

Transport

Some of the most important decisions you can make regarding the energy consumed by your household relate to transport. Where will you live? Is there good public transport? Will you have to buy a second car? You may have an energy efficient home but still be a high energy household if you rely heavily on your car. Transport is a crucial ingredient in the good design of homes, neighbourhoods and cities.

Smart cities throughout the world are designed to have low rates of motor car use and high quality of life. The same can apply to your household.

URBAN VILLAGES

To reduce the environmental, social and economic impact of your transport, think carefully about where you should live. Avoid the sprawling car-dependent suburbs and choose an urban village with good access to public transport.

The main characteristic of an urban village is increased density of development around public transport facilities. Walking, cycling and public transport are used instead of cars. Road space and car parking are restricted and traffic speed and volume are controlled.



Mirvac Land Lease Village Consortium

In urban villages, street layout should be simple, facilitating the easy movement of pedestrians, cyclists and buses.

Australians produce more motor vehicle pollution per capita than almost any other country in the world. Twice as much as Europeans and many times more than people in Tokyo, the so called "car pollution capital of the world."



Community ties are strengthened by community interaction at meeting places near the village centre. Local shops and small businesses benefit from community support. Natural areas are protected and quality public spaces created and maintained. This kind of development can promote a sense of community and help reduce car use.

Older parts of cities that developed in the pre-car era exhibit many of the good qualities of urban villages.

PROBLEMS OF CAR DEPENDENCY

Each Australian home produces around 20 tonnes of greenhouse gases each year and a third of this comes from cars.

Promoting urban villages helps us counter car-dependent sprawl and its many negative impacts. Some of these impacts are:

- > Greenhouse gas emissions, air and noise pollution. [\[See: Noise Control\]](#)
- > Pollution and waste from manufacturing and disposing of cars.
- > Communities divided and fragmented by roads.
- > Cost burden of car ownership and poor access for non car owners.
- > Flooding and water pollution created by runoff from impervious road surfaces. [\[See: Stormwater\]](#)

The NRMA estimates the total cost of running a new medium-sized car to be around \$200 per week.

- > Loss of valuable bushland and farmland to roads and car parks.
- > Depletion of finite oil reserves.
- > High cost of roads and related services.
- > Car accident deaths and injuries.

Australian cities require five car parking spaces per vehicle on average. In Los Angeles, 70 percent of the surface area of the city is dedicated to the motor vehicle.

BENEFITS OF SUSTAINABLE TRANSPORT

By walking, cycling and using public transport you will benefit in many ways:

- > You can enjoy meeting and interacting with people while walking or riding a bus or train.
- > You will save money on transport.
- > Your homes, neighbourhoods and cities will look better.

Sustainable transport can revive our communities and improve our quality of life.



A sedentary lifestyle is a health risk. A brief walk to the bus or train each day can improve your health and lower stress levels.



Increasing road capacity attracts more traffic, cancelling the benefits of increased capacity. Building more roads is not the answer to our transport problems!

DECIDING WHERE TO LIVE AND WORK

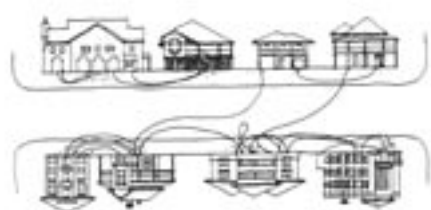
You can reduce car travel and help create a market demand for urban villages by living in an established area close to public transport and other urban services.

In deciding where to live and work, you should consider the following questions:

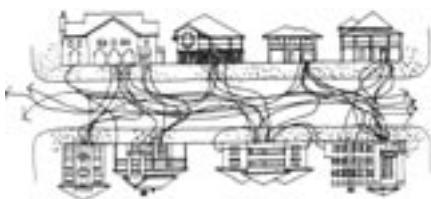
Are you within walking distance of public transport, shops, schools and other urban services?

Can you commute to work without a car? For most of us, the work commute is the most significant component of weekly travel.

Are you close to work? If so you will save hours of travel and free up time for activities you enjoy.



Light traffic streets
2000 Vehicles per day
200 Vehicles per peak hour
3.0 Friends per person
6.3 Acquaintances



Heavy traffic streets
16000 Vehicles per day
1900 Vehicles per peak hour
0.9 Friends per person
3.1 Acquaintances

Is your community vibrant? Find opportunities to participate in community activities. These might range from formal meetings on transport issues to local art classes or just chatting to neighbours.

YOUR DAY-TO-DAY TRAVEL BEHAVIOUR

The design of your home, choice of neighbourhood and your day-to-day travel behaviour are important elements of your lifestyle.

Here are some ideas for improving your lifestyle while reducing the impact of your transport needs.

In built up areas during peak periods, trains and bicycles can be faster than cars - particularly if time taken to find parking is considered.

Use your car less. Where location demands that you own a car, then limit the number of cars in your household. This will reduce parking impacts and compel members of the household to plan their trips more carefully.

Share car ownership and car trips. You can share journeys by taking on passengers, riding as a passenger with others or by participating in formal ride sharing schemes.

Combine multiple car trips into a single trip. With a little planning, this can significantly reduce the extent of your car travel.

If buying a new car look for the fuel consumption label that will tell you how economical the car is. This label is now mandatory for all new cars, four wheel drives and light commercial vehicles. Choosing the more economical model will save you money and reduce your greenhouse gas emissions. Consider a hybrid petrol/electric car to further reduce your greenhouse emissions.



