for an Australian company.

PLANEX IN THE CONTEXT OF THE WIDER ENVIRONMENT

Planex, an Australian manufacturer of powder-coated sheet metal products, employs 40 people and serves multinational, corporate, educational, and government clients. We aim to meet high standards of product quality, functionality, and longevity in an environmentally responsible manner.

Our initiatives include improving waste stewardship related to the powder coat processes and using local fully recyclable Australian steel. We design and manufacture focusing on modularity, and disassembly, ensuring reuse, repurposing, and recycling.

By prioritizing Australian-made materials and services, we support the national economy, promote local businesses, and align with the 2024 Commonwealth Procurement Policy. This reduces environmental costs associated with imported goods and supports employment and economic stability, particularly highlighted during the COVID-19 pandemic.

We provide sustainable vocational training and rewarding employment to our local Melbourne community, indirectly supporting over 200 people.

REPORT SCOPE

This is the 8th edition of Planex's of our published Sustainability Report, detailing our environmental and sustainability objectives as well as performance data from 2019 to 2024. Reports from 2010-2019 established the foundational framework for this report and it adheres to "A Framework for Public Environmental Reporting - An Australian Approach (March 2000)" and is certified under the ISO 14001 Management System.

Environmental accomplishments and initiatives pre 2019 are listed in the Appendix of this report.

MANAGEMENT PERFORMANCE, POLICIES AND SYSTEMS

Planex maintains management systems across quality, environmental, and safety standards and has held ISO 9001 Quality Management certification since 1996 and ISO 14001 Environmental Management certification since 2007 and has integrated ISO 45001 safety principles into its systems. Current Management Standards followed: ISO 9001:2015 and ISO 14001:2015.

ENVIRONMENTAL PERFORMANCE

Planex has identified and developed programs to reduce the key environmental impacts of its manufacturing processes. Below is a summary table, followed by detailed explanations of each aspect and initiative.

Process	Aspect	Program	Initiatives 2019-2024	Action
Manufacture - Gas use	Gas use impacting on resources	Optimize gas efficiency	9% efficiency improvements to gas use equating to over 50 tonnes less GHG emissions per annum	Ongoing
Manufacture - Discharge to sewer	Harm to waterways	Maintain pH, heavy metal, phosphate, and discharge limits within the Trade Waste Agreement (South East Water No 8067)	Monthly and bi-annually third-party monitoring (3 separate companies) End of shift monitoring Minimize / substitute hazardous substances. Continual processes	Ongoing
Manufacture - Waste from production	Resource use	Change from polymer to steel pallet strapping	Replace non-recyclable polyester pallet straps to recyclable steel straps	Ongoing
Manufacture - Powder coating	Waste minimizing	Review transfer efficiency	Cleaning electrostatic powder coating hooks to optimise powder adhesion	Ongoing
	Waste repurposing	Surplus powders initiative	Offer surplus powder to other users instead sending to waste	Ongoing
	Waste powder disposal	Raise awareness to powder coat industry stakeholders of potential adverse impact of waste powder	Publish journal articles highlighting waste powder coat powder as both a valuable resource and a microplastic pollutant. Begin planning for industry reforms with powder manufacturers and users	Ongoing
	Waste powder as a replacement for virgin material	Test blends of waste powder as alternative to new powder	Waste powder tested for re-use to save sourcing new powder as >80% of embodied energy is used to manufacture new powders	Ongoing
Logistics - Transport	Resource use - Harm to waterways and air, damage to road surfaces	Optimize loads through using truck size to fit order size	Partnering long-term with trusted delivery teams allows us to optimize loads, cut down on inefficient trips, and provide smoother service. This is better for clients - and better for the environment - than switching between contractors based solely on price	Ongoing
		Company vehicle policy	Sourcing and use of efficient company vehicles	Ongoing
Packaging	Minimize waste	Packaging optimization	Minimal use of packaging that is fit for purpose Use recyclable packaging	Ongoing
Environmental	Sustainability	Product Traceability	QR code on all products to identify	Ongoing
		Furntech Green Tick GECA	Third-party certification of products	Ongoing
		Other programs supporting sustainability	Policy review, audit program, hazard and incident reporting, emergency management, complaint handling, staff training plan and management review of environmental objectives and targets	Ongoing

