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‘Above all, do not lose your desire to walk. Every day I walk myself into a state of wellbeing and walk away from every illness. I have walked myself into my best thoughts, and I know of no thought so burdensome that one cannot walk away from it.’

(Jan Gehl, 2010 -quotation from Danish Philosopher Soren Aabye Kierkegaard).

The Northern Beaches Smart Growth Plan 2030 was completed over a six month period in 2011. Its intent is to provide a document that would encourage and enable Mackay’s largest and fastest growing area – the Northern Beaches – to improve the quality of life for its citizens through an emphasis on neighbourhoods and Smart Growth. The impetus for preparing this Plan was the natural gravitation of Mackay’s growing population to the area and the corresponding level of development to meet growing demands. Mackay Regional Council recognised the need for proactive planning to achieve best planning practices in the Northern Beaches and thus developed this Plan.

The Plan begins with the recognition that, in its short history, the predominant model of growth for the Northern Beaches has been suburban sprawl with a strict segregation of uses and minimal employment opportunities. Single family suburban estates, a shopping centre, larger lot subdivisions and limited community facilities are connected by arterial roads. The resulting dependence on the private vehicle, and a feeling of placelessness, is at odds with the vision of a tropical lifestyle people associate with Mackay, where being active, outdoors and enjoying the climate is part of everyday life.

Today, the negative consequences of suburban sprawl are well documented. High costs of living, multiple vehicle ownership, petrol price increases, rising obesity rates caused by a sedentary lifestyle, environmental damage, and social segregation by income and lack of housing choice are all negative consequences of suburban sprawl.

So what is the ‘Smart Growth’ alternative?

The Smart Growth alternative to suburban sprawl is the traditional neighbourhood unit. The dominant pattern of development in Australia until the Second World War was the design of our early towns and settlements based on the neighbourhood unit. This pattern of development has resulted in incredibly liveable, sustainable and valuable places even today. The underlying principles of these towns are a compact, legible form; a diversity of housing types; daily necessities within an easy walk or cycle; a high quality public domain; and connections with nature. By ensuring that vehicle ownership is a lifestyle choice rather than necessity, benefits of growing this way include social equity for people who choose not to drive or cannot drive, including the young and elderly. An additional benefit of Smart Growth includes a more affordable lifestyle by being able to match house size and vehicle ownership with salary and lifestyle aspirations. Further benefits include a healthier population where walking or cycling is an attractive alternative to driving as well as environmental improvements through a reduction in CO \textsubscript{2} emissions.

The Smart Growth alternative for the Northern Beaches is an ambitious task, however, this Plan utilises four key elements to establish a compelling vision. The four key elements of this Plan are Smart Growth Principles and Benefits, the Northern Beaches Structure Plan, the Illustrative Master Plans, and the Design Guidelines. In the hands of bold leadership, this Plan will prove more than adequate to the challenge of turning Mackay’s growth into a positive asset.
Within this context, the four elements described below provide guidance on how to implement Smart Growth for both new and existing communities and build towards the vision of the next 20 years. If followed, it could become a model for the nation.

SMART GROWTH PRINCIPLES AND BENEFITS

The Smart Growth Principles describe the philosophy, principles and benefits behind Smart Growth that Mackay Regional Council, developers, stakeholders and the community are being asked to embrace. An idea fundamental to successfully delivering Smart Growth is that it facilitates different lifestyles to coexist in harmony. Various types of development provided through Smart Growth are likely to appeal to people at various stages of their lifecycle, even if they are unaware of that appeal today. For example, a concern typically expressed from parents with young children is that they do not want any smaller cottages or apartments in their neighbourhood, as Smart Growth promotes housing diversity. However, when the concerned parents realise that the cottages are the affordable ‘start-up’ housing option for their children and the apartments are their future ‘retirement plan’, perceptions can quickly change. Smart Growth is about providing more housing choices for people at all different stages of life.

In facilitating this coexistence, the Northern Beaches Smart Growth Plan is an integrated document across all scales of development from the region. The Plan describes how densities are allocated for different community types through to the design of the block, street, building and landscape character.

NORTHERN BEACHES STRUCTURE PLAN

The Structure Plan is the overall blueprint for achieving Smart Growth in the Northern Beaches study area over the next 20 years. Compared to conventional land use maps, which do little more than depict a variety of segregated land uses, the Structure Plan represents a significant departure by the fact that it integrates the open space system, neighbourhood structure and transit corridors into a mutually supportive framework where growth is good. The Structure Plan proposes a suite of Community Types and Centres, including Sprawl Repair Communities and New Communities. Each type is assigned a residential density target that is required to foster Smart Growth in Northern Beaches over the lifetime of the Plan. The Structure Plan, particularly the assigned densities, requires ongoing review.

ILLUSTRATIVE MASTER PLANS

Master Plans illustrate the principles of the Structure Plan in more detail. A Master Plan vision is articulated for each Community Type. The aim is to provide guidance on the allocation of streets, blocks, thoroughfares, character areas, densities and building types necessary for Smart Growth. The Master Plans contain ideas for ongoing refinement and collaboration with developers, decision makers and other key stakeholders over time.

