FORMRITE GROUP

NATIONAL PACKAGING COVENANT
ANNUAL REPORT
(Public report)

July 2005 – June 2006

FormRite AUSTRALIA

Packaging and Point of Sale

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Introduction

Company Background

The FormRite Group is an Australian owned business of over 40 years that provides a complete service for customers in all Packaging and Point of Sale requirements. It operates a 6000m^2 facility at Brookvale in Sydney, which is equipped with the most up to date manufacturing technology and design capability. In house manufacture at Brookvale specialises in plastics and the company subcontracts manufacture in other materials at other sites (outside the scope of this document).

The company's products include:-
- Display:- permanent and temporary displays, counter and floor displays, signage, printing, illuminated displays, showcases
- Packaging:- food trays, blister packs, injection moulding, PVC boxes, transportation trays
- Medical:- pharmaceutical dispensers, pill blisters, laboratory trays
- Industrial:- transport trays, component housings, custom trays

Materials used include acrylic, polypropylene, PVC, biodegradable plastics, polystyrene, APET, polycarbonate, card, metal, glass, timber.

Additional capabilities include CAD/CAM design, in-house tool manufacture, screen printing and three axis routing.

Other stakeholders assisting in this Action Plan.

A number of organisations are involved in developing the various aspects of this action plan. The paragraphs below outline who these players are and their relationship to FormRite.

FormRite is a member of the Plastics and Chemicals Industry Association (PACIA). PACIA represents the plastics industry on the National Packaging Covenant Industry Association and the committee responsible for the Environmental Code of Practice for Packaging. FormRite is also a member of the National Packaging Covenant Industry Association (NPCIA).

PACIA manages plastics ID codes, conducts surveys on plastics recycling rates, develops codes of practice for degradable plastics, maintains a resource map for available materials and products, assists members with Covenant Action Plans, assists working groups with plastics litter reduction programs etc.

FormRite's Customers – Improvement of recycling rates for the large number of customers in the supply chain with a wide variety of applications is an ongoing challenge for this company. FormRite will continue to contribute by means of providing information and pamphlets on recycling to customers. The Packaging Covenant, the benefits of membership and FormRite's commitment to it continue to be promoted to customers.

Company Requirements under the 2005 Packaging Covenant

A revised and strengthened Packaging Covenant came into force on 15 July 2005 for five years. Under it signatories are required to produce an Action Plan by 30 November 2005 and annual reports covering the period 1st July – 30th June by 31st October each year thereafter. This document is the first annual report under the new arrangements.

The Waste Hierarchy

The overall strategy for waste management in Australia and at FormRite is informed by the Waste Hierarchy.

The Waste Hierarchy

Materials should be conserved through more efficient use, the avoidance of unnecessary consumption and the encouragement of re-use, recycling and energy recovery. The waste hierarchy states that wastes should be managed in accordance with the following order of preference:

1. Avoidance (source reduction)

2. Re-use

3. Recycling

4. Energy Recovery

5. Disposal

Summary of Achievements to date

This is the fourth report submitted by FormRite since the commencement of the Packaging Covenant program. These have focussed on improving compliance with the Packaging Covenant guidelines and business performance whilst reducing our products' life cycle impact on the environment. Achievements to date include:-

Waste Minimisation
- <u>All</u> plastic wastes types, including skeletal waste, rejects (by products) and plastic wrap are collected and recycled through an improved agreement with a new recyclables collection contractor.
- Reduction of the amount of waste generated in manufacture by tight control on automatic machines.
- Increased the range of forming frames and improved material yield, which is reported on a monthly basis and has reduced production costs.
- Close tracking of material usage on a job-by-job basis with measurable KPI.
- Where design specifications allows, material used for product is a blend of recycled and virgin materials (unless constrained by customers requirement for virgin raw material).

