



# Planex Sustainability Report 2019

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## MANAGEMENT COMMITMENT

Planex has been designing and manufacturing specialised steel storage systems since 1973. The relocation of the business to purpose built infrastructure in Princes Highway, Hallam, Victoria in 2002 evidenced the embracing of environmental commitment. The built environment of the Planex Factory and Showroom displays underpinning environmental commitment as do the factory processes, design, manufacture and delivery of product. Policies demonstrate environmental commitment to staff and interested parties. External endorsement of commitment through certification to ISO 9001 and ISO 14001 Management Systems has been upheld since initial certification on 28/08/1996.

On a continuum, Planex has maintained Furntech AFRDI Blue Tick product testing and Good Environmental Choice to a range of products since 2009.

Commitment was extended to AFRDI Green Tick (AFRDI 150 Sustainability Standard) at Platinum level in 2018, recognized as GBCA Green Star Level A. With the Platinum level Planex became the first Australian company to achieve this for the xLocker2 and for the Linea sliding door cabinet storage systems.

## PLANEX IN THE CONTEXT OF THE WIDER ENVIRONMENT

Planex is an Australian Manufacturer of specialised powder coated sheet metal products which employs 45 people. Planex services multinational, corporate and government clients. Planex has responded to requests for responsible manufacture and is in turn promoting quality Australian products backed by sustainable processes.

Products made from steel rather than alternative materials present unique longevity and recyclability. They are manufactured to enable modularity and disassembly.

Planex is focused on smart and functional design of adaptive storage for the evolving workplace. This is complemented by environmental commitment which is measured and analysed to present continuous improvement.

## REPORT SCOPE

This is Planex version 6 of the publicly available Sustainability Report. However, data is disclosed from 2010 and annual reporting is available. The report is based on 'A Framework for Public Environmental Reporting - An Australian Approach March 2000' and the data is collected and analysed within the certified ISO 14001 Management System.

This report relates to Planex environmental and sustainability programs, objectives and performance data.

## MANAGEMENT PERFORMANCE, POLICIES AND SYSTEMS

### Management Systems and Programs

Planex has maintained certification to ISO 9001 Quality Management since 1996, to ISO 14001 Environmental Management systems since 2007, and has integrated the principles of the global safety standard ISO 18001 within the Management System. In 2017 Planex transitioned to the new standards ISO 9001:2015 and ISO 14001:2015.

Aspects related to Planex processes have been identified and programs devised to minimise the impact of the processes.

| Process  | Aspect                            | Program   | Initiatives 2010-2019  | Action    |
|--|-----------------------------------|---|--|-----------|
| Manufacture -<br>Electricity use   | Energy use impacting on resources | Monitor and measure power and usage   | Install and monitor power factor correction  | Completed |
|  |                                   | Use technological solutions to ensure effective power use   | LED lighting - 2015<br>Solar energy - initiated installation 2015; fully commissioned early 2016   |           |
| Manufacture -<br>Gas use   | Gas use impacting on resources    | Optimise gas efficiency   | Awarded gas assessment and gas efficiency grant from Sustainability Victoria 2017  | Completed |
|  |                                   |   | Improvements to gas use have so far given 9% efficiency, equating to 50 tonnes fewer GHG emissions, with work continuing   | Ongoing   |
| Manufacture -<br>Powder coating  | Release to air                    | Prevent dust to atmosphere  | Reverse pulsing extraction system/no venting to atmosphere. Powder reuse strategy. (see below *)   | Completed |
| Manufacture -<br>Water use in iron phosphate pre- treatment and in factory | Resource use - water              | Reduce water at phosphate machine by 50%<br>Provide training on water conservation  | Rinse water reused in process<br>Installation of conductivity meter and solenoid to ensure fresh water added only when required. Ongoing maintenance<br>Implement daily recording of water use   | Completed |
| Manufacture -<br>Discharge to storm water                                  | Harm to waterways                 | Maintain pH, heavy metal, phosphate, and discharge limits within the Trade Waste Agreement (South East Water No 8067)         | Quarterly third-party monitoring.<br>End of shift monitoring<br>Minimize / substitute hazardous substances   | Completed |
| Manufacture -<br>Waste from production                                     | Degradation of land               | Heat-treat (i.e., solidify) the waste powder from powder coating plant to prevent its dispersal when sent to landfill         | Supplier evaluation and records control<br>Reduce impact on landfill (see below *)   | Completed |
| Manufacture -<br>Waste from production                                     | Resource use                      | Optimise steel thickness / sheet size through design.<br>Collect and recycle metal waste. Reduce bin size from 3 m3 to 1.5 m3 | CNC machining & automated processes to reduce error & waste<br>Supplier contracts<br>Staff training & audits   | Completed |
|  |                                   | Reclaim /recycle polypropylene & ACUPANEL off cuts  |  | Ongoing   |
|  |                                   | Re-use waste powder: Initiate R&D with Monash Univ and major manufacturers for using it in the circular economy               | Maintenance of electrostatic powder coating line   | Ongoing   |
|  |                                   |   | Offer unused powders to external users<br>* Use waste powder to make new components in-house to reduce landfill, energy, GHG emissions and labour costs. Initiate plans for industry-wide reforms on the fate of waste powder (cooperation with powder manufacturers & users | Ongoing   |

