MWH®

BUILDING A BETTER WORLD

Your life, your home, your city -
the future of Australia's liveable cities.

May 2013

Live to plan or plan to live?

Creating 'liveable cities' is an increasingly used theme for the planning, design and engineering disciplines, as well as the organisations tasked with delivery of infrastructure and services to develop these cities of the future.

By definition liveable cities offer a high quality of life, and support the health and wellbeing of the people who live and work in them. But what factors do Australians consider important when choosing where to live, and are we integrating them?

As recognised leaders in strategic consulting and technical engineering, MWH recently commissioned a piece of independent research of Australian households to explore attitudes and priorities with regard to liveable cities. In particular, we set out to explore infrastructure priorities, drivers to live in cities versus regional areas, attitudes towards water, transport and energy consumption and lifestyle influences.

The survey found that when choosing where to live, Australians believe access to healthcare is the most important factor, followed by employment/work.

When choosing the city, town or suburb to live in Australians most valued infrastructure element is water. However, there is still a major stigma associated with drinking recycled water with 64% of respondents willing to pay a premium to have drinking water without recycled sewage included in the supply network. The findings also indicate that most Australians would drink rainwater harvested from their roofs. Collecting rainwater, stormwater, grey water and recycled water and using these in fit for purpose applications will maximise efficient water use and minimise demand on fresh water drinking supplies.

Nearly all Australians surveyed (91%) believe that road networks will need to be maintained and operated efficiently to make an area liveable. And 9 in 10 respondents (87%) believe unused crown land and government-owned buildings should be used to generate electricity through solar and wind.

To compare existing needs versus future needs, Australians rank having safe tap water for drinking as the most important aspect of where they will live now and in 30 years, highlighting the need to ensure that quality water and infrastructure is available. Renewable energy and a drought-proof, resilient water supply are ranked second and third respectively.

To develop a more sustainable environment for people to live in, councils, government departments (federal, state and local) and service providers need to understand the needs and wants of the Australian public. This, coupled with risk and resilience in land use planning, needs to be at the heart of what we do.

An increasing wave of natural disasters around the globe highlights the effects of climate change, increased urbanisation and population growth. Resilience needs to become the leading factor in how we plan and design our future cities. These factors are combining to increase both the likelihood and consequence of disruptions and accelerating the need for mitigation versus reconstruction. The government needs to take on a long-term perspective and an adaptive approach that builds resilience not only in infrastructure itself but also in the community that it serves.

It is our hope that this report will shed further light on the factors of importance to Australians in planning for liveable cities. The challenge for us all is to get ahead of the game. We need to address the megatrends that are coming and start shaping the communities and cities in which we live, work and play.

Live to plan or plan to live? We had better plan for the future because we will spend a lot of our time there; and while we are there, we will have to pay our way.

Mark Bruzzone
Managing Director, Government and Infrastructure Australia
MWH

Mark Bruzzone
Managing Director, Government and Infrastructure Australia
MWH
Level 21
141 Walker Street
NORTH SYDNEY NSW 2060
T: +61 2 9493 9700
E: mark.bruzzone@mwhglobal.com

