

Table 31  
DISTRIBUTION OF INDUSTRIAL LAND, 1951

District	Extractive		Oil and Explosives		General Manufacturing		Total	
	Used	Held	Used	Held	Used	Held	Used	Held
Central	30				1,622		1,652	
Western	400		1,203	1,600	736	787	2,339	2,387
Northern	300	10			609	165	909	175
Eastern	234	165			331	330	565	495
Southern	199				680	674	879	674
Total	1,163	175	1,203	1,600	3,978	1,956	6,344	3,731

highly suitable for industry because of its central location, has become available in relatively recent years.

Outside the central district the principal development has taken place to the west of the city, where industry has been able to secure large areas close to the city centre because the bulk of residential development has gone to the east, south-east and north. Most of the land occupied by industry in the west is held by those industries requiring large areas of land, such as meat killing and processing, and those producing basic chemical products, such as oil, explosives and fertiliser manufacture. There have also been extensive developments in the fields of engineering and rubber.

The industrial development to the west has been so rapid in recent years that the area has become over-industrialised in relation to the local labour market. Industries there have to rely more and more on attracting workers from other suburbs across the metropolitan area. This has resulted in many industrialists preferring to secure land for development in the south-eastern and northern suburbs in the line of the dominant residential trend.

The principal development in this regard over the past few years has been in the Oakleigh, Moorabbin, Dandenong area to the south-east, where industry has secured extensive holdings for future development. Apart from its strategic location with regard to the trend of residential development, many industries have been attracted to this area because of its proximity to the Latrobe Valley, the main source of power and fuel in Victoria and in future, of gas also. Most of the development in this district is in engineering and to a lesser degree textiles and food.

In the northern suburbs industrial development is more mixed, and the relatively small proportion of industry located in the eastern district is mainly in the light industrial field.

The location of industry around Melbourne is broadly summarised in Table 32.

The composition of industry within these districts based on 1949 employment figures is summarised on the Table 33 and map 31.

It is worth noting that a high proportion of industrial employment is located in the central city area bounded by

Flinders, Spencer, Franklin, Victoria and Lansdowne Streets. Some 37,000 factory workers, or 15 per cent. of Melbourne's total factory labour force, work in this area. The majority are engaged in the clothing, paper and printing and light engineering trades. Nearly one-third of all clothing and 45 per cent. of all paper and printing employment is located in the central city area.

### LOCALATIONAL REQUIREMENTS OF INDUSTRY

The chief factors influencing the choice of location of most industries in Melbourne since the war have been access to a suitable labour market and to adequate transport facilities, whether road, rail or wharf, as may be required. Other factors affecting special types of industry include access to adequate power, water and effluent disposal facilities where industries are heavy users of power and water; proximity to distribution centres or to other allied industries; and isolation from residence and other industry where the processes of manufacture are dangerous or offensive.

#### Labour

The general shortage of industrial labour throughout Australia after the war has probably been the dominant factor in determining the location of most new factories, especially in the lighter range of industries. Clothing, textiles, light engineering and plastics are all fields that have shown a tendency to decentralise in search of new sources of labour in the growing outer suburbs. The trend is strongest in clothing, textiles and plastics which depend mostly on female labour, and follows the pattern of establishing a series of small factories in outer suburbs to attract and absorb local

Table 32  
LOCATION OF INDUSTRY IN MELBOURNE

District	Industrial Employment (Percentage of Total)	Land used by Industry (Percentage of Total)
Central	60	26
Western	15	37
Northern	11	14
Eastern	4	9
Southern	10	14