| Process                                | Aspect                                      | Program   | Initiatives 2010-2019  | Action    |
|--|---|---|--|-----------|
| Manufacture - Sound deadening material | Release to air                              | Prevent volatile organic compounds (VOC) into atmosphere  | Use of ACUPANEL which is free of volatile organic compounds (VOCs)<br>Planex test certificates   | Completed |
| Packaging                              | Resource use<br>Degradation of land         | Recycle plastic<br>Reuse or reclaim<br>Policy Training  | Supplier contracts<br>Courier controls<br>Install cardboard crusher  | Completed |
| Office / Administration / Sales        | Resource use                                | Electronic vs paper<br>Recycle paper<br>Toner cartridge / recovery of batteries & electronic components | Green and recyclable materials used<br>Maintenance services undertaken   | Ongoing   |
|  | Noise suppression                           | Design of office cabinets that feature noise suppression technology                                     |  | Completed |
| Delivery / Transport                   | Resource use.<br>Harm to water ways and air | Optimise loads through line haul<br>Truck size to fit order size<br>Company vehicle policy              | Supplier contracts. Client and delivery contract liaison. Vehicle selection with commitments to quality, safety, optimal fuel usage. Green and recyclable materials used & maintenance services undertaken | Ongoing   |
|  |   | Minimise flights through teleconferencing   | Teleconference facilities installed  | Completed |
| Materials Efficiency                   | Waste powder coat powder                    | Turn waste powder into new components (counterweights)  | Awarded Materials Efficiency grant from Sustainability Victoria 2018. 2/3 of waste diverted from landfill & giving a reduction of GHG emissions by 30 tonnes per year                                      | Completed |
| Environmental                          | Sustainability                              | TAKE2, a Victorian Government initiative on collective climate change #                                 | Planting native grasses, flowering shrubs & other vegetation on our property to absorb carbon emissions and to assist local fauna  | 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   |

<https://pledge.take2.vic.gov.au/pledge-directory/>

## ENVIRONMENTAL PERFORMANCE

### Energy

Gas and power usage is directly related to production. In the construction of the purpose built factory, Planex implemented various short and long-term strategies to be more efficient.

The strategies included:

- Installation of a Power Factor Correction system that controls the amount of power drawn by a load to optimize efficiency, reduce line current losses and ensure reliable current delivery.
- Installation of automated machinery for cutting, punching, folding and spot welding that has allowed some off-peak production, as well as improved efficiency in the use of steel sheets, with reduced waste.
- Auto rinse and paint lines, drier and ovens have been installed and are subject to ongoing and preventative maintenance.
- In 2015 all warehouse 400W high bay metal halidelamps were replaced with 100W and 150W LED lights. All office fluorescent and quartz halogen down lights were replaced with LEDs. These measures gave 2 main benefits: significant reductions in electricity usage, lower maintenance costs because LEDs last longer, and hence less resources needed from the environment.
- The investment by Planex in 2015 in a solar power system resulted in a substantial reduction of electricity drawn from the grid. The solar power facility was fully commissioned in early 2016. Since its installation, the electricity drawn from the grid has been significantly reduced, so much so that during the sunnier 6-month period of October 2016 to March 2017 the contribution of solar was over 40% compared to that used from the grid. Over the full year of July 2016 to June 2017, including the cloudier months, the saving was almost 30%. This is equivalent to Planex not emitting 134 tonnes of greenhouse gases into the atmosphere - equal to the gases released by about 30 average passenger cars driven for a year, or by one average car driven for over 500,000 km. During the set-up stages of our solar system (before October 2016 to March 2017), similar amounts of solar power were also generated and used to power machinery, meaning that even less emission of greenhouse gases were made. In the future, the combination of LEDs and the solar system will continue to reduce the reliance of Planex on electricity purchased from the grid, and hence indirectly reduce greenhouse gas emissions into the environment.
- Where switching off of machines, computers, monitors and office lighting is not automated, training and audits ensure awareness of energy consumption.
- Gas usage fluctuates year to year in relation to production output.
- Late 2017 Planex was awarded gas assessment and a gas efficiency grant by Sustainability Victoria to improve gas usage in the factory. Upgrades were made to the powder coat line Pre-Treatment Bath, Curing Oven, and Dry Off Oven. By early 2019 a 9% efficiency gain was reached which means that the factory's GHG emissions were reduced by over 50 tonnes during 2018/2019, on top of the reduced GHG from the solar power system. Further modifications to the ovens are continuing in order to get even better gas efficiency.
- Mid 2018 Planex was awarded a materials efficiency grant to re-use waste powder coat powder. Now, Planex makes its own counterweights for its furniture rather than buying new steel counterweights. This innovation means Planex reduces its GHG emissions by 30 t/year, landfill by 3.6 t/year of waste powder, and significant labour costs.
- The total contribution in the reduction of Planex's GHG emissions from solar, plus gas and materials efficiencies, is over 200 t/year.
- Planex initiated a collaborative R&D project to potentially divert all waste (powder coat) powder from landfill into a resource to extract energy and materials for industrial use - i.e., to use it in the circular economy. The project involves university research and major manufacturers of powder coat powder.

With the monitoring techniques that were introduced since 2006, confidence is placed in on-going review of strategies to reduce energy consumption.

## Water

Process water used is related to quantity of steel processed for powder coating.

A target to reduce pre-treatment water by 50% was met in 2009 through installation of a conductivity meter to ensure fresh water is used on demand. Pumps are kept in good condition to ensure efficient use of water. A managed contractor relationship provides confidence that reduction of water use will continue to be an achievable environmental initiative of Planex.

## Waste Management

In accordance with our commitment to prevention of pollution, Planex management selects material inputs to ensure that reclamation, reuse or recycling of waste occurs. To this end polypropylene is used in preference to PVC; iron phosphate is used as pre-treatment and electrostatic powder coating is used in preference to solvent based painting techniques. The powder coating process and the industry using it generates a portion that is avoidably wasted. Planex identified this amount of waste as the last of its major material inputs needing a better fate - i.e., something better needed to be done rather than spending energy to solidify it then dumping it to landfill. (In fact, dumping it as a powder and not a solid, which is very common, releases into the environment what is essentially a ready-made source of micro- and nano-plastics.) Planex now uses most of its waste powder (about 2/3) to make new components. The 1/3 of the waste that remains was still an amount that needed an answer. Therefore, Planex initiated and is driving a project that should see this waste used in the circular economy. Design considerations ensure optimum use of materials with disassembly being a key intent of designers.

The range of waste reclamation extends from steel and aluminium, to polymer, cardboard, paper and pallets. Steel is sourced from suppliers that have a recycled steel content of 15-20%. Optimum recycling has been achieved through using all ACUPANEL offcuts internally in the assembly area, on trollies and as acoustic screens in sections of the plant.

In 2013 a major success was the halving of the landfill bin size. Through contract management the cost of disposal was minimized and there was heightened awareness of waste segregation and overall reduction in landfill volume.

Correct disposal of office waste such as batteries, phones, and toner cartridges is something of paramount importance and all employees contribute to management of such waste. Moreover, employees are encouraged to bring phones, small batteries and toner cartridges from home for Planex to recycle through its waste management channels.

Delivery contractors return protective packaging and cardboard for reuse / recycling by Planex.