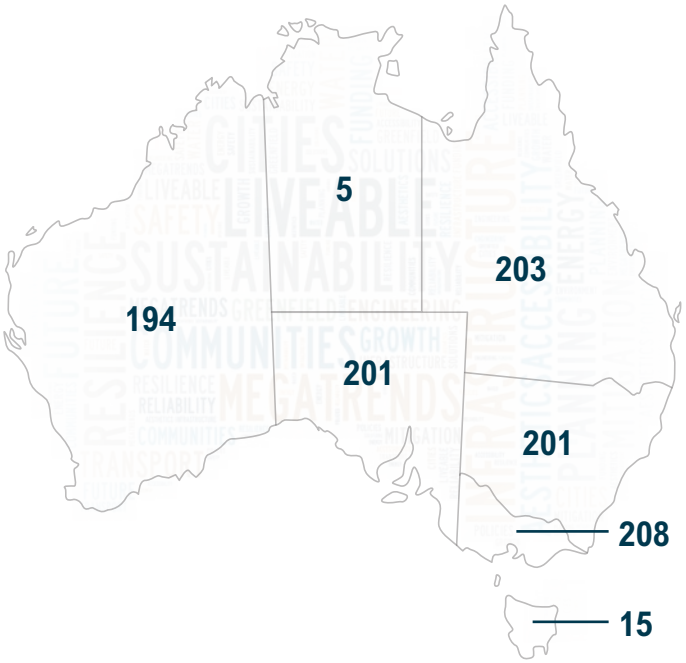
Contents

About this report

Between 8 and 13 March 2013, MWH commissioned a study to understand attitudes, drivers and priorities with regard to liveable cities. The survey was conducted among 1,027 Australians, 18 years of age and over, located in both capital city, regional and remote areas.

Questions asked in the survey ranged from opinions on components of liveable cities and infrastructure priorities, drivers to live in cities versus regional areas, attitudes towards water, transport and energy consumption, lifestyle influences, and opinions of future infrastructure and spend.

The survey was conducted online by Lonergan Research and results were weighted to the population estimates according to the Australian Bureau of Statistics.



Respondent Profile		
Age	18 to 24	24%
	25 to 34	14%
	35 to 49	22%
	50+	39%
ARIA Score	Cities	70%
	Regional	21%
	Remote	9%
Income	<$40K	22%
	$40K-$100K	51%
	>$100K	27%
Education	High School	32%
	TAFE/Technical	31%
	University	37%
Employment status	Full time	46%
	Part time	23%
	Not at all	32%

1. Components of liveable cities and infrastructure priorities

People want accessibility, aesthetics and reliability of services and are prepared to pay a bit more to get it when choosing where to live. The government policy to reduce the cost of housing can be applauded, but at the moment is measured in one dimension only and that is the upfront capital cost. However, if a whole-life costing, that is looking at the ongoing operational cost of services were to be considered, it would fit better with the Australian people's desire for a broader range of options and their willingness to pay for things that they value about a place. There is more scope for consideration of a range of outcomes that satisfies both government policy drivers as well as community demand for something different.

In response to many of the global megatrends, such as climate change and planning for megacities that are shaping our world, there is an increasing need for engineering consulting firms, technology providers, regulators, and the government to work in a more collaborative arrangement to provide solutions for infrastructure. We realise there is an increasing need to bring together engineering, planning design and assessment expertise, with technology providers, to provide the innovative solutions we are going to need to build a sustainable future.

Peter Fagan

General Manager, Sustainability and Environment, Australia

When choosing where to live, Australians were asked to rank what was important to them based on where they would want to live. They ranked healthcare as the most important component followed by employment/work and essential services such as police and ambulance.

However, those living in cities are more likely to rank aesthetics in their top three most important things to have. Those living in remote areas are more likely to rank education in their top three most important things to have.

The most important infrastructure element Australians value when choosing the city, town or suburb they want to live in is water. This rated higher than electricity, roads or sewage. 76% of Australians value water supporting infrastructure more than sewage supporting infrastructure, 69% value water more than roads and 55% value water more than electricity.

However, those living in regional areas are more likely to rank electricity (35%) as the most important infrastructure than those living in cities and remote areas. Australians living in remote areas are more likely to rank water (38%) and roads (27%) as the most important infrastructure elements than those living in the cities and regional areas.

When asked to look into the future, Australians ranked having safe tap water as the most important aspect of where they will want to live. This is followed by having renewable energy as the main source of electricity and having a drought-proof water supply.

Overall Rank	Components of Liveable Cities
1st	Healthcare (hospital, doctors, health practitioners etc)
2nd	Employment/ Work
3rd	Essential services (police, ambulance, fire etc)
4th	Infrastructure (roads, electricity, water, sewage)
5th	Environment (public spaces, air quality)
6th	Aesthetics (how the place looks)
7th	Education (schools, universities)
8th	Culture (e.g. theatre, cinema, sports venues, libraries)
9th	Food (restaurants, cafes, fresh produce)

2. Drivers to live in cities vs regional centres

Those living in the outskirts of major cities (68%) ranked access to medical practitioners, hospitals, shopping centres and restaurants as a key driver for location choice.

