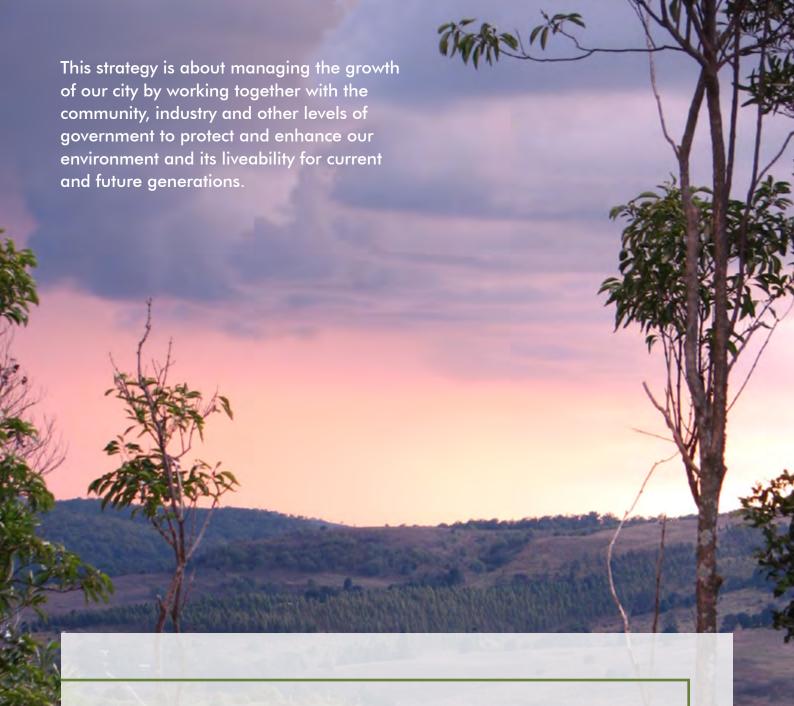
City of Ipswich **Sustainability Strategy**

2019





What does sustainability mean to us and how can we all achieve success together?

Council has been working with the Koala Protection Society to protect our koala population and its habitat.

"Ipswich Koala Protection Society has for the past 23 years been rescuing, rehabilitation and releasing sick, injured and orphaned koalas into the wild, consulting and delivering education, maintaining accurate mapping, statistics and records with council and stakeholders. We are recognised for our professionalism, experience and expertise in our field.

Sustainability is working together to ensure the indefinite conservation and protection of the environment whilst recognising the need for future growth."

Ipswich Koala Protection Society



Contents

1.0 Introduction	2
2.0 Sustainability Advisory Group	3
Council's Objective	3
3.0 Sustainability Pathways	4
Pathway 1	4
Pathway 2	5
Pathway 3	6
Pathway 4	7
4.0 Our Sustainability Achievements	8
4.1 Nature Conservation	8
4.1.1 The Conservation Works Program	8
4.1.2 Maintaining Biodiversity	8
4.1.3 Greenspace Networks	8
4.1.4 Landholder Partnerships	9
4.1.5 Education, Awareness and Community Involvement	9
4.1.6 Waterway Health and Flood Management	10
4.2 Corporate Sustainability	10
4.2.1 Energy Efficiency and Carbon Emissions	10
4.2.2 Water Consumption Efficiency	11
4.2.3 Waste Management	12
4.2.4 Sustainable Procurement	12
4.3 Ipswich City Council Planning	12
4.3.1 Settlement Pattern and Compact Urban Form	12
4.3.2 Land Supply	12
4.3.3 Native Vegetation Clearing and Consolidation and Preservation of Natural Areas	13
4.3.4 Responsive Design	13
4.3.5 Responding to Hazards and Constraints	14
4.3.6 Rural Lands	14
4.3.7 Protection and Adaptive Reuse of Character Buildings (Pre-1946 buildings)	14
4.3.8 Erosion Management and Water Quality	14
4.4 City of Ipswich Transport Plan (iGO)	15
4.4.1 Facilitating Travel Mode Choices	15
4.4.2 Transport and Land Use Integration	15
4.4.3 Culture Shift	15
4.5 Sustainable Road Design and Construction	16
4.6 Smart City Initiatives	17

1.0 Introduction

The World Commission on Environment and Development (1987) provided an early and still widely accepted definition of sustainability as being the ability to "meet the needs of the present without compromising the ability of future generations to meet their own needs". It should be noted that sustainability is not only about protecting the environment, even though environmental stewardship is an integral part of sustainability. To achieve sustainability, an organization must consider environmental, social and economic elements as each of these play a vital role.