Design
- Appropriate tooling design and material gauge selection to reduce raw material usage while ensuring product efficacy (performance analysed on samples of all production).
- Design specifications evaluated for all customer new product design requests (with measurable KPI).
- Successful development of expertise in thermoforming APET.
- Educating customers on environmental benefits of use of APET compared to PVC. APET offered as a packaging material where feasible. APET use has increased greatly.

Distribution
- Working with customers to minimise the total use of cartons through carton re-cycling. Unusable cartons (after many cycles through supply chain) are collected and recycled by third party contractors.
- Negotiated with customers for collection of timber pallets for re-use to minimise use of new pallets. Pallets are inspected on return and repaired if necessary.
- Trial of easily identifiable long life multiple re-use plastic pallets with selected customers.
- Use of lightweight reconstituted timber pallets with selected clients. These are re-usable and contain no virgin material.
- Negotiation with select customers for the return of obsolete, redundant product for inclusion in FormRite plastic recycling program.

Research
- Working with customers in product and tooling design to eliminate denesting problems in APET blister packaging.

Biodegradable materials
- FormRite has obtained exclusive right to manufacture using the plant based 'Plantic' product. It is made from environmentally sustainable corn replacing fossil fuel derived materials and is completely biodegradable (water soluble). Production has commenced and strong promotion of this new environmentally friendly product is continuing.

Education
- Recycling of packaging by customers is encouraged by the use of recycled logos on products.
- Provision of recycling pamphlets to customers and end users.
- Promoting commitment to the Packaging Covenant to our customers.

Market Development
- Scrap is provided to scrap recyclers supporting the recycling market.

FormRite Environmental Code of Practice for Packaging

The FormRite Environmental Code of Practice (based on the Environmental Code of Practice for Packaging, a part of the National Packaging Covenant) is a public document (www.FormRite.com.au).

- FormRite undertakes to educate its employees and customers in environmental responsibility and packaging stewardship.
- The importance of environmental responsibility, the National Packaging Covenant and the role of the employee forms part of company induction and ongoing employee training.
- The National Packaging Covenant, the benefits of becoming a signatory and the Environmental Code of Practice for Packaging will be promoted to customers and supply chain stakeholders.
- All packaging will conform to all government Acts, Regulations and Australian/ISO Standards.
- Overall strategies to reduce environmental impacts across packaging supply and recovery chains will be addressed.
- Packaging decision making process will be documented for environmental impacts by reference to the following strategies 1-7. If any conflict exists, the Waste Hierarchy and the requirement for the product to properly perform its primary function will determine the best approach.

Overall strategies (and examples of FormRite's ongoing commitment).

1. Source reduction
   - Reduction of material thickness and energy use in production wherever possible within the constraints of product viability.
   - Manufacture using 'Plantic' biodegradable plastic (plant non-fossil fuel raw material).
   - Raw materials and cardboard containing highest recycled content used wherever possible.
2. Potential for Re-use
   - Continued reuse then recycling of used cardboard packaging.
   - Re-use of tubular cardboard wastes by another local company.
3. Recovery and recycling
   - Inclusion of maximum feasible levels of recycled materials in production.
   - 'Buy recycled' policy (where use of recycled material does not affect quality).
   - Consideration of product impact on resource recovery and recycling before introduction.
   - Introduction of single component products where possible.
   - Recycling advice to customers and end users is available through this company website.
4. Incorporating recycled content
   - Promotion of biodegradable plastic and recycling as environmentally friendly.
5. Minimising impacts of packaging.
   - Minimisation of use and avoidance of hazardous or toxic materials by substitution with more environmentally benign products, if product quality is not affected.
6. Propensity to become litter
   - Recycling logo on all new and existing tools (progressively).
   - Production and promotion of 'Plantic' plant based biodegradable plastics
7. Consumer information
   - Recycling logo promoted and incorporated into the product whenever possible.
   - Recycling information provided to customers and end users on company website and by pamphlets.