Better transport links (52%) are more important to those who live in major cities than those on the outskirts of major cities (46%) or regional centres (34%).

Those who live in regional or remote areas would like better transport links and services (57%), hospital/ specialist medical care (53%), and opportunities for work (46%) to enhance their quality of life.

A common theme prevails whereby irrespective of a person's persuasion to live in a city or regional centre, access to medical services, transport links and being close to friends and family and employment increases quality of life for Australians, and should be central to planning future cities and towns.

Income differences

51% of Australians living in cities estimate that their income will decrease if they moved to regional, rural or remote areas of Australia. More than 1 in 10 (11%) believe that their income will decrease by 50% or more.

Given their current skills, experience and type of work, city people moving to regional, rural or remote Australia expect their income to drop by 13%.

Conversely, 38% of Australians living in regional, rural or remote areas expect an increase in income if they moved to the city.

- Those who believe their income would increase expect an average rise of 27%.
- 6% believe that their income would increase by 50% or more.

State findings/variations

There are differences in state-wide findings when it comes to the three most important aspects in choosing a city town or suburb to live:

Those from NSW are more likely to include employment (57% compared with the national average of 51%) and culture (e.g. theatre, cinema, sport venues and libraries), (26% compared with the national average of 18%) in their top three aspects.

VIC and SA are more likely to include environment (public spaces, air quality), (37% compared with the national average of 31%) in their top three aspects.

Queenslanders are more likely to include essential services (police, ambulance, fire), (58% compared with the national average of 45%) in their top three aspects.

Those from WA are more likely to include education (schools, universities), (30% compared with the national average of 22%) and food – restaurants, cafes, fresh produce (17% compared with the national average of 13%) in their top three aspects.

On the move?

Having good quality tap water is the most important infrastructure element when choosing an area to live. 87% rate this as extremely or very important, higher than clean air (85%) and well maintained roads (69%).

The majority of Australians (57%) are willing to move to an area which provides them with the elements they consider to be important. Given the right conditions, Australians will resettle to an area that provides them with a higher standard of living. They won't settle in an area just because they have to.

In an ideal world, 48% of Australians would choose to live in a major city or it's outskirts, with 21% choosing to live in a regional centre or a small city.

Not surprisingly, people who currently live in certain demographic areas tend to choose similar size areas as their ideal locations.

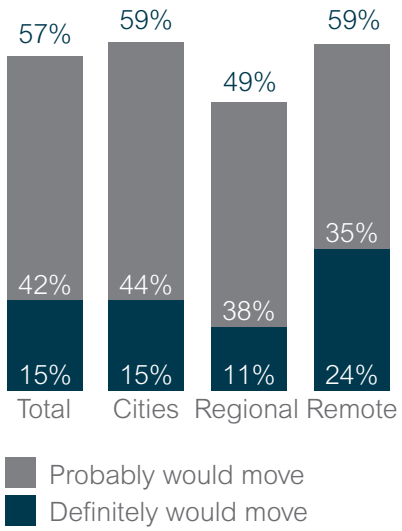
Australians living in major cities chose major cities (36%) or the outskirts of major cities (24%). People living in regional areas chose to live in a regional centre or small city (34%) or regional towns (25%). However, some Australians would like to move to areas with a different population size. 40% of people currently living in cities have indicated that they would like to live in regional centres, regional, rural or remote areas. 42% of Australians in regional centres would prefer cities or rural or remote areas. 35% of rural and remote area people would want to move to a larger population area such as cities or regional areas.

57% of Australians would resettle to a location that provides a better quality of life with elements they consider important to them:

- Good quality tap water.
- Better transport links.
- Better access to hospitals and medical practitioners.
- More opportunities for work.

These were ranked as the most important attributes improving quality of life.

Likelihood to resettle.