Process	Aspect	Program	Initiatives 2019-2024	Action
Environmental	Sustainability	Planex's stewardship programs	Independent 3rd party certifications of Planex's stewardship programs for waste. Delivering products to local customers with minimal packaging	Ongoing
		Minimise waste	Replacing fossil fuel-based foam with recyclable cardboard (avoid sending polymer to landfill)	Ongoing
		Carbon number	Identify value of embodied carbon number for Planex products Calculate a carbon footprint number for leading products from cradle to factory gate	Initial calculations completed Ongoing refinement
Environment	Minimise waste	Australian Furniture Association	Participant in Advisory Panel to the AFA, Australian Furniture Association Sustainable Procurement Report Reduce office furniture going to landfill	Ongoing
ESD	Materials sourcing	Vendor assessment	Engage suppliers to identify source for materials supplied	Ongoing
			Work with vendors to introduce concept of modern slavery and code of conduct through an online assessment form to be completed prior to being accepted as a Planex vendor.	Completed
			Commenced and completed for most tier 1 suppliers. Working on tier 2	To be actioned
			UN Global Compact Participant	Ongoing
ESD	Stakeholder engagement	Suppliers declare	2024, Joined Suppliers Declare, part of Construction Declares, a global movement highlighting the need for sustainable practices in the supply and manufacturing sectors. It is a public pledge to address and act on environmental crises impacting climate and biodiversity	Raise awareness via social media and consistent engagement with clients and staff
		Staff education	Completed in 2023 - Reviewed annually	Ongoing
			Staff meetings regarding best environmental practices reinforced by notices in throughout the plant on our environmental initiatives	Ongoing
		Internal and public advocacy	1 x Management staff Completed the Small Giants Academy: Into the Arena Climate Leadership Accelerator Program 1 x Providing Continuing Professional Development (CPD) to Architecture & Design Sector through presentation on Community Engagement Embracing a Circular Economy in Manufacturing and Furniture Design	Completed 1499 architects enrolled and completed CPD presentation

ENERGY EFFICIENCY INITIATIVES

Planex's energy usage directly correlates with production levels. We have implemented short- and long-term strategies to improve energy efficiency. These initiatives fall under 4 categories: electricity, gas, process and sourcing. These initiatives are regularly monitored and reviewed, with adjustments made to optimize both short- and long-term goals.

ELECTRICITY

Power Factor Correction (PFC) improves the power factor by reducing energy losses in the system so that power is not wasted and is used effectively. The ideal power factor is 1.0 or 100% efficiency. Without correction industrial plants run at 0.8 or 80% efficiency. PFC is achieved by installing equipment with large capacitors, that align voltage and current. The capacitors store and release energy, balancing lags in the power factor of the system by harmonizing the peaks and troughs.

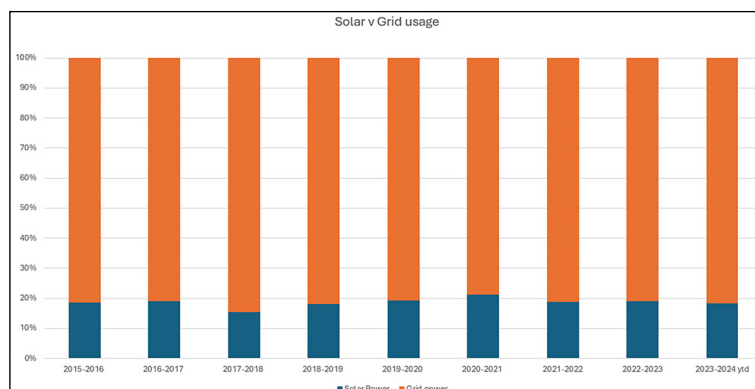
A power factor of 0.9876 means that our power use is 98.76% efficient, saving us about 5% in electricity use.