Planex accepts products returned at their end of life and may either rework the product or dispose of through its partnership with steel recycler Future Metals Pty Ltd.





### Trade Waste

A contract with an external supplier ensures statistics are generated for water quality in accordance with the Trade Waste Agreement. Employees on the production rinse line are involved in trade waste and water monitoring through recording statistics on water use, temperature and pH at the change of shifts. This practice has been in place since 2005.

Quarterly third-party checks are also made with results graphed and reported to management.

### Packaging

Choice of packaging ensures use of recycled cardboard, low density polyethylene bags and protective film. Measurement of good practice is maintained for cardboard packaging and boxes are returned and reused. Plastic recycling and cardboard crushing is undertaken to ensure efficient baling of recycled materials for which data from waste receipts is collated.

### Future Strategies

Following the installation of the solar panels, further savings on the use of electricity are planned. For example, exhaust fan usage in the powder coat area will be reduced by installing partitions to enclose the powder coating plant, which will reduce convection currents. This quarantining of the powder coating plant is estimated to result in 3 out of the 5 exhaust fans no longer being required, reducing the venting of hot air, the amount of natural gas required to heat the powder coating process will be reduced.

A long-term option to reduce mains water usage is to harvest storm water from the roof to tanks.

During 2017 and 2018 Planex was assisted by the Victorian Government's statutory authority, Sustainability Victoria, to help the company use gas, electricity, and waste powder coat powder more efficiently.

### Compliance Requirements

Planex subscribes to an environmental legal requirements updating service (Environment Essentials) and updates its procedures and training program accordingly. The company measures and monitors processes in accordance with the National Pollutant Inventory and Australian Packaging Covenant. No breaches or penalties have been applied by the EPA or WorkSafe.

The primary compliance requirement is Planex Trade Waste Agreement with the water authority - South East Water.





## PRODUCT PERFORMANCE

### Product Stewardship and Lifecycle

Planex product longevity is supported by the eminently recyclable nature of steel. Each product has been assessed for its component parts and eco-preferred content by mass. Through design, bonding is minimised and disassembly promoted. A Stewardship Policy supports return of products for disassembly or recycling beyond the 10-year warranty period. Polymer components have identifying marks that assist segregation of polymer class and recycling. Replacement parts are available for a wide range of components in excess of 10 years from the date of delivery.

Planex's design and manufacturing philosophy supports its environmental credentials by ensuring that our products must not only be versatile, elegant and original; they must also be durable. They are designed to last many years and be made from materials that can be readily recycled. We apply a test we call built-out obsolescence to all our products. It means that we want them to have longevity, to be repurposed as required, and not end up as landfill. This is in contrast to products that are made using principles of product obsolescence or inbuilt obsolescence where manufacturers intentionally make things that do not last a long time, or are designed to fail: products that either break or stop functioning earlier than consumers would expect. Product obsolescence is an avoidable manufacturing practice that contributes to wasting resources. The Environment Protection Authority discusses the topic of inbuilt obsolescence. For example, the EPA says "Product obsolescence may be good for business, but there is a down side - the dramatic growth in waste and rubbish created by our throwaway society.

(See pages 12 and 13 in [http://www.epa.vic.gov.au/AGC/r\\_cc\\_responding.html#product-obsolescence/!](http://www.epa.vic.gov.au/AGC/r_cc_responding.html#product-obsolescence/)).

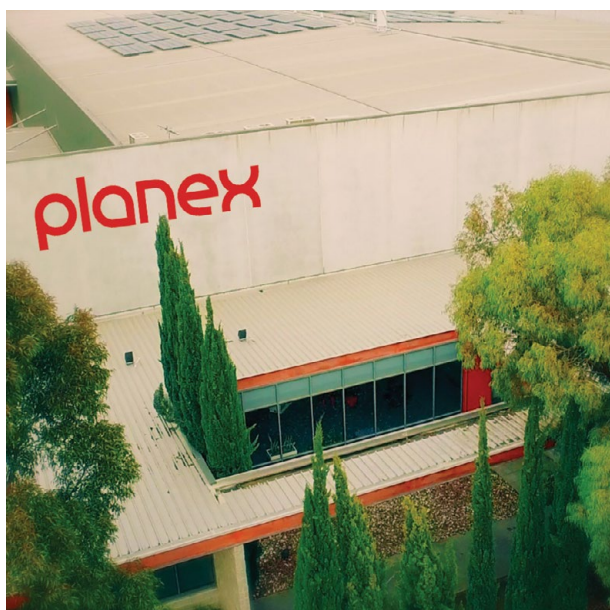
The longevity of Planex products helps address the problem of product and in-built obsolescence.