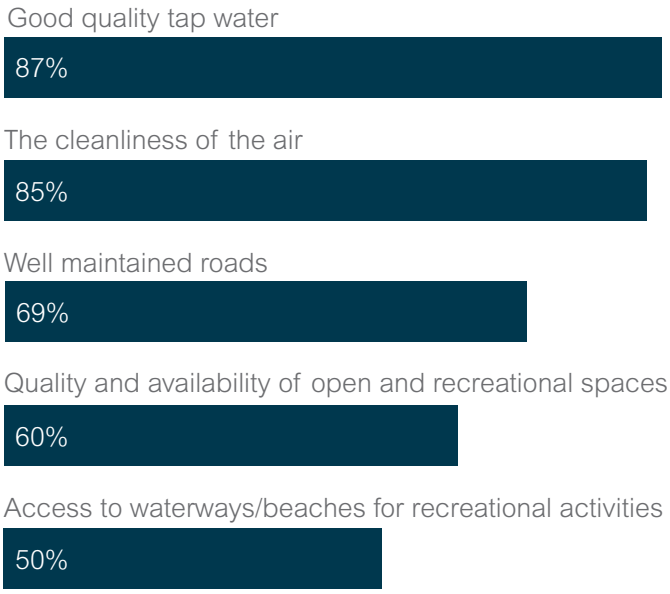


3. Important factors for future liveable cities

Australians ranked having safe tap water for drinking as the most important element of where they will live now and in 30 years, highlighting the need to ensure that quality water and infrastructure is available.

- 76% of Australians prefer having safe drinking tap water over renewable energy being the main source of electricity.
- 85% prefer renewable energy to be the main source of electricity over having public spaces with ponds and fountains.
- 75% would like to have sufficient water supply for a long drought more than having public transport close to where they live.
- 52% like having public transport close to where they live more than having locally grown fresh produce available.
- 57% like having clean and safe river/oceans/ waterholes more than having roads with minimal traffic jams.
- 66% like having enough locally grown food without having to import from somewhere else more than roads without traffic jams.

Things of high importance in the places Australians want to live in.



Due to the high level of importance placed by Australians, the future liveable cities need to integrate all of these qualities and not just one.

4. Infrastructure: Water

Water is considered of huge importance, with 64% prepared to pay a 10% premium on drinking water without recycled sewage included in the supply network. This tells us there is still a major stigma with Australians drinking recycled water, despite the fact most country towns are drawing from rivers, where further upstream sewage is being discharged.

Perception is different to reality, and while this is changing over time, education about the different water supplies, and what is in them, is important if the government wants to invest in new and sustainable water supplies.

The research does show that most Australians would drink rainwater harvested from their roofs. A key design aspect of our future cities will be to ensure that we maximise the fit for purpose use of all of the different available sources of water within the catchment. Collecting rainwater, stormwater, grey water and recycled water and using these in fit for purpose applications will maximise efficient water use and minimise demand on fresh water drinking supplies.

The research also tells us that aside from drinking water, people place a real value on the cultural aspects of water for activities such as for recreation. While utilities and regulators rightly place public health as of utmost importance, other factors should be elevated as well.

In the water sector, the future of large, centralised systems is increasingly uncertain. Ageing infrastructure and changing standards, coupled with the need to adapt and build resilience to climate variability, are challenging traditional methods and standards. In the case of greenfield developments, we are being driven to lower our footprint by reducing the water we import from outside the catchment and encouraged to make better use of sources within the developments themselves. In brownfield or redevelopment sites, we are looking at ways to mitigate the need to amplify or renew existing systems by making better use of local sources and investment in water efficient appliances and technologies. The ability to identify changing community expectations, understand customer and community values and accordingly adjust service is also a major challenge.