This has an ongoing impact.

Usage Report up to: Aug-24		DEMAND - MAXIMUMS OVER LAST 12 MONTHS						POWER FACTOR
Customer	Site Name	kW Qtr Hr Max Demand	MAX Hlf Hr kVA metered in hlf hrs	Average Max HLF HR kVA by month for last 12	kW Half Hr Max Demand	kVA at Max half hr kW	Max kVA (qtr hr)	PF @ MAX Hlf Hr kW last 12 months
Planex Sales	Planex	228.0	260.6	223.7	226.3	260.6	265.5	0.9876

Photovoltaic System of 1020 solar panels: Installed in 2015, the system significantly reduced electricity drawn from the grid, with solar energy providing over 40% of power during sunny months. This reduces our greenhouse gas emissions by 134 tonnes annually.

This has an ongoing impact.



ENERGY CONSERVATION INITIATIVES

1. LED Lighting Retrofit: In 2015 all warehouse metal halide lights (57 MWh per year) were replaced with LED (21MWh per year) achieving a net saving of 60% based on an average illumination period of 6h per day.
2. External security lighting controlled by light sensors
3. Installed individual convection heaters to supplement office HVAC based on occupancy resulting from remote working.
4. Emphasized staff training and regular audits to ensure equipment is shutdown when not in use.
5. Implemented preventative maintenance to keep equipment efficient and reduce environmental risk.

These have an ongoing impact.

GAS

1. In 2017 Planex received a Gas assessment and efficiency grant from Sustainability Victoria to improve gas usage. This enabled upgrades to the powder coating plant which by 2019 resulted in a 9% efficiency gain thereby reducing GHG emissions by 50 tonnes during annually.
2. Using locally sourced, lightly oil coated steel reduces the amount of gas (energy) required to pre-treat products before powder coating.
3. In 2023, individual meters were installed on all appliances to measure gas usage accurately and document any changes in consumption following engineering modifications.
4. In June 2025, we installed a new powder coating oven with advanced flame modulation for greater gas efficiency and precise temperature control. Usage calculation indicates a 25% reduction in gas consumption compared to the previous oven.

These have an ongoing impact.

SOURCING

1. Wherever possible, Planex sources locally. Over 95% by weight of all Planex materials come from less than 50km from our Hallam plant. This near sourcing significantly reduces the GHG impact of transporting required raw materials.
2. By avoiding long ocean transport, our steel requires much less protective mill oils and waxes. As a result, highly caustic pretreatment prior to powder coating is unnecessary.

WATER CONSERVATION

1. Our water conservation strategy focuses on reducing both total volume and quality of discharge. The use of lightly coated steel requires lower water temperatures for physical cleaning. This reduces both total volume of water used for cleaning and that lost to evaporation.
2. Lightly coated steel also simplifies our effluent management. We discharge a lower volume of water at a lower temperature that also needs less severe effluent control (reduced environmental impact).
3. For our external plantings and landscaping we have chosen Australian native grasses and endemic species of eucalypts which are extremely drought tolerant.

These have an ongoing impact.

PLANEX WASTE MANAGEMENT AND CIRCULAR ECONOMY INITIATIVES

1. Planex actively tackles powder coating waste, prioritising diversion from landfill and integration into the circular economy.
2. Launched 2 collaborative R&D projects co-funded by the Federal Government, one in 2020 with Monash University and one in 2023 with SMaRT UNSW. Industry partners were Akzo Nobel, Dulux Group, AISF for the Monash project, in addition with DooGood Australia for the SMaRT project.
3. Project aims to explore energy and material recovery solutions for waste powder; research results to be published internationally.
4. Planex chooses materials that support pollution prevention: prefers polypropylene over PVC, uses recyclable steel strapping, and selects iron phosphate (not solvents) for steel pre-treatment.
5. Three dedicated research projects have enabled reuse of three years' worth of waste powder, demonstrating significant progress in circular economy practice.
6. Improved waste segregation has halved landfill bin size and disposal costs.
7. Office waste (including batteries, e-waste, toner cartridges) is responsibly recycled.
8. Employees are encouraged to bring similar recyclable waste from home.
9. Planex's commitment and research have been featured in the Sustainability Matters article on powder coating waste.