In the last fifteen years Ipswich has encountered a resurgence in economic prosperity as the availability of affordable land and housing in south east Queensland has reduced and domestic and commercial buyers have entered the Ipswich market. In the last 10 years the population of Ipswich has increased significantly with a current population exceeding 200,000 and projected to be in excess of 500,000 residents by 2041 (ShapingSEQ - Draft South East Queensland Regional Plan October 2016). With the current economic and population growth occurring in the city of Ipswich, council needs to sustainably balance the needs of today against the needs of tomorrow.

The development of this sustainability strategy is a continuation of the Ipswich City Council's longstanding commitment to sustainability. Council has already implemented some outstanding initiatives such as:

- The securing of approximately 6,400 ha as part of council's Natural Area Conservation Program which provides for the city's biodiversity as well as an area for the community to re-connect with nature through low-impact nature based recreational activities.
- Council has provided a strong focus on creating partnerships with local landholders aimed at protecting the natural environment on private land. Council offers different ways for residents to be involved under this initiative and allows for properties

from urban sized blocks to large rural blocks to participate. These partnerships are designed to support a sustainable city by protecting areas of natural environment on private land, increase awareness and promote sustainable living. There are over 1,000 active partnerships across the city; this includes around 7,000 ha registered under one of council's Voluntary Conservation Agreements and 11,403 ha under a Land for Wildlife agreement.

 The retrofitting of 2,500 streetlights across the city to energy efficient LED technology in 2015. As the highest consumer of electricity, accounting for 47% of overall corporate energy consumption, this street lighting efficiency initiative saves on energy usage and maintenance costs, as well as reducing council carbon emissions by 376 tonnes CO2-e per year.

Our existing sustainability initiatives have placed council in a great position to responsibly manage the growth of the City whilst achieving our sustainability objective.

The Sustainability Strategy recognises the important role that the council has to play in relation to climate change. At the 21st United Nations Framework Convention on Climate Change in December 2015, the Australian government signed the Paris Agreement which commits to limiting increase in global temperatures to 'well below 20C' while pursuing efforts to keep warming 'to 1.50C'. In order to achieve this, the Australian government has set a target of reducing carbon emissions by 26 to 28 per cent below 2005 levels by 2030. The Queensland government has also committed to significant reductions in carbon emissions across Queensland as part of their climate change strategy. Ipswich City Council recognises that we have a significant role to play in achieving these targets and are committed to doing so through aspects of this sustainability strategy including reducing our organisational carbon footprint and increasing the use of renewable resources.

This sustainability strategy provides the objective



and initiatives that council intends to lead in order to achieve the stated objective. The strategy provides a framework for sustainability but as is the case with any public policy, the strategy will need to evolve as our city continues to change and grow.

Council will provide an annual update to the community in relation to this strategy to ensure that the community is informed and engaged throughout our sustainability journey.

Council's Sustainability Advisory Group will include invited members of the community from groups such as students, industry representatives and any other areas needed for success. The board will meet on a regular basis to consider our sustainability position, provide leadership on emerging issues and trends and identify opportunities for improvement.

Sustainability requires a whole of city approach with support and input from the community, other levels of government and the private sector. The advisory group is seeking written submissions from the community, educational sector, the private sector and other levels of government to assist us in achieving our sustainability objective. These submissions provide an opportunity for everyone to be involved in our sustainability journey.

Written submissions can be provided to Ipswich City Council via email, post or hand delivered and should be addressed to the Sustainability Advisory Group.

Email: sustainablelpswich@ipswich.qld.gov.au

Post: PO Box 191, Ipswich QLD 4305

Hand delivery: Customer Contact Centre

143 Brisbane Street, Ipswich

Planning and Development Counter Ground floor, 45 Roderick Street, Ipswich

Mayor's Office

Level 2, 45 Roderick Street, Ipswich

Council's Objective

This strategy is about managing the growth of our city by working together with the community, industry and other levels of government to protect and enhance our environment and its liveability for current and future generations.

3.0 Sustainability Pathways The Ipswich City Council Sustainability Strategy will follow four pathways to achieve our sustainability objective

Pathway 1

The promotion of city wide sustainability through education, awareness and community involvement

Key Targets:

- Minimum 10,000 residents (incl. students) will be participating in conservation and sustainability activities each year.
- 20 schools will be actively involved in the Youth Sustainability Summit by 2021 (Inaugural Summit commences 2017).