Shane O'Brien

Technical Lead,
Wastewater Network

Attitudes to water

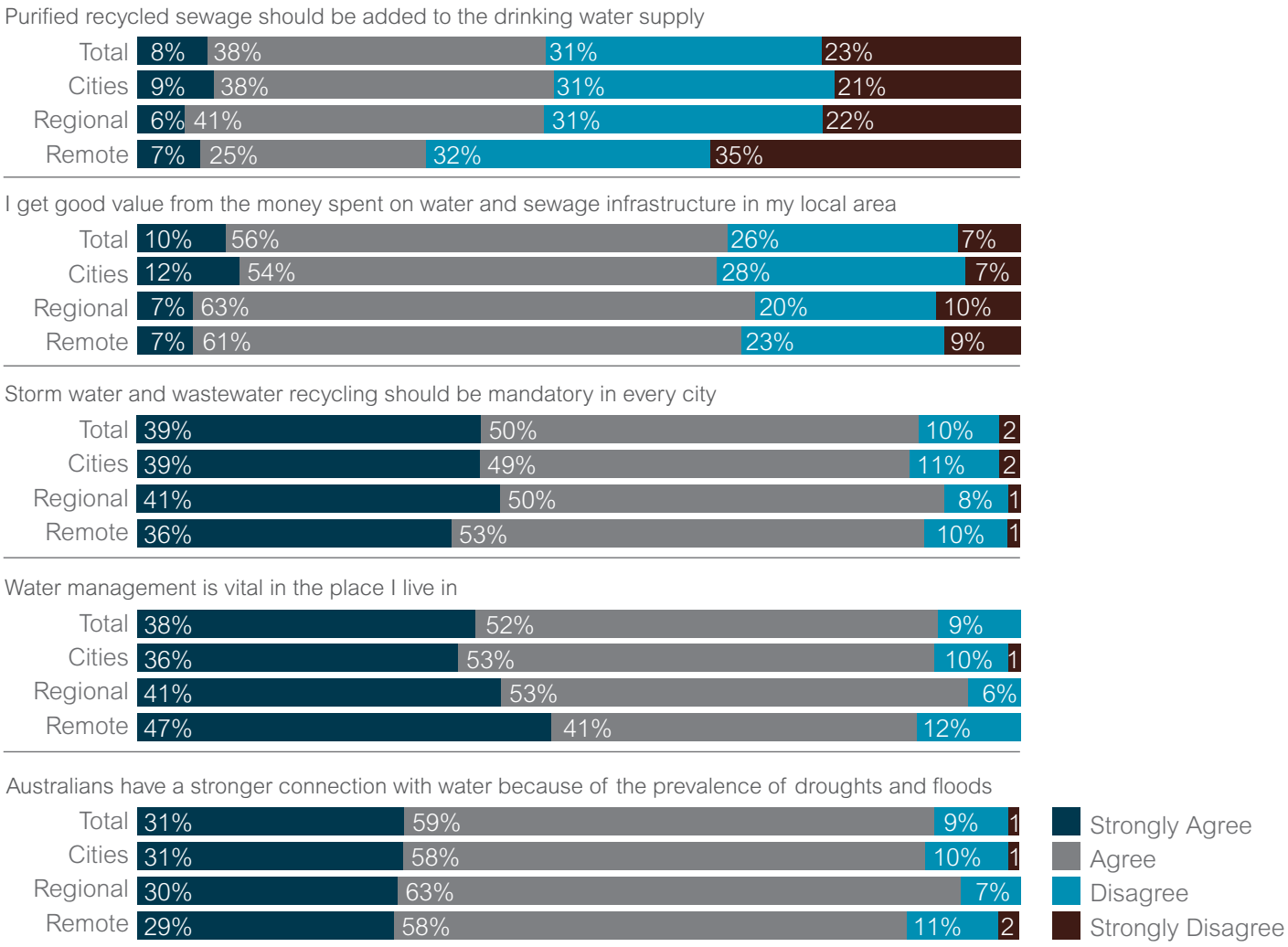
Australians have always had a strong connection with water resulting from the prevalence of droughts and floods, as agreed by 90% of Australians surveyed. In the survey, Australians noted that water issues are an important part of what makes a liveable place, with 9 in 10 indicating that water management is vital in the place they live, in particularly those living in cities (94%). Of those surveyed 88% believe stormwater and wastewater recycling should be mandatory in every city.