The Waste Hierarchy

Materials should be conserved through more efficient use, the avoidance of unnecessary consumption and the encouragement of re-use, recycling and energy recovery. The waste hierarchy states that wastes should be managed in accordance with the following order of preference:

* Avoidance (source reduction)
* Re-use
* Recycling
* Energy Recovery
* Disposal

Signed:. . . . . .Greg Jung,   General Manager,   FormRite Australia Pty. Ltd.

Commitments related to the Environmental Code of Practice for Packaging

Packaging should conform to all government Acts, Regulations and Australian Standards
Responsibility: Production, Design Sections
- The Design section ensures that product specifications comply with all relevant standards
- Design and Operations staff periodically check samples from all product lines to ensure that specifications are met.
- Supplied incomings goods meet all design specification criteria.
- Any change or update to relevant standards is automatically notified by relevant authority (SAI Global Standards Watch) to the Design Manager.
- The statement "Packaging should conform to all government Acts, Regulations and Australian Standards" has been included in the Quality Manual.

Packaging decision-making process should be documented for beneficial and adverse environmental impacts.
Responsibility: Design Section
- The <u>Environmental Code of Practice for Packaging Form</u> is being used for new product development or changes to product.
- This document considers overall strategies to address environmental impacts:
  - Source reduction
  - Potential for Re-use
  - Recovery and recycling
  - Incorporating recycled content
  - Minimising impacts of packaging
  - Propensity to become litter
  - Consumer information
- Examples: (i) avoidance of composite products where a single material product performs equally well,
- Raw materials and cardboard containing highest recycled content used wherever possible.
- Recycling instructions are provided on website for customers and end users.
- The Company's Environmental Code of Practice for Packaging bearing the General Manager's signature is displayed in public areas of our business and on the company website.

Avoidance of use of hazardous toxic substances
Responsibility: Production, Design Sections
- The company is to avoid the use of hazardous or toxic substances in manufacturing process if the quality of the finished packaging product is not compromised.
- At present the company uses a limited amount of hazardous and toxic substances in the screen-printing and assembly area. Few viable alternatives exist at present, but relevant personnel are aware of this commitment and will watch for safer alternatives.
- The Quality Manual and Purchasing Procedure have been amended to include statement on hazardous substances.
- The <u>Environmental Code of Practice for Packaging Form</u> will be used in the development of new products.

Implementation of 'Buy Recycled' Purchasing Policy
Responsibility: Purchasing
- The Purchasing procedure and Quality Manual have had a clause added "Where practical the company will consider products with highest recycled content in purchasing decisions if neither product quality or cost is compromised".

Product Stewardship Commitments

Consider packaging design including recovery, reuse, recycling, and litter reduction.
Responsibility: Design Sections
Consideration to be given to design in following areas:
- Process design: product packaging processes to include recycling and re-use considerations (use of <u>Environmental Code of Practice for Packaging Form</u>)

Minimisation of amount of material used in production
Responsibility: Purchasing, Design Sections
- Appropriate tooling design and material gauge selection to minimise raw material use and ensure compliance to customer specified requirements.
- Encouraging reuse of all packaging cardboard and pallets.
- An arrangement exists with some customers for return and re-use of cardboard cartons.
- Cardboard from suppliers collected for commercial recycling.

Reduce material and energy consumption in distribution
- Product deliveries are made by company truck.
- Investigation on reduction of product transport movements with a larger truck is on-going.

Facilitate safe and easy disposal (recovery, reuse, recycling etc) minimising environmental impact
- Biodegradable plastic product is in production. Exclusive deal with 'Plantic' concluded.
- Biodegradable plastic promoted as environmentally friendly choice.

Facilitate research re supply, use and recovery of packaging, identification of new uses and markets and reduction of amount of packaging
- FormRite continues membership of PACIA, which conducts such research.

Help establish and finance circulation of reliable information for consumers to assist choice
- FormRite's membership assists PACIA, a provider of reuse/recycling information pamphlets.
- Pamphlets describing industrial and kerbside recycling are available through company website and company representatives to customers and end users.

Accurate consumer information and labelling to encourage recycling
- Plastic recycling logo is routinely placed in new product designs. For customer specific designs, at approval stage customer may specifically request for recycle logo to be removed (opt-out).