The involvement of the community in making Ipswich a sustainable and livable city is critical and necessary as we share the responsibility to create the city we all want to live in. Council is preparing to initiate a number of new activities, with some already in action, to build capacity within the community and to bring awareness, shared stories and practical knowledge to our residents. These include:

■ Inaugural Youth Sustainability Summit 2017: In partnership with external stakeholders such as the State Government, academia, community groups and the private sector, Ipswich City Council will hold an annual Youth Sustainability Summit in October 2017, with schools invited to attend and actively participate.

- Ipswich City Council Sustainability Awards: council will formally recognise and reward outstanding achievement in sustainability by community groups, individuals, schools and the private sector.
- DigiCon Digital Application: a collaborative effort with Fire Station 101 to support a start-up business within the tech community to develop a digital solution to engage the community with the natural areas of Ipswich.
- Koala Conservation: In partnership with Ipswich Koala Protection Society, natural resources groups and eligible landholders, council is building a network of koala habitat properties across the city to increase valuable koala habitat corridors. Release sites for koalas are being identified in council's Conservation Estates and Reserves, where pest animal control programs will be designed to reduce the risk of wild dog attack.



Pathway 2

The protection of urban ecology and the natural environment

Key Targets:

- 150,000 new trees planted by 2021.
- 15,000 hectares of public and private land will be managed for conservation outcomes by 2021.

Environmental integrity and resilience is one of the cornerstones of sustainability. To ensure that Ipswich maintains and supports environmental sustainability into the future, council will continue to lead programs and activities that encompass the natural environment as well as elements of urban ecology. The initiatives that council will lead to achieve this pathway are:

- Management, protection and enhancement of council owned conservation estates.
- Continuation and expansion of existing environmental programs under the Ipswich EnviroPlan.

- Natural environment regeneration to achieve healthier waterways.
- Resource recovery and the circular economy.
- Beautiful Ipswich is an Ipswich City Council initiative that aims to beautify major thoroughfares and streetscapes, create attractive parks and recreational pathways and improve waterways throughout time-honoured suburbs. It also supports the community helping to beautify their own streets.
- Reduction in city wide greenhouse gas emissions/ carbon footprint through mechanisms such as renewable energy.
- A strong regulatory framework with dedicated environmental compliance officers.



Pathway 3

Corporate sustainability

Key Targets:

- Council will work with partners towards becoming a carbon neutral organisation by 2021.
- Council will deliver a 100% roll out of domestic green waste collection services by 2021.
- Council will explore the establishment of a local glass reuse system in concrete used by council for all types of works (mandated minimum local glass content in concrete supplied to council as part of procurement conditions).
- Council will explore the establishment of a local concrete recycling process to be used by council in council drainage works (mandated locally recycled concrete supplied to council as part of procurement conditions).

At Ipswich City Council, sustainable communities are supported through our demonstrated commitment

to sustainable business practices and delivering high quality services to the Ipswich community.

- Auditing, monitoring and analysis of council's resource consumption, and identifying areas for improved efficiency.
- Good governance lead, promote and integrate environmental sustainability into the operations of council.
- Buy Smarter achieve value for money on a whole of life basis and reduce environmental impacts through responsible procurement practices.
- Use Less exercise efficient and effective management of resource consumption across council facilities.
- **Reduction** in council's organisational greenhouse gas emissions/Carbon footprint.
- Waste Less reduce waste generated and maximize on opportunities for resource recovery through council operations.



Pathway 4

Supporting sustainable industry

Key Targets:

- 10,000 tonnes of waste will be diverted from landfill so it can be reprocessed and add value to local product and industry.
- Council will promote the establishment of a Bio-diesel Plant by industry in the Ipswich area.

Council recognises existing and future sustainable industries and businesses in Ipswich are important partners that must be engaged with to achieve city wide sustainability. Council will engage with these industries through:

- Partnerships with industry and local businesses to promote sustainability across the city.
- Promotion of existing industries recognised as being involved in sustainable industry practices.
- Attraction of sustainable industries and businesses to Ipswich.