Table 33

**DISTRIBUTION OF INDUSTRIAL EMPLOYMENT**  
(Percentage of Employees located in each Statistical District,  
1949)

Type of Industry	Districts				
	Central	Western	Northern	Southern	Eastern
Engineering	60.0	20.2	9.0	8.5	2.3
Clothing	76.4	1.4	9.6	8.9	3.7
Textiles	41.7	11.4	30.5	10.5	5.9
Food	60.8	14.6	6.3	14.7	3.6
Paper and Printing	83.8	1.0	6.0	2.6	6.6
Timber and Furniture	50.0	7.3	17.6	16.3	8.8
Chemicals	42.7	51.1	2.7	2.6	.9
Skins, Leather and Furs	54.2	19.4	17.5	7.2	1.7
Rubber	63.5	29.6	3.1	1.7	2.1
Miscellaneous	60.0	8.6	7.6	16.2	7.6
Mine & Quarry Products	20.8	22.0	23.2	22.0	12.0
Heat, Light and Power	55.2	32.2		6.6	6.0
Total	60.0	15.0	11.0	10.0	4.0

labour. Most industries tend to draw labour from a fairly wide area, although in general, most factory labour is obtained from the surrounding industrial districts.

It has already been shown that most of the unskilled manual labour force lives in the central, northern and western suburbs, and most of the administrative and clerical labour in the eastern and southern suburbs, while the skilled manual labour force is more evenly distributed throughout all districts. In general, skilled factory and administrative labour is much more mobile and is drawn from a wider area than unskilled labour.

#### *Transport Facilities*

With the constantly growing importance of motor transport to all sections of industry, good access to main roads and highways is a vital factor in the location of all industry. In general, industries whose metropolitan transport costs form a high proportion of total production costs require more centralised locations than industries whose transport costs are lower. The majority of service industries involving metropolitan distribution such as breweries, newspaper establishments, biscuit, ice-cream and canister manufacturers, large bakeries, dry cleaners and milk pasteurisation plants endeavour to secure a central location. Of the heavier industries, timber and joinery, cardboard and paper mills, and sections of the automobile and oil industries also need locations which minimise transport problems.

Relatively few sections of industry today need direct access to a wharf. The advent of motor transport and other

modern methods of handling bulk cargoes, such as pipe lines and conveyor belts, have resulted in a more economical use of wharf space, and have enabled many industries which formerly required sites immediately alongside wharves to move from the waterfront. Where goods have to be off-loaded from ships on to some form of motor transport, it is normally just as easy for a vehicle to transport the goods two miles as a hundred yards. It is normally uneconomic for a ship to berth at a private wharf when it carries a mixed cargo, and therefore, unless an industry is sufficiently large to charter a complete shipment for itself it does not normally require direct access to a wharf.

The industries which have the highest demand for direct wharf access are those receiving or despatching complete bulk shipments of materials by sea, such as certain of the basic chemical industries like fertiliser manufacture and sugar refining. The oil industry depends on bulk shipments of crude oil and petroleum from abroad and requires direct connection by pipe line from oil berths to storage tanks. The timber industry receives most of its timber by sea in bulk shipments, and it is desirable that the larger distributing organisations at least be located as close as possible to the timber wharves because of the heavy bulk freight involved.

#### *Power, Water, Effluent Disposal*

Most heavy industries are big users of electric power according to size and continuity of operations. The following industries are relatively heavy users of water and most require special effluent disposal facilities:—basic chemicals, paper and cardboard, textiles, dyeing and dry cleaning, breweries, milk pasteurising and bottling, soap manufacturing, tanneries, certain food products, spinning and weaving.

#### *Distribution*

Most service industries such as large bakeries, dry cleaners, biscuit and ice-cream manufacturers, milk pasteurising establishments, newspaper houses and large timber yards, because of their function of direct distribution, require to be reasonably centrally located in respect to the region they serve to avoid excessive transport costs. Other industries, such as printing establishments, tanneries, foundries, certain specialised engineering establishments and furriers, require to be centrally located in relation to the range of industry dependent on them. Other industries need to be near those to which they are closely linked—e.g., meat canners near abattoirs or slaughter yards, automobile parts manufacturers near large automobile assembly plants, canister manufacturers near canning plants. Once a major industry has been established dependent industries naturally tend to congregate around it. This pattern of linkage is a complex one, and has a very important bearing on traffic and the whole economic functioning of industry. The decentralisation of certain industries could increase traffic and transport costs, and the problem of industrial decentralisation even within the metropolitan area must be approached with care.