Work from home. Avoid the commute every now and then by 'telecommuting'. It will reduce your stress levels, add variety to your work routine and allow you to perform some home duties and spend time with your children while working. It is good for your neighbourhood as you can provide surveillance against crime during weekdays.

Drive smoothly. Minimise acceleration and braking. This will reduce noise, air pollution and accidents. Erratic, aggressive driving creates a stressful and dangerous city.

Maintain your car regularly. You will reduce noise and air pollution if you ensure that your car's engine and muffler are operating effectively.

Choose a small car. Driving an unnecessarily large and heavy car such as an off road vehicle in the city wastes fuel and creates unnecessary noise and air pollution. Consider renting a specialised car for the occasions when you need to carry a large load or drive off road.

Use the most environmentally friendly fuels. Leaded petrol creates more greenhouse gases than LPG and methanol.

Shop locally and buy locally made goods. This reduces the extent of your travel and you are helping to create urban villages by reinforcing local social and economic linkages.

Every year, around 3000 people die on Australia's roads. Road accidents cost the community over \$5 billion annually.

WORKING WITH YOUR NEIGHBOURHOOD AND COUNCIL

You can work with your council and neighbours to reduce car use and promote a healthier community. This work could include:



Traffic calming. Widen footpaths, install speed humps, roundabouts and landscaped strips. Introduce local speed restrictions and road closures. These not only serve to slow traffic, but can transform your traffic-ravaged street into a friendly and attractive space shared by local residents, pedestrians, cyclists and motorists alike.

Organise or participate in street parties, markets and festivals. They are fun, allow residents to reclaim their streets, strengthen the community, promote pride of place and increase opportunities for social interaction.

Develop a neighbourhood traffic reduction plan. This involves residents reorganising their travel behaviour to reduce their car use. In order to reduce car travel by others on your street, you must first make an effort to reduce your car travel on others' streets.

Participate in strategic planning. Councils have to consider a wide range of issues in the decision making process and a decision that is right for one part of the community could be wrong for another. Your council is continually developing strategic plans and policies that influence transport and your environment. These include pedestrian and cycle-way plans and car parking policies. Your participation can help council in its decision making processes.

Avoid short car trips - your car generates 40 percent more greenhouse gases per km when cold. Walk or ride a bicycle instead.

Comment on development proposals. Your council is also continually approving new developments that can significantly influence your neighbourhood. You can comment on how

(or whether) developments should be approved in the interests of promoting more livable communities.

DESIGNING A HOUSE OR APARTMENT BUILDING

If you are building or renovating a house or apartment, you should consider the following transport-related design elements.



Avoid a line-up of garage doors along the street.

Minimise the number of on-site spaces. It is best to eliminate the need for on-site parking altogether. You can do this by not owning a car, or by parking on the street if possible. By minimising on-site parking, you will reduce the extent of paved areas and extend your garden space. You will also reduce the number of driveways crossing footpaths, which is safer for children and pedestrians generally.

Minimise the extent of paving. Driveways should be kept as short and narrow as possible and be only partially paved to minimise stormwater runoff.

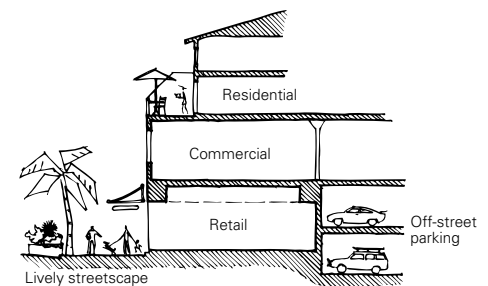
Locate on-site spaces appropriately. Whilst parking at the side or rear of a house is recommended to avoid an unsightly line of garages facing the street, this does add to the extent of driveways and paved areas (except if there is rear access). On-site parking for apartments should also be minimised, and whilst it should be located underground, this adds to the embodied energy of construction.



Allow space for bicycle storage. This could include a dedicated bicycle storage area or space in the garage. Consider space saving, inexpensive options for storing and securing your bicycle, such as wall mounted bicycle racks.



Front yards without car parking areas create a more attractive streetscape. [See: [Streets & Communities](#)]



Siting shops and residences instead of car parking at the street level frontage of apartment buildings will retain activity on the street and enhance the streetscape.

ADDITIONAL KEY REFERENCES

Engwicht D (1999) *Street Reclaiming: Creating Livable Streets and Vibrant Communities*, Pluto Press, Sydney

Newman P & Kenworthy J (1992) *Winning Back the Cities*, Australian Consumers' Association and Pluto Press, Sydney

Newman P & Kenworthy J (1999) *Sustainability and Cities: Overcoming Automobile Dependence*, Island Press, Washington D C

Fleay B J (1995) *The Decline of the Age of Oil: Petrol Politics and Australia's Road Ahead*, Pluto Press, Sydney

Urban Design Advisory Service (1998), *Residential Densities*, Sydney

Commonwealth Department of Transport & Regional Services, www.dotrs.gov.au

Environment Australia www.ea.gov.au

UK Department of the Environment, Transport and the Regions www.detr.gov.uk

Smogbusters www.nccnsw.org.au/transport

Street Reclaimers www.lesstraffic.com

Principal author: Kendall Banfield

Contributing authors: Caitlin McGee, Steve Shackel