- The City of Ipswich Bio Futures Summit will bring together all levels of government and the private sector, to discuss strategies that embrace a Bio Futures agenda that stimulate investment, and create high value and knowledge intensive jobs for the region. Discussions will focus on bio energy and product development, renewable energy solutions, industrial ecological precincts and a road map to support the growth of the industry across the city.
- To support existing and future sustainable industries and businesses in Ipswich, council has undertaken a number of initiatives and is seeking to build momentum for further development of sustainable industries and businesses. Some of the activities done to date include:
 - Renewable Power investigations into solar farms and the purchase of green power.
 - Materials Recovery council participates in the council of Mayors working groups to work collectively to build momentum in the waste sector for the commercialisation of new resource recovery businesses that supports a circular economy approach.

4.0 Our Sustainability Achievements

Council's focus on sustainability and protecting our natural environment has created the foundation from which we will continue to achieve and build upon. Ipswich City Council has already introduced a large number of successful initiatives that align with our sustainability pathways. These initiatives include our planning scheme, Ipswich EnviroPlan, environmental education programs, protection of koala habitat and partnerships within our community. The following sections provide just some examples of the great programs that have been implemented by council that all contribute to protecting and enhancing the sustainability of our city.

4.1 Nature Conservation

The strategic vision for achieving nature conservation outcomes in Ipswich is set within the Ipswich Nature Conservation Strategy 2015. The very first Ipswich Nature Conservation Strategy was developed in 2000 as a means of directing the implementation of the **Ipswich EnviroPlan**, the city's environmental levy which was introduced in 1996. Enviroplan assists council in delivering vital programs such as:

- The Conservation Works Program
- Matters of Local Environmental Significance
- Iconic Species Program
- Voluntary Conservation Agreements and Landholder Partnerships
- Education, Awareness and Community Involvement.

4.1.1 The Conservation Works Program

Through the EnviroPlan Acquisition Program council has secured valuable conservation areas across the city since the late 1990s. Today approximately 6,400 ha makes part of council's Natural Area Estate and are managed through the Conservation Works Program. These areas provide a refuge for the city's biodiversity as well as an area for the community to re-connect with nature through low-impact nature based recreational activities.

4.1.2 Maintaining Biodiversity

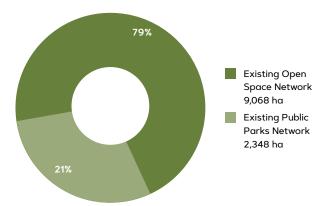
Ipswich supports over 1,600 native flora and fauna species, of these, almost 2% are listed as either endangered or vulnerable under state and/ or federal legislation. Council has undertaken a Biocondition Assessment of the Natural Area Estate to benchmark the current state and to inform biodiversity improvement actions over time. Other current biodiversity programs include a focus on iconic species such as the brush-tailed rock wallaby habitat improvement project, participation in Platypus Watch surveys and the development of a Koala Habitat Management Plan.

4.1.3 Greenspace Networks

The creation and maintenance of open space and public park networks play an integral role in the environmental, social and economic sustainability of the city. Ipswich currently has an open space network of 9,068 ha and an existing public parks network of 2,348 ha.



Existing Open Space Breakdown



4.1.4 Landholder Partnerships

Since the establishment of the Ipswich EnviroPlan, council has provided strong focus on creating partnerships with local landholders aimed at protecting the natural environment on private land. Council offers different ways for residents to be involved under this initiative and allows for properties from urban sized blocks to large rural blocks to participate. These partnerships are designed to support a sustainable city by protecting areas of natural environment on private land, increase awareness and promote sustainable living. By joining one of council's landholder partnerships, partners may have access to multiple incentives (depending on level of agreement) including financial assistance, funding opportunities, technical support and free resources and events.

There are over 1,000 active partnerships across the city; this includes around 7,000 ha registered under one of council's Voluntary Conservation Agreements and 11,403 ha under a Land for Wildlife agreement.

4.1.5 Education, Awareness and Community Involvement

Council has multiple ways in which it engages and educates the community in regards to nature conservation as well as sustainability. Ipswich City Council has been delivering sustainability education since the start of the 'What a Waste' education program in 2006. This has since grown into the **EnviroEd Program** which now includes additional programs targeted at school aged children in Ipswich to promote sustainable living.

Council also delivers on a number of other community awareness activities designed to engage residents, most recently, this has been in the shape and form of:

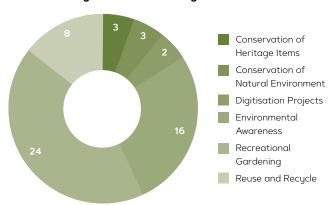
- The Ipswich EnviroForum starting in 2014, this is an annual conference style event which brings interested community members and professionals together to learn about and discuss current trends and projects within the sustainability industry;
- The EnviroPlan Photographic Competition encourages community members to get outside and engaging with the city's natural environment.
- Tree planting days, such as Trees for Mum, encourages the community to get involved through revegetation of the City's urban environment.
- Father's Day Fishing Fest the focus of this annual event is to reconnect the community with the City's important waterways by providing a fun and educational setting, promoting sustainable management of our rivers.