MATERIAL EFFICIENCY AND SUSTAINABLE DESIGN

Planex is dedicated to minimising waste and promoting sustainability across all operations.

1. Planex streamlines its product range to prioritise modularity and shared components, reducing raw material offcuts and boosting material efficiency.
2. Reconfigurable components and purposeful product design minimise waste and support easy disassembly for reuse, refurbishment, and recycling.

3. CAD nesting software enhances material optimisation, reducing steel waste and improving yield.
4. Robotics and automated equipment support efficient, lights-out production that lowers waste and energy use.
5. Offcuts of ACUPANEL™ acoustic material from Linea cabinets are repurposed in-house as buffers and screens, exemplifying circular innovation.
6. Planex sources BlueScope sheet steel with 24.2% recycled content-including 17.4% from pre- and post-consumer sources-to support responsible material sourcing.



PACKAGING AND END-OF-LIFE PRODUCT RETURN

1. Planex collaborates with suppliers to identify the most effective and efficient packaging solutions, aiming for maximum protection with minimal material usage.
2. Protective packaging is returned by delivery contractors for reuse or recycling, reducing waste at every opportunity.
3. Planex accepts end-of-life products for refurbishment or recycling. Unlike engineered timber, steel is fully recyclable without loss of quality or strength.

MONITORING

1. Since 2006, Planex has consistently monitored and reviewed these energy and waste reducing strategies, affirming a long-term commitment to sustainability.
2. Planex has calculated the embodied carbon of its products, estimating it at 3.08 kg CO₂-e per kilogram. This figure allows us to determine a product's total embodied carbon by multiplying this value by its weight. This provides a basis for the further reduction of embodied CO₂.

FUTURE STRATEGIES

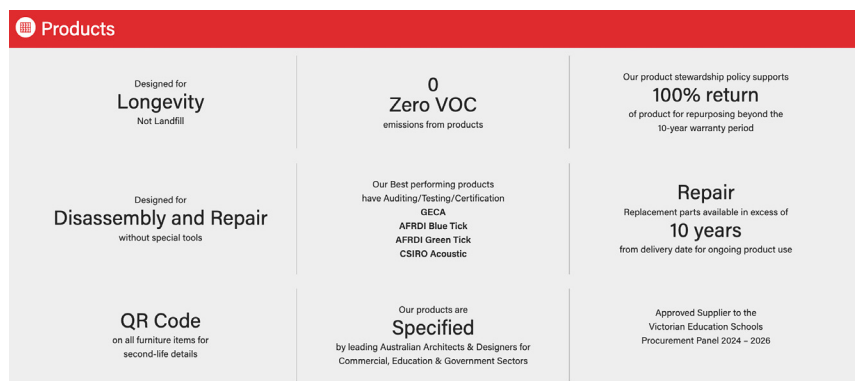
Building on the installation of solar panels and power factor correction, Planex plans to further reduce resource and energy use in the short, medium and long term.

1. Short term opportunities to fit automated doors to reduce heat spillage by the powder coating ovens.
2. Investigate the use of low temperature powder coating material to reduce curing temperature and consequential gas use.
3. Medium term opportunities to fit air-air heat exchanges to the oven exhaust flues to recover process heat and return this prewarmed air into the oven combustion chambers.
4. Long term opportunities of partitioning the powder coating plant to reduce convection currents. This could potentially eliminate the need for three out of five exhaust fans, minimizing heat loss and reducing the gas consumption used for powder coating.
5. Other opportunities include options to further reduce mains water usage by harvesting stormwater from the roof into storage tanks and using it for non-critical purposes where mild atmospheric contamination is critical.

