



1. Environmental Impact Statement.

- **Materials.**

The materials used are post consumer and post industrial mixed plastics collected and processed by other recyclers or by ourselves. Energy utilised in reprocessing is limited to heat generated by electricity which is used to soften and reform the thermoplastic materials. No additional environmental pollution is generated by this process and no waste results; all material is converted to finished product. The thermoplastic materials processed are not regarded as toxic and no toxic substances are generated during manufacture of the timber and concrete substitute products.

- **Pollution and Health**

There are no known pollution or health problems associated with the use of recycled plastic. However it would be expected that users of recycled plastic materials as a timber substitute will make use of the same personal safety items as are used in the working of timber.

- **Installation.**

Installation procedures involved in the use of recycled plastic timber substitutes are the same as for the materials they are intended to replace, the material can be machined and formed using the same techniques as for timber. Predrilling of nail and screw holes is recommended. The waste generated is more easily collected and less dusty than timber waste and could possibly be recycled, although this would not generally occur because of the small quantities involved. Material is usually supplied to the length required by the customer to minimise waste. The minimal waste resulting would probably be disposed as general building residue. In the case of concrete substitutes, the procedures for installation result in lower costs and energy usage because of the much lower weight to volume ratio of recycled plastic. This gives significant savings in labour and lifting machinery costs. In addition the use of lightweight recycled plastic products has significant Occupational Health and Safety advantages. Site preparation costs are not affected by the use of recycled plastic products, however structural changes to allow for the use of recycled plastic may be necessary. Any increase in costs incurred must be considered against the advantages involved in the use of recycled plastic, generally increased life expectancy.

- **Maintenance**

It is generally claimed that the life expectancy of recycled plastic products of the type usually made, i.e. thick section products, is 40 years plus. Maintenance is normally not required other than visual inspection for damage and general cleaning. In many cases, for example tables, chairs and benches, damaged parts can be replaced easily and cheaply. Painted surfaces are subject to the same cleaning and repainting requirements as any other material. Graffiti is easily removed using commercially available graffiti removing strippers. Removal and reinstallation costs of timber substitute products are as for timber, whereas for concrete substitute products, costs are less due to the reduced weight.

- **Disposal**

Undamaged items can be reused in other areas. Unusable damaged items can be recycled where such facilities exist or returned to the manufacturer for disposal. There is no potential hazard involved in disposal in landfill if that is the only disposal option.

- **Environmental Effects**

The use of recycled plastic products does not involve any environmental damage; in fact the reverse is the case. The use of timber substitute preserves timber for other uses and in the long term could result in the preservation of such species as Red Gum, Ironbark and other hardwoods. The manufacture of products, likewise, does not harm the environment since no toxic substances are generated and all production waste is reused. The energy required to process waste plastic is in general conceded to be no more than that required to produce product from virgin materials, which in many instances are based on the consumption of non-renewable resources.

- **Design Criteria**

Plastic, particularly of the types used in our recycling process, are not to be regarded as structural or load bearing materials. Careful compounding using reinforcing fillers can give adequate load bearing characteristics in certain circumstances provided the material spans minimal gaps. The span must be determined for each structure taking into consideration expected loads and the dimensions of the materials being used.