## STAKEHOLDER ENGAGEMENT

### External Recognition and Activities

In late 2017 Planex applied for and was awarded 2 grants from Sustainability Victoria. The first grant (\$13,000 on a dollar by dollar basis) funded an independent Energy Assessment to take a snapshot of the current situation and identify potential energy efficiency improvements.

The second grant (\$35,360 on a dollar by dollar basis) enabled potential improvements uncovered by the energy audit to be acted on. This consisted of installing equipment specifically tailored to minimise heat loss in our process ovens, increase oven efficiency and overall reduce gas use and costs while still maintaining current production levels.



Planex minimises the environmental impact of our manufacturing through design excellence, design for disassembly, quality finish and material selection that promises our products that will stand the test of time.

Planex has achieved the following design awards:

- Inaugural IDEA Award 2003 “Furniture” category for Planex Fatfile Range
- Design Institute of Australia [Qld] 2004 Award of Merit “Furniture” category for Planex Fatfile Range
- Design Institute of Australia [Qld] 2004 Award of Merit “Design is Good for Business” category for Planex Fatfile Range
- Design Institute of Australia [Qld] 2004 Award of Merit “Ecologically Sustainable Design” category for Planex Fatfile Range
- Australian Design Award 2004 “Furniture category” for Planex Fatfile Range
- Australian Design Award 2004 DIA Furniture award category for Planex Fatfile Range
- RAlA Victorian Chapter Architecture 2004 award, Australian Interior Design Award “High Commendation and Architectural Excellence in SouthEast sector “ in the category of “Best Commercial and Industrial building”
- DRIVENxDESIGN product design 2017 silver award “Office” category for xLocker2 System  
‘Acknowledging creative and innovative design within commercial office applications’
- Good Design Award Winner 2019, xLocker2 for product design/made in Australia

Planex Website (awards won by web developer Evolution7):

- Create Awards ‘Best Website’ Finalist 2015
- Melbourne Design Awards 2015: Silver Award



### Employee Relationships

Planex has approximately 50 employees with diverse cultural backgrounds. These groups are catered for in a variety of ways including leave requests, dietary needs and respect of cultural and religious beliefs.

The employee guide issued at induction describes special leave arrangements. Planex is open to negotiation on working hours and special needs for family related matters.

### Supplier Relationships

Supplier relationships and contracts are used to foster environmental compliance and pollution prevention. Planex manufactures locally and does not use components supplied by entities that use modern slavery. Long standing relationships with delivery companies sees the optimum load size being met. Where small numbers of cabinets comprise an order clients are quoted an extended lead time to accommodate linehaul delivery. Planex delivery companies are contracted to return packaging to Planex or provide evidence of responsible disposal.

Planex Purchasing department partners with component suppliers to guarantee supply of MSDS for all material inputs where appropriate. Planex undertakes to check the MSDS CAS numbers against listed substances on the IARC website (Group 1 and Group 2A) and against toxic substances referred to on the Rotterdam Convention, Annex III.

Water reduction strategies were partnered with a service contractor who has assisted with problem solving as well as ongoing monitoring.

Investment in production and robotics equipment has followed from advice sought on world's best practise in quality manufacture.

### Communication with Stakeholders

Key interested parties of Planex environmental initiatives are its clients. Through tender applications clients request evidence of quality, safety and environmental certification. Increasing recognition of Furntech AFRDI product testing, Good Environmental Choice Certification and Green Star have encouraged Planex to commit to these third party endorsements of its sustainability initiatives.

Communication to stakeholders is via tender response, the website, expositions and the sales office.

Customer issues are promptly addressed through Planex Customer Issues Register. Client satisfaction is identified and reported on at management level.

This Sustainability Report and web site are key areas where stakeholders may be kept abreast of Planex product and environmental initiatives.

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