COMPLIANCE REQUIREMENTS

1. Planex subscribes to an environmental legal requirement updating service (Environment Essentials) to updates procedures and inform staff regarding updated legal requirements.
2. The company measures and monitors processes in accordance with the National Pollutant Inventory and the Australian Packaging Covenant.
3. No breaches or penalties have been applied by the EPA or WorkSafe.

4. The primary compliance requirement is the Planex Trade Waste Agreement with our local water authority – South East Water.
5. No breaches or penalties have been applied by or recorded by South East Water.



PRODUCT TRACEABILITY AND ENVIRONMENTAL PERFORMANCE

1. Planex products now feature QR codes linked to manufacturing dates, helping customers responsibly dispose of items and supporting a circular economy.
2. The company's approach focuses on durability, function, and repurposing to prevent products from becoming landfill. This aligns with the 2019 Victorian Parliament recommendation for long-lasting, repairable goods, and meets Commonwealth Procurement Rules for value, flexibility, sustainability, and whole-of-life.
3. Our products are tested for durability and fitness for use by AFRDI-Furntech.
4. Our manufacturing and environmental performance is assessed by AFRDI-Furntech and GECA.

STAKEHOLDER ENGAGEMENT: EXTERNAL RECOGNITION AND ACTIVITIES

- 2003** Inaugural IDEA Award, Furniture category, for the Fatfile Range
- 2004** Multiple Design Institute of Australia [Qld] Awards of Merit for the Fatfile Range, including Furniture, Business Impact, and Ecologically Sustainable Design categories
- 2004** Australian Design Award in the Furniture category for the Fatfile Range
- 2004** RAI Victoria Chapter Architecture award, High Commendation in Best Commercial and Industrial building
- 2017** DRIVENxDESIGN Silver Award, Office category, for xLocker2 System
- 2019** Good Design Award, xLocker2, product design/made in Australia
- 2020** Planex received a Commonwealth Government Grant through the Innovation Connections collaborating
- 2022** Planex was awarded a Commonwealth Government Grant to study the use of waste powder to produce Green Ceramic™ tiles
- 2024** INDE Awards Influencer Category, shortlisted for Green Ceramic tile work using waste powder

WEBSITE AWARDS (by developer Evolution7)

- 2015** Create Awards, Best Website Finalist
- 2015** Melbourne Design Awards, Silver Award

SOCIAL RESPONSIBILITY AND ENGAGEMENT

1. Planex is a diverse team, and we support flexible leave, family commitments, and cultural needs. Our Employee Guide details special leave and work hours. Planex pursues a balance of financial, environmental, and social outcomes, encouraging employee development and sustaining our local community through jobs and material sourcing.
2. University collaborations have led to innovations like using waste powder for circular economy solutions.
3. Indigenous culture features through a 2019 partnership with designer Lucy Simpson, whose perforation patterns reflect Aboriginal storytelling with royalties paid accordingly. Planex values ongoing Indigenous partnerships.
4. As a UN Global Compact participant, Planex aligns with SDG 12, aiming for zero waste to landfill or incineration and 100% sustainable materials. Management completed the UN SDG Ambition Accelerator in 2022.

VENDOR RELATIONSHIPS

1. Planex chooses vendors based on shared environmental and social values and avoids those linked to modern slavery and unethical practices. Purchasing works with vendors to obtain and review product, code of conduct and modern slavery documentation through an online assessment form prior to being accepted as a Planex vendor.
2. Logistic partnerships optimize deliveries and encourage packaging return or responsible disposal.
3. Products essentially use locally sourced materials chosen for longevity and ease of local recycling.
4. Our steel supplier BlueScope uses at least 24.2% recycled content and holds Responsible Steel™ certification.
5. Only a few specialized parts are sourced from Europe when not available locally.

By choosing Planex, clients support Australian manufacturing.