Provision of point of sale recycling information.
- FormRite promotes to customers the principles of the Covenant and the benefits of becoming a signatory.
- Pamphlets for distribution to customers and end users have been obtained for distribution by sales staff.

Baseline Data, Action Plan KPI Targets and Results

Goal for packaging manufacturers	Aim	Baseline Data	Target	Results
Goal 1 KPI 2 Resources used to produce packaging by material type: Energy (Mjoule/tonne) Water (klitres/tonne)	Reduction of overall energy use per unit of production Energy (Mjoule/tonne) Not applicable	Initial baseline data: Electricity use : total mass of packaging product (Jan –Dec 2005) 	Parameter	Result
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Electricity (MJ/y)	xxxxxxxx (confidential)
Product (tonne/y)	xxxxxxxx (confidential)
Energy use per unit of production (MJ/tonne)	6714		Reduction in energy use per tonne of packaging produced by 2% p.a.. (6% over three years of plan through energy efficiency. | Date	Energy/unit of production (MJ/tonne)
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June 2005-July 2006	6991
June 2006-July 2007	6851
June 2007-July 2008	6714		Electricity use / total mass of packaging product (I July 2005 – 30 June 2006 | Parameter	Result
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Electricity (MJ/y)	3202099
Product (tonne/y)	827.5
Energy use per unit of production (MJ/tonne)	3869.4	 **Target achieved? Yes** This big improvement is a result of a different product mix with lower energy requirements.

Goal for packaging manufacturers	Aim	Baseline Data	Target	Results
Goal 1 KPI 5 Packaging designed and manufactured to optimise amount of post consumer recycled content.	Recycled content in packaging manufactured	**Revision**: Reviewed and amended from previous plan. Amount of packaging produced using virgin materials and recycled content (1/7/05 – 30/6/06)[i] <table><tr><td>Type</td><td>Virgin material use (kg)</td><td>Recyl'd Mater'l use (kg)</td><td>rcycld cntent %</td></tr><tr><td>Type 1 PET</td><td>(conf.)</td><td>(conf.)</td><td>0</td></tr><tr><td>Type 2 HDPE</td><td>(conf.)</td><td>(conf.)</td><td>0</td></tr><tr><td>Type 3 PVC</td><td>(conf.)</td><td>(conf.)</td><td>0</td></tr><tr><td>Type 4 LDPE</td><td>(conf.)</td><td>(conf.)</td><td>0</td></tr><tr><td>Type 5 PP</td><td>(conf.)</td><td>(conf.)</td><td>21.6</td></tr><tr><td>Type 6 PS</td><td>(conf.)</td><td>(conf.)</td><td>29.8</td></tr><tr><td>Type 7 OTHER</td><td>(conf.)</td><td>(conf.)</td><td>0</td></tr><tr><td>Non recyclables</td><td>(conf.)</td><td>(conf.)</td><td>0</td></tr><tr><td>Std Crdbrd</td><td>(conf.)</td><td>(conf.)</td><td>96.0</td></tr></table>	Purchasing remains mindful of the need to buy raw materials of highest recycled content, however barring a technological breakthrough, production of plastics with non-virgin material (except polypropylene and polystyrene) is not possible. <table><tr><td>Type</td><td>Virgin material use (kg)</td><td>Rcyl'd Mater'l use (kg)</td><td>recycled content%</td></tr><tr><td>Type 5 PP</td><td></td><td></td><td>>21.6</td></tr><tr><td>Type 6 PS</td><td></td><td></td><td>>29.8</td></tr><tr><td>Std Crdbrd</td><td></td><td></td><td>>96.0</td></tr></table>	As this is the first time that this data has been collated, it is proposed that these figures provide the baseline data for reporting against next year.
Goal 2 KPI 16 Provision of collection services for post consumer packaging and paper	Provide recycling collection facilities for post-consumer packaging generated on-site.	Established for production plastics, plastic wrap, cardboard, office paper, and aluminium cans. Other metals from production also recycled (aluminium and steel)	Continue and improve for all plastics, cardboard, office paper, aluminium cans, and metals aluminium and steel from production.	**Target achieved? Yes**