Sources of water

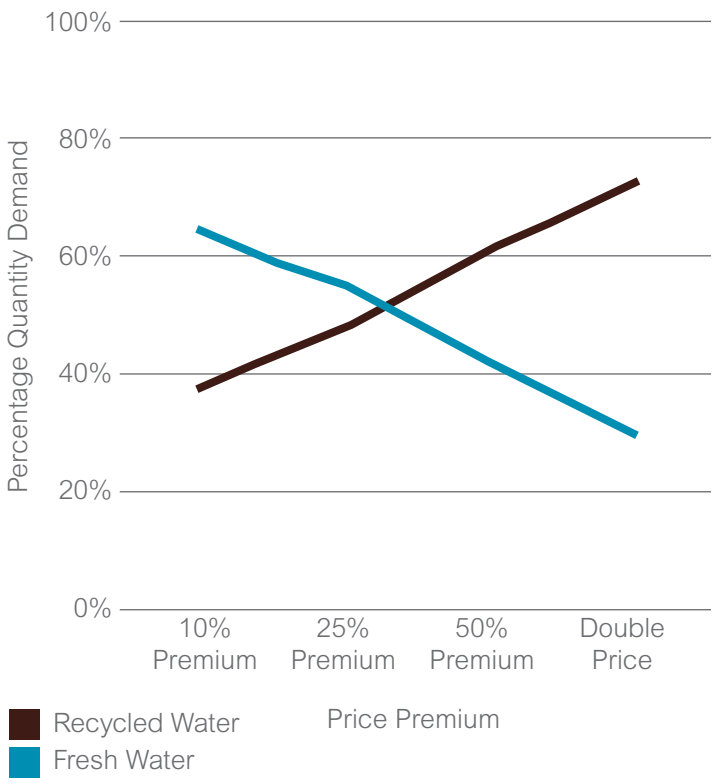
There is still a major stigma associated with Australians drinking recycled water. Of the surveyed participants, only 19% would drink from purified sewage, 21% from purified recycled grey water from their own house, and 31% from purified stormwater from the street. However, 60% of Australians did not mind drinking filtered water collected from their own roof and stored in tanks.

Australians are more comfortable with drinking water from 'fresh sources' than recycled or purified sources, with the exception of local rivers.

Attitudes to water.

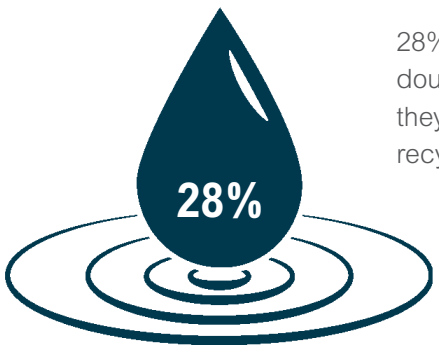


Water at a premium.



Water at a premium

Pricing does have an impact on the consumption of purified recycled water by Australians. With a 10% premium on water without recycled sewage, 64% of Australians will pay the premium and drink the water without recycled sewage. With a 25% premium, almost 50% of people will drink the purified recycled water.



28% would pay double to ensure they are not drinking recycled sewage.

Resilience is something Australians place a high value on, and are prepared to pay to ensure it. Climate variation and natural disasters or extreme events will continue to influence the way new cities are designed and existing cities are reshaped to ensure these communities are more resilient in the future. The frequency, intensity and unpredictability of natural disasters is expected to increase as a result of climate change and it is more important than ever that we learn from the past and plan for the future.

Organisations need to consider resilience in the infrastructure they build to support growing communities. This is so they are better able to deal with the event, but also have a longer-term ability to cope with the response and recovery following an event. Over the last 10 years, there has been an average of 396 disasters recorded annually, with an average damage bill of $142.5 billion annually. Tragically, these impacts have also resulted in an average of 114,502 fatalities annually over the same period (Brookings Institution).

Every dollar invested into disaster preparedness saves seven dollars in disaster aftermath (UNDP, Act Now, Save Later campaign). The Victorian bushfires and Queensland floods are examples of this, where expenditure on building resilience into the design and rebuilding of affected communities will not only serve to better protect the communities from future events but will also save the governments, the insurance sector and the community from future reconstruction costs.