STAKEHOLDER COMMUNICATION

Planex communicates environmental initiatives to clients seeking certifications through tender processes. Recognition of ISO9001, ISO14001, AFRDI Furntech testing, and Green Star standards drives Planex to pursue these endorsements. Information is shared internally via training and meetings, and externally through tenders, the website, exhibitions, social media, and client visits. Online Technical Briefs and the Sustainability Report keep stakeholders informed about Planex's environmental and social progress.

APPENDIX

Initiatives completed before 2019

SUMMARY OF SUSTAINABILITY INITIATIVES AND ACTIONS

Planex Key Environmental and Social Actions (2010–2023 and prior)

Area	Focus	Initiative	Key Actions & Outcomes	Status
Manufacture - Electricity	Energy use	Monitor/reduce usage	Power correction, LED lighting (2015), solar installation	Completed
Manufacture - Gas	Gas efficiency	Optimise usage	Efficiency grants (2017)	Completed
Powder Coating	Air quality	Prevent dust/reuse powder	Reverse pulsing extraction, no venting of waste powder	Completed/ Ongoing
Water Use	Resource conservation	Reduce & monitor usage	Reused rinse water, conductivity meter, training	Completed
Storm Water Discharge	Waterway protection	Maintain pH & contaminant limits	Frequent third-party & end-of-shift monitoring, hazardous substance reduction	Completed
Production Waste	Land/resource impact	Minimise landfill, recycle	Heat-treat waste, optimal steel design, CNC machining, staff training, two-thirds of waste diverted, 30+ t CO ₂ saved/year	Completed/ Ongoing
Packaging	Resource use	Recycle/reuse materials	Supplier contracts, courier controls, cardboard crusher	Completed
Office/Admin/Sales	Resource use & noise	Recycling, digitalisation, noise suppression	Green materials, maintenance, battery & toner recovery, cabinet design	Completed
Transport	Resource use	Minimise flights	Teleconferencing facilities	Completed
Environment/ Community	Sustainability	TAKE2 climate initiative	Native vegetation planting, fauna support	Completed
Stewardship	Waste minimisation	Certified waste programs	Deliver unpackaged products locally, third-party certifications	Completed
	Waste powder as a feed stock	Recovering resources from powder for reuse in circular economy	Innovation Connections Grants, with Akzo Nobel, Dulux Group, DooGood Australia, and AISF, to support a Monash University project using pyrolysis to recover resources from waste powder	Completed

Area	Focus	Initiative	Key Actions & Outcomes	Status
Stewardship	Waste powder as an additive	Use as a component of Green Ceramics	UNSW Dept Chem Eng to show the waste as a compatible component in Green Ceramics™	Completed
Public advocacy	Stakeholder Engagement Internal	Training in wellbeing and awareness	2 x Management Staff completed the UNGC Sustainable Ambition Accelerator Program and Communication on Progress	Completed
	Information on matters relating to product/user interactions	Technical Briefs (TB) to provide a knowledge base for Stakeholders	Published reports online	R&D Ongoing
Technical briefs		TB001: Heat dissipation xLocker2	The xLocker2 system is suitable for recharging personal e-devices within each locker without creating overheating. Laminate lockers performed poorly with significant heat build-up	Online - Planex website
		TB002: Sound absorption xLocker2	Planex cabinets can feature perforated doors and optional acoustic panels to reduce workplace noise, with effectiveness depending on the chosen pattern	
		TB003: Sound absorption Linea	The Linea cabinet with punched doors and acoustic panels significantly reduced workplace noise in all door positions	
		TB004: Aesthetics versus practicality	The size of castors on mobile cabinets affects how easily they move: on carpet, 40 mm castors require excessive force and risk tipping, while 80 mm castors move smoothly. On linoleum, larger castors also make movement much easier than small ones	
		TB005: Improving materials efficiency	Providing examples of how to solve a long-standing problem of sending microplastics in the form of powder coat waste to landfill	

Report Authorised by Jean-Pierre Jardel, PhD



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