

# Contributors to our ecological footprint

## Ecological footprint - impacts

Ecological footprint analysis calculates land consumed through resource consumption as a way of comparing consumption levels with the amount of resources nature can continually supply. Calculations take into account all upstream ecological footprint impacts, capital requirements, imports and capital imports generated by a place.

Every step in a product's supply chain contributes to the ecological footprint of Melbourne. The city's production layer shows the cumulative impact of the ecological footprint of various stages of production in the supply chain. The base production layer is the land required directly by the population - for example land occupied by a house and land required to absorb emissions caused by a household or by driving a private car. All other more indirect land requirements originate from this base layer. The provision of goods and services purchased by the population forms the first production layer and the land needed for this process is called a first-order requirement. The suppliers of the first-order requirements make up production layer number two, and so on. The sum of direct and all indirect requirements is the total requirement in terms of land.

## Melbourne's production layer

Graph 1 shows a breakdown of production layers and ecological footprint analysis, which highlights the impact of lifestyle choices on the natural environment.

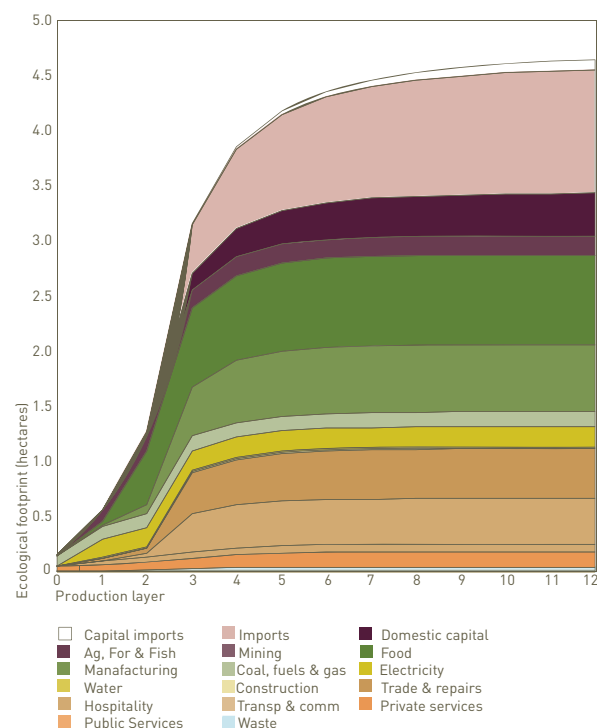
This includes:

- Food – the impacts of food production, processing, packaging, storage and transport.
- Goods purchased – the materials required to produce, store, transport and dispose of them.
- Housing choices – the land and resources required for construction and maintenance, along with the resources such as electricity, gas and water required on a day-to-day basis.
- Movement – the fuel and energy consumed for private and public transport and associated infrastructure.

Imports are the single largest contributor to Melbourne's total ecological footprint, reflecting the energy and resources required for their production and transport.

Note: The production layer is a breakdown of the land areas required by the producers of consumer items, recognising that these producers draw on numerous input items which also require land. It is the process of industrial interdependence which proceeds infinitely in an upstream direction, through the whole life cycle of all products.

**1 Impacts of Melbourne's production layer**  
Melbourne Statistical Division, 1998-99



## Ecological footprint – commodity breakdown

The commodity breakdown provides aggregate figures for Melbourne's ecological footprint performance. As an example, clothing consumed by Melbourne's population contributes an ecological footprint of 0.68 hectares per capita - about 14% of the total ecological footprint.

**2 Commodity breakdown for Melbourne**  
Melbourne Statistical Division, 1998-99

Rank	Commodity	Impact (hectare per capita)	Per cent of total Eco footprint
1	Clothing	0.68	14.41
2	Retail trade	0.55	11.66
3	Accommodation, cafes and restaurants	0.54	11.40
4	Beef products	0.46	9.73
5	Electricity supply	0.20	4.20
6	Raw sugar, animal feeds, processed seafoods & other food products	0.19	3.96
7	Ownership of dwellings	0.14	2.97
8	Dairy products	0.13	2.86
9	Carpets, curtains, tarpaulins, sails, tampons and other textile products	0.13	2.71
10	Bread, cakes, biscuits and other bakery products	0.10	2.19
11	Petrol	0.10	2.09
12	Footwear	0.08	1.60
13	Wholesale trade	0.07	1.58
14	Motor vehicles and parts, other transport equipment	0.07	1.44
15	Banking	0.06	1.35
16	Sheep, lambs, wool	0.06	1.29
17	Furniture	0.06	1.19
18	Processed wool, textile fibres, yarns and woven fabrics	0.06	1.19
19	Knitting mill products	0.05	1.11
20	Vegetable and fruit growing, hay, plant nurseries, flowers	0.05	1.05
21	Coins, jewellery, sporting goods, toys, signs, brushes and other	0.05	1.04
22	Air transport	0.05	1.04
23	Flour, cereal foods, rice, pasta and other flour mill products	0.04	0.95
24	Poultry and eggs	0.04	0.92
25	Communication services	0.04	0.89
26	Forestry and services to forestry	0.04	0.89
27	Gas production and distribution	0.03	0.73
28	Vegetables, fruit, juices, jams and other fruit and vegetable products	0.03	0.69
29	Household appliances and hot water systems	0.03	0.68
30	Insurance	0.03	0.66