Ipswich Libraries offer a range of public programs which support sustainability in the community and is inclusive of all ages. These sessions are developed and delivered by Library staff as part of regular programs such as themed Story Time and Makerspace, as well as the engagement of external presenters with knowledge and expertise in fields such as:

- Grow Your Own Organic Food presented by Roman Spur.
- Urban Harvest presented by Claire Bickle.
- The Climate Problem by Dr John Price.
- The Potted Garden by Noel Burdette.

In the last twelve months Ipswich Libraries has delivered 56 programs/workshops/events that align to council's sustainability strategy, within the categories of heritage conservation, conservation of the natural environment, heritage digitisation projects, environmental awareness, recreational and sustainable gardening and reuse/ repurpose/recycle.

Ipswich Libraries Programs Supporting Sustainability in the Community



Ipswich Libraries also provide research and reference support to the community through databases and journals that inform and educate, these can be used in the library or from home. Authoritative information sources such as the Science Reference Centre can be accessed online by using a library membership card, current information on climate change, endangered and threatened species, environmental issues, invasive species, global warming, hazardous waste and landfills are just a few of the sustainability topics that are explored in depth. The library service also has a range of documentaries and books to inform and engage the community across the full domain of the sustainability agenda.

4.1.6 Waterway Health and Flood Management

Since the introduction of the SEQ Healthy Waterways Partnership's annual score card in 2001, Ipswich has received poor or very poor ratings for its waterway conditions. Council places a strong focus on waterway rehabilitation through a number of plans, policies and actions.

Ipswich City Council's Integrated Water Strategy,

adopted in 2015, establishes a framework for the management of Ipswich's water cycle in accordance with a total water cycle management approach.

The Waterway Health Strategy, first introduced in 2009 and currently under review, was developed to assist council with the management and enhancement of the city's natural waterways.

Council also recently released the Floodplain Management Strategy, which aims to increase community resilience to floods whilst recognising floodplains as valuable and sustainable resources.

Amongst the tools used to deliver these strategies, other council initiatives include:

- Stormwater Quality Offsets currently a number of stormwater quality offset projects are underway. These have multiple outcomes for the community, including urban stormwater treatment and harvesting, reduced sediment transport and improved waterway health, improved aesthetic values, erosion control, bank stabilisation and more.
- Habitat Connection now in its fourth year, the Habitat Connection program directs dedicated funding to urban waterways, primarily focused on increasing riparian vegetation within linear parklands. This program actively engages individuals and community groups through planting days and community events.
- The construction of Queensland's longest fish ladder in 2016, allowing native fish species easy upstream access within the Bremer River.

4.2 Corporate Sustainability

At Ipswich City Council, sustainable communities are supported through our demonstrated commitment to sustainable business practice and delivering high quality services to the Ipswich community. To date, this includes the auditing, monitoring and analysis of council's resource consumption, identifying areas for improved efficiency.

4.2.1 Energy Efficiency and Carbon Emissions

Council has for some time recognised that local governments have a role to play in relation to the reduction of greenhouse gas emissions and our carbon footprint. Over the past decade, council has focused on improving energy efficiency across its facilities via the implementation of a range of energy saving initiatives. A key project completed includes the retrofitting of

2,500 streetlights across the city to energy efficient LED technology in 2015. As the highest consumer of electricity, accounting for 47% of overall corporate energy consumption, this street lighting efficiency initiative saves on energy usage and maintenance costs, as well as reducing council carbon emissions by 376, tonnes CO2-e per year.

Ipswich City Council was also one of the first councils in Australia to implement LED lighting on a sports field, which was done at Woodend Park in 2013. The following timeline outlines some other energy efficiency upgrades which have been implemented at council facilities, such as:

- retrofitting of lighting to more energy efficient types
- replacement of air conditioning units to more efficient versions
- installation of light control systems
- upgrade of lift control systems to high energy efficient control gear
- installation of time controlled water boilers.

The timeline also indicates the future targets and achievements council will make up until 2021.