Of course, resilience in rebuilding should not be left to governments, the insurance sector or individuals alone and without proper planning, those making decisions on rebuilding following natural disaster events will respond to short-term needs rather than long-term imperatives.

Brendan Nelson

Asia Pacific Leader, Financial, Commercial and Risk Services

Water bill costs

Australians identified upkeep of pipes (61%), cost of water supply sources (57%) and cost of filtering water (54%) as the top three priorities for water payment.

Costs included in a water bill	%
Upkeep of the pipes	61%
The cost of water supply sources	57%
The cost of filtering water	54%
The cost of extending the systems / networks to cope with new developments	49%
The cost of building and maintaining dams	45%
The cost of building and running desalination plants	45%
The creation and maintenance of emergency water supplies	41%
The costs of recycled water schemes	39%
Water used to water local parks / local fountains	34%
The management of local river systems	31%
None / don't know	17%
Other	4%

Natural disasters

In the event of a natural disaster Australians are willing to pay up to $21.73 per month to ensure that there is a backup supply of clean drinking water. People living in the cities are willing to pay more ($22.99) to protect the drinking water. People living in regional and rural locations will pay less per month ($19.63 and $16.29 respectively) for a backup water supply.

In the event of a natural disaster Australians are willing to pay $ extra per month	
Total	$21.73
Living in cities	$22.99
Living in regional	$19.63
Living in remote	$16.29

5. Infrastructure: Transport

Getting public transport right is a very important part of creating liveable cities. People want to live closer to work so they have a choice of transport modes (buses, trains, cycle, walkways, roads). However our cities have historically sprawled to maintain affordability and the cost of supplying public transport increases as a result.

Poor urban planning can inevitably create segments of disadvantaged communities. Those on the fringe are often shackled by a lack of transport choice, shops, childcare and healthcare. The way we connect our communities to services is critical in creating liveable communities.

In our regional areas where access to funding is limited and the majority of wear and tear on roads is created by passers-by, road safety and maintenance is often low on the priority list of allocating public funds. Federal government grants such as the Blackspot Program are one way local councils can access funds to improve the overall safety of our roads.

Julian Zorzo

Australia Business Development and Strategy Manager, Transport

Attitudes to transport

While 54% believe they get good value from the public money spent on roads in their local area, nearly all Australians (91%) believe that road networks will need to be maintained and operated efficiently to make an area liveable.

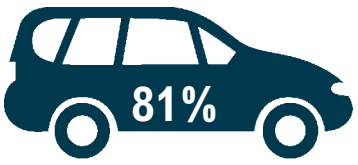
If there was public transport within one kilometre of where Australians live and work, 77% would actually use it. Those living in cities are more likely to agree (81%).

82% believe a network of walkways and cycle paths will enhance the place they live in.

Road safety

An overwhelming 81% of Australians believe road safety should have higher funding priority. Those living in regional areas (86%) are more likely to believe road safety should have higher funding priority than those living in the cities and remote areas.

Multiple modes of transport and in close proximity of where Australians live and work is required.



believe road safety should have higher funding priority.

6. Attitudes to energy

Energy

Energy is a fundamental component of a liveable city; it is needed to power buildings and workplaces, to transport people; to pump water from source to tap and to provide the food and other supplies on which our society relies.

The imperative to lessen our impact on the climate and the increasing worldwide demand for depleting natural resources will see a heightened focus on resource use efficiency over the coming decades. Globally, our growing population will need to extract more from less.

The potential impacts of climate change, including increased severity and frequency of flood and bushfire events along with higher average and peak temperatures, pose a significant threat to infrastructure and communities. Transitioning to low carbon energy sources will therefore be fundamental to protecting the ongoing liveability of our cities and communities.

In an increasingly complex environment, it is unlikely that one single solution will address the energy needs of cities of the future. Rather, it will require a diverse range of innovative policy, planning and technical solutions that support the uptake of renewable energy generation, encourage energy efficiency and facilitate development of low energy and low carbon urban forms.