Goal for packaging manufacturers	Aim	Baseline Data	Target	Results
Goal 4 KPI 21 Increase recycling of used packaging	Estimated tonnage of consumer packaging from on-site collection facilities recycled and sent to landfill respectively.	Amount Recycled (per year) • Cardboard and paper = (conf.) • Plastic = (conf.) • Aluminium cans = (conf.) • (conf.) tonne / year of aluminium and (conf.) tonne /year of steel off-cuts are recycled. Amount Disposed to landfill (per year) • Cardboard = (conf.) • Plastic = (conf.) Note: (conf.) per year of "non-recyclable" plastic is disposed to landfill. Negotiations with contract recycler re recycling • Aluminium cans = (conf.)	Recycled (per year) • Cardboard and paper > (conf.) • Plastic > (conf.) • Aluminium cans > (conf.) • Aluminium > (conf.) • Steel > (conf.) Disposed to landfill (per year) • Cardboard < (conf.) • Plastic < (conf.) • Non-recyclable plastic < (conf.) • Aluminium cans = < (conf.) **Note: all plastic including "non-recyclable" plastic is now accepted for recycling by plastic recycler.**	Recycled (per year) • Cardboard/paper = (conf.) • Plastic = (conf.) • Aluminium cans = (conf.) • Aluminium = (conf.) • Steel = (conf.) Disposed to landfill (per year) • Cardboard = (conf.) • Plastic = (conf.) • Non-recyclable plastic = (conf.) Aluminium cans = (conf.) **Target achieved? Paretially** It is thought that the goals set were optimistic as total recyclable waste sent to landfill is currently 99% Waste audit on monthly basis on garbage bins commenced, auditing for presence or absence of the following: cardboard, plastic wrap, plastic, aluminium cans, steel.
Goal 4 KPI 22	Adoption of Environmental Code of Practice for Packaging	FormRite uses of Environmental Code of Practice for Packaging in new product development and displays company Environmental Policy in office and on web site.	Continue use of Environmental Code of Practice for Packaging in new product development (ECOPP form). Display company Environmental Policy in office and on web site.	FormRite continues use of Environmental Code of Practice for Packaging in new product development (ECOPP form) and displays company Environmental Policy in office and on web site. **Target achieved? Yes**

Goal for packaging man'factrers	Aim	Baseline Data	Target	Results
Goal 4 KPI 26	Adoption of "Buy Recycled" Purchasing Policy.	FormRite has adopted a "Buy Recycled" Purchasing Policy and included in Quality Manual	"Buy Recycled" Purchasing Policy to remain in place. Evidence of recycled material purchase.	"Buy Recycled" Purchasing Policy still in place. (conf.) of material with recycled content was purchased and used. The company is investigating introduction of other non-virgin raw material purchase, e.g. PVC. **Target achieved? Yes**
Goal 4 KPI 27-29 Establishment and reporting of baseline data, lodgement of annual report against action plan, continual improvement		Previous lodged action plan reported baseline data. This annual report demonstrates improvement and achievements and continual improvement against targets		**Target achieved? Yes**

[i] **Definitions of plastics types**
Plastic type Definitions
Type 1 PETE (Includes APET and PETG)
Type 2 HDPE
Type 3 PVC
Type 4 LDPE
Type 5 PP
Type 6 PS (all forms of polystyrene including High Impact PS)
Type 7 Other (includes ABS (acrylonitrile-butadiene-styrene), polycarbonate, acrylic and biodegradable.

Note: while types 4, 5, 6 and 7 are regarded as "non-recyclable" due to low recycling rates in the marketplace, in FormRite production they are all recycled by bundling separately and sale to an external recycling company. Plantic biodegradable plastic waste is returned to Plantic manufacturer.