Council also actively monitors and reduces fuel consumption across council's fleet and has over the past five years, reduced its fleet by approximately 16%. The Ipswich City Council Green Workplace Travel Plan is designed to assist in this fleet reduction by offering or promoting other means of travel for council employees.

Other initiatives implemented with the aim of increasing efficiency around fuel usage includes the installation of telematics systems in council's waste trucks to allow for increased understanding of current fuel consumption.

4.2.2 Water Consumption Efficiency

Council uses water in a range of activities and settings across the open space network as well as buildings and other council facilities providing drinking, cleaning, swimming, sanitary, and amenity functions. The majority of water is used for irrigation purposes.

Council currently has 24 sports fields using alternative water sources for irrigation to reduce potable water use. Approximately 32% of sports fields in Ipswich are irrigated using an alternative water source or a mixture of potable and bore/river water. A key project, recently finalised, is the provision of stormwater harvesting systems at Jim Donald Parkland and Redbank Plains Recreation Reserve, reducing council's reliance on town water for irrigation. In addition, council now mainly uses river water for irrigation across a number of sports fields, including: North Ipswich Reserve, Woodend Park, Cribb Park and Ivor Marsden Sports Field.



4.2.3 Waste Management

As a large city, Ipswich produces a significant amount of waste that the council manages. The council currently provides 73,344 domestic general refuse services weekly and 12,865 green waste services fortnightly. Through sustainability related initiatives such as the recycling and green waste services council has achieved the following:

- Material diverted from landfill by domestic recycling collection service per year = 13,263 tonnes.
- Amount of material diverted from landfill by green waste service since its commencement in Sep 2011
 = 15,033 tonnes.
- Waste diverted from landfill from the Recycling and Refuse Centres per year = 18,619 tonnes.

Council, as any other organisation, generates waste through day to day business within its offices as well as depots and other locations and activities. As a result of an internal waste audit conducted in 2006, council adopted an internal recycling program which included:

- provision of bin stations including general waste, recycling and paper and cardboard recycling
- removal of desk waste bins
- printer cartridge recycling.

In 2016, council also started investigating the introduction of drum musters across the depot sites to encourage the collection of used chemical containers for recycling.

4.2.4 Sustainable Procurement

Sustainable procurement is a process whereby organisations meet their needs for goods, services and capital projects, in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to society, the economy and the natural environment.

Council's procurement processes are designed to be consistent with and ensure compliance with the five Sound Contracting Principles set out in the *Local Government Act 2009* namely:

- value for money
- open and effective competition
- the development of competitive local business and industry
- environmental protection
- ethical behaviour and fair dealing.

As part of its sustainability plan, council will further embed the principles of sustainability within its procurement activities in order to deliver value for money whilst actively considering social, ethical, environmental and economic impacts throughout the procurement process.

4.3 Ipswich City Council Planning

Land use planning and assessment of new developments are undertaken within a framework of State government legislation, policies and plans. The State government framework requires that land use planning (including the lpswich Planning Scheme) and development assessment activities facilitate the achievement of 'ecological sustainability' by integrating the protection of ecological processes and natural systems, economic development and the maintenance of cultural, economic, physical and social wellbeing of people and communities.

The Ipswich Planning Scheme incorporates a number of key policies to facilitate ecological sustainability as follows.

4.3.1 Settlement Pattern and Compact Urban Form

- In establishing the urban footprint of the city, areas with significant habitat and environmental values (for example, the vegetated hills surrounding Ripley Valley) were set aside/excluded from being developed for urban purposes.
- Promotion of a compact urban form including increased densities and mix of uses in and around centres that provide supporting services and facilities, and which reduces the need for additional allocation of urban land in rural and natural areas.
- Increased densities in proximity to public transport hubs and corridors, and in and around centres, to support access by public and active transport and to promote linked trips, reduced trip lengths and number of trips by private motor vehicle to assist in reducing carbon and pollutant emission levels associated with travel.

4.3.2 Land Supply

Identification of a sufficient land supply (serviced or serviceable) to accommodate urban growth to support affordable living, economic and community development outcomes whilst conserving ecological systems and environmental values. The current lpswich Planning Scheme has land identified to accommodate 25 years residential growth, as set out in draft Shaping SEQ (new SEQ Regional Plan) negating the need to allocate further areas of the city for urban development to accommodate the forecast growth. Significant land supply/capacity to facilitate employment and productivity growth, particularly in centres and in regional business and industry areas. Provides a variety of land types and locations to accommodate a diversity of economic development and to improve access for Ipswich residents to local jobs and employment.