Philippa Charlton

Team Leader, Sustainability and Environment, Vic, Australia

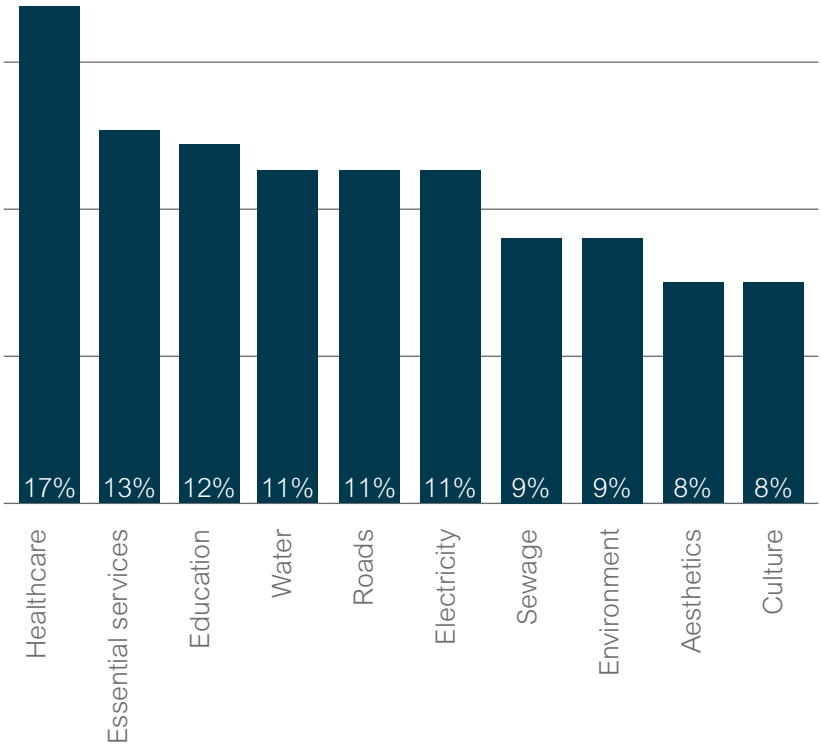
Nearly 9 in 10 Australians believe unused crown land and government owned buildings should be used to generate electricity using solar and wind. 78% also indicated that it is only a matter of time until coal powered electricity generators are phased out. 2 in 3 Australians agree that it should be mandatory to have an energy audit of businesses and households annually to ensure that there is no wasting of electricity. Those living in cities (69%) are more likely to believe there should be a mandatory energy audit than those living in regional and remote areas. 40% of Australians are prepared to pay more to ensure a good supply of electricity and minimal power outages to the place where they live.

39% are willing to pay higher rates to have access to renewable energy (wind and / or solar).

7. Infrastructure spending priorities

Australians place healthcare (17%), essential services such as fire and police (13%) and education (12%) as top budget items. Ranked fourth is water, with a similar proportion to roads and electricity, but a higher spend than sewage, environment, aesthetics or culture.

Spending priorities.



NOTE: mean percentage calculated for each budget item

The challenge

Governments around the world, in the face of population growth and resource and financial constraints, are introducing policies aimed at achieving productive, liveable and sustainable cities.

These types of policies require integration of services, efficient use of resources and infrastructure planning, as well as agreed social, environmental and economic outcomes. Resilience is also becoming the dominator of how we need to plan and design for the future of our cities.

Planning for liveable cities in Australia is no different and requires a long-term perspective, an adaptive approach and an understanding of what the public wants.

Research findings such as those outlined in this report are a valuable tool in helping to inform these planning decisions.

The challenge for all of us in the industry of developing and servicing cities is to get ahead of the game. With population growth and lower interest rates, is there an opportunity for the government to borrow now to invest, so that by 2050 we have invested in sustainable and resilient infrastructure? We need to address the megatrends that are coming and start shaping the communities and cities in which we live, work and play.

MWH

BUILDING A BETTER WORLD

Your life, your home, your city - the future of Australia's liveable cities.

MWH
Level 21
141 Walker Street
NORTH SYDNEY NSW 2060
T: +61 2 9493 9700