4.3.3 Native Vegetation Clearing and Consolidation and Preservation of Natural Areas

- A development application is required for the clearing of native vegetation where exceeding a prescribed area over time (certain exemptions have to be applied in relation to agricultural activities).
- A policy mechanism to deliver 'nil net loss' of native vegetation in the city to support opportunities and solutions to retain native vegetation on developable land. Where vegetation retention is not feasible, the cleared vegetation is to be offset by planting of compensatory vegetation within the city.
- To properly assess the impacts associated with clearing native vegetation and important areas of wildlife habitat (including watercourses and wetlands), an Environmental Management Plan is required.
- Protection and rehabilitation of connections between the greenspace network. In particular, reflecting the importance of vegetation along creeks and major watercourses, development and works are to be located outside of, or have to avoid significant adverse effects on, important remnant vegetation and riparian areas along designated watercourses.
- Recreation and Conservation Zones are used for land containing valuable natural features and areas and which may also serve a connectivity, linkage and/or drainage function;
- The zoning of land that is subject to nature conservation agreement with council are generally changed to Rural E (Special Land Management)
 Zone to ensure the ongoing protection and conservation of the environmental values.

4.3.4 Responsive Design

- New development has to be responsive to natural features such as difficult topography, hazards and constraints, significant riparian corridors and vegetation etc. Building orientation and design is required to take into consideration the Ipswich climate, and minimise the reliance on non-renewable energy for heating, cooling and ventilation as far as is possible.
- Landscaping is undertaken in a way to assist in microclimate management and energy conservation



and efficiency (maximising summer shade and access to winter sunshine).

4.3.5 Responding to Hazards and Constraints

- Setting of land use policy responses (based on risk) to hazards such as flooding, bushfire, steep slopes etc. This includes preventing uses established in areas where there are significant risks to the use (eq intensification of housing in areas of significant risk of flooding).
- Land uses policies utilise the best available information such as the comprehensive flood study for the Brisbane River Catchment, State government Bushfire Mapping and latest topographical information to manage risks from natural hazards.
- Land is zoned and developed having proper regard to constraints such as mining, operations of RAAF Base Amberley, key resource areas, noise sources such as Willowbank Raceway etc. to minimise as far as possible potential conflicts between land uses (eq noise impacts on housing).

4.3.6 Rural Lands

- Identification of Good Quality Agricultural Land (GQAL) and its conservation for commercial agricultural production purposes through zoning of the land.
- Rural areas are conserved and protected from incompatible uses such as urban residential (refer also to 4.1.1) to ensure there continued capacity to accommodate rural activities.
- Creating new rural lots through subdivision is to lead to no net increase in the number of lots in the Rural Locality (ie creation of an additional rural lot requires the amalgamation of other rural land) to discourages further fragmentation of rural lands and promote the consolidation of primary production, conservation and constrained lands.
- The consolidation of rural land (refer above) is supported by 'Transferable Dwelling Entitlements' that provide for 'rural housing' to be moved from vacant primary production areas, rural conservation zoned land, rural (special land management) zoned land and other constrained rural lands to appropriate locations that have access to services and away from other rural uses that may impact on residential amenity.
- Provide opportunities for 'natural area tourism' and 'eco-tourism', particularly within trail destination parks, tourist focus precincts and regional parks. Wherever possible sites used for buildings and

related works for 'eco-tourism' and other uses are encouraged to encompass existing cleared land, or land outside principal conservation areas to ensure that the values of the areas are protected whilst providing opportunities for public access to, and use of the areas.

4.3.7 Protection and Adaptive Reuse of Character **Buildings (Pre-1946 buildings)**

- The planning scheme provisions 'protect' more than 7,000 character buildings in the city with a presumption against their demolition.
- To support the viability of retaining character buildings, appropriate adaptive reuse for commercial, business or other related uses adding an additional type of commercial building to the mix and reducing the need for new builds is supported. Additionally, concessions and incentives are provided to keep character buildings (eg reduced application fees, infrastructure contributions and car parking standards) through reuse.
- Council runs a Heritage Program to support the owners of character buildings through the Heritage Adviser Service and to raise awareness of the important contribution heritage makes to the city through education activities (seminars, publications, scholarships, partnerships) and recognition and celebration of the work of individuals and groups in the community in conserving the heritage of the city, delivering well designed development and conserving the natural environment (council Awards for Excellence that also included a student category).

4.3.8 Erosion Management and Water Quality

- Management of sediment run-off and erosion during earthworks development in areas containing dispersive soils is undertaken during development to ensure that sediment is properly controlled and does not enter creeks and rivers.
- Stormwater discharge must not degrade the water quality of receiving environments.
- Water quality control methods are designed in accordance with Water Sensitive Urban Design (WSUD) techniques.
- Voluntary Offset Contributions Scheme (in appropriate areas) to allow pooling of funding to deliver regional or sub-regional solutions is provided for. These can be combined where appropriate with other offsets to maximise 'investment' returns and outcomes (refer to 4.1.3).



4.4 City of Ipswich Transport Plan (iGO)

Transport plays a fundamental part of our daily lives. In a rapidly growing city, getting transport right is the foundation for jobs growth and protecting our lifestyle.

The City of Ipswich Transport Plan (branded as iGO) is council's strategic transport plan which was adopted by council in June 2016. It is a longer term high level document that outlines council's aspirations, master plan and over 200 actions to advance the city's transport system to a sustainable future.

The key message from iGO is that whilst private vehicle use will continue to play a role in our daily lives, adding more and more road space just for cars is not a sustainable practice from an economic, financial, social or environmental perspective.

As such, the key outcomes of iGO are:

4.4.1 Facilitating Travel Mode Choices

iGO aims to reduce Ipswich resident's dependency on the car by facilitating meaningful travel mode choices through the provision of quality public and active transport systems and incentives/disincentives (particularly for white collar commuter and school trips).

4.4.2 Transport and Land Use Integration

iGO outlines the need to foster the development of:

- strong, compact and connected mixed use activity centres ("20 minute city" idea)
- complete communities ("10 minute neighbourhood" idea)
- higher density living in proximity to public transport nodes and corridors.

4.4.3 Culture Shift

Clever new thinking and strong civic leadership to make sustainable transport decisions. This includes new 'non-traditional' attitudes such as:

- promoting travel behavior change for certain trips
- taking a demand management approach to parking, road network performance and traffic congestion (not demand satisfaction)



- balancing the needs of all users in the design and management of roads
- embracing the development and uptake of new transport related technology
- influencing institutional frameworks (i.e. employee core work hours and locations)
- using innovation in regards to the cost, affordability, funding and financing of new infrastructure.

A copy of iGO can be downloaded from council's website at Ipswich.qld.gov.au

4.5 Sustainable Road Design and Construction

As the city continues to grow council is required to build and maintain infrastructure to support the growth. Council aims to do this sustainably through the following practices:

- Matching levels to existing driveways/footpaths therefore eliminating the need to rebuild them fully and reduce future maintenance.
- Existing pavement levels can be matched where possible to reduce the amount of pavement reconstruction.
- Balancing earthworks to reduce the amount of embankment to be bought on site or the amount of cut to be removed from site.

- On larger projects, allowance for topsoil to be stripped, stored on site and reused if suitable.
- Existing signage and line marking is assessed and reused if possible in the new design.
- Water Sensitive Urban Design:
 - treating stormwater to meet water quality objectives for reuse and/or discharge
 - SQUID stormwater quality improvement devices
 - encouraging infiltration into the ground where possible, instead of drainage system augmentation
 - use of vegetation for stormwater filtering purposes
 - improving waterway health and ensuring ecological corridors are not severed i.e. fish passage
 - water-efficient landscaping to reduce potable water consumption
 - we consider the whole lifecycle of a design materials are selected considering their embodied energy, projected life and maintenance required.

4.6 Smart City Initiatives

Open Data: Enable and encourage public access and reuse of city datasets. Allow the community and market to develop innovation solutions and stimulate engagement in the positive progress of our city.

Application Studio: Citizen-centric solutions through digital council services. Front-end developers, backend programmers, user interface and user experience designers in agile collaboration on council challenges.

Build and Learn: Enhance digital literacy across ages and abilities through resourceful co-creation. Skilling and

re-skilling makers through a program of coordinated challenges and events focused on science, technology, engineering, arts and mathematics.

Drones Program: Revolutionise efficiency, accuracy and timeliness of large scale nature reserve monitoring. Adaptable data collection and analysis leading to ongoing innovation solutions.

Pilot Project: Testbed venue for Smart Lighting, Sports Facilities, Smart Buildings, Safe City, Smart Parks, Eco-Village and Health Lab initiatives.