THE DESIGN GUIDELINES

The Design Guidelines illustrate the principles of the Master Plans in more detail. They identify the full spectrum of character areas (or transect zones) envisaged for the Northern Beaches and the elements that make each one unique. The Design Guidelines put forward a suite of private and public standards that is accompanied by guidance on how the standards could be allocated to achieve the 2030 vision.

Taken together, the four key elements of this Plan clearly demonstrate how the principles of Smart Growth can be applied in order to achieve best planning practices. By 2030, it is envisioned that the Northern Beaches will be a highly connected series of coastal neighbourhoods, inland villages and hamlets which are interconnected by high quality linear open space and converge in a vibrant and easily accessible Activity Centre. The Northern Beaches Activity Centre, which will be referred to in this Plan as the Rural View Major Centre, consists of the Northern Beaches Central Shopping Centre, as well as a series of frame areas explained in later sections of this Plan. The Rural View Major Centre will consist of a mix of uses and provide a range of services for the various needs of the community. The four key elements of this Plan work together to give clear direction on how to plan for, design and implement the vision of the Northern Beaches as a great place to live, work and play.
01 INTRODUCTION
1.1 BACKGROUND

The Northern Beaches is located within Mackay, which is one of the most rapidly expanding regional cities in Australia. Growth associated with expansions in coal mining, mining service industries and tourism, is forecast to continue into the foreseeable future. Furthermore, the Mackay Isaac Whitsunday region is forecast for the next ten years to be the fastest growing region in Queensland. Social and physical infrastructure has not been able to keep up with population demand. Strong growth is forecast for the Mackay region, with a projected regional population heading towards 200,000 over the coming decades, placing even more pressure on critical infrastructure. This Plan addresses the expected growth and provides best planning practices to ensure the liveability and sustained viability of Mackay’s Northern Beaches as a desirable location in which to live, visit and invest. There are two ways to grow: to continue down a path of unplanned suburban sprawl or, Smart Growth.

The Master Plan and Design Guidelines use a Smart Growth strategy to guide development within the Northern Beaches over the next 20 years. The Smart Growth strategy should be reviewed and updated throughout its lifetime. It forms part of a broader initiative for Mackay Regional Council to deliver capital works and planning reform under the Housing Affordability Fund (HAF). This funding will assist in:

- the planning and reporting of best practice urban planning and design outcomes for the Northern Beaches study area and
- the provision of critical transport infrastructure.

More specifically, the Federal Government funding secured by Mackay Regional Council and Xcel Properties, the developer for Plantation Palms Estate, will be allocated towards:

- Partial construction of Rosewood Drive;
- A Structure Plan and Master Plan;
- Preparation of Design Guidelines;
- A Residential Densities Strategy;
- A Centres Strategy.

The latter two strategies support the Smart Growth principles that underpin this document. Once completed, the latter two strategies will be available on Council’s website or by request.

Xcel Properties, Council’s partner in securing the HAF funding, is leading the way in Mackay to challenge conventional development practice and embrace Smart Growth. This sort of bold foresight was carried over to their securing of funds with Council towards ultimately improving housing choice and affordability in Mackay. Providing for affordable housing and diverse lifestyle choices is a central component of Smart Growth and is a best practice planning solution to the widely recognised national crisis of insufficient and unaffordable housing stock. Xcel Properties has committed to provide quality housing product at an affordable price and in return will have the construction of Rosewood Drive partially funded by the HAF funding. Rosewood Drive is a significant piece of infrastructure, linking the Northern Beaches Central retail core and Blacks Beach. For Plantation Palms, it will enable a southern neighbourhood to come onto the market more quickly and economically.
01 INTRODUCTION

1.2 PURPOSE

The purpose of this document is to provide a framework for the Northern Beaches to evolve and prosper as an affordable, inclusive, active and unique community over the next 20 years and well into the future.

The Northern Beaches blueprint for growth is founded on balancing the needs and aspirations of major landowners, decision makers and citizens involved in the Northern Beaches now and in the future.

The flow chart on the following page is a quick guide on how to use the Northern Beaches Smart Growth Plan 2030.

The Structure Plan should be used to guide the pattern of growth for existing and new communities, particularly the allocation of residential densities, employment, movement systems, and open space networks.

Master Plans are included for each Community Type to illustrate possible Smart Growth outcomes. The emphasis here is on presenting ideal outcomes and the rationale for allocating different transect zones (character areas) within a given Community Type. The aim is to show how complete communities can be configured to accommodate both daily needs and changing lifestyle needs within a 5-10 minute walking and cycling catchment.

The Design Guidelines provide the technical information for the realisation of the vision. It is based on the urban to rural transect, calibrating guidance on built form and public domain to promote a diverse and authentic spectrum of lifestyle choices within the Northern Beaches.

This Plan is founded on balancing the needs and aspirations of major landowners, decision makers and citizens involved in the Northern Beaches.

1.3 THE OPPORTUNITY

The opportunities for the Northern Beaches are endless. Beautiful beaches, a warm climate and a tropical setting make it particularly attractive to the growing number of baby boomer retirees looking for an affordable sea change. Low key tourism could also hold appeal for these reasons.

A more affordable, diverse and lively urban setting appeals to the X and Y generations increasingly in search of more vibrant places to live. It is these younger generations that are often lost to major cities, particularly the creative class who should be leading innovation and cultural development within the region. Liveable communities encapsulate transient populations and retain the economic base of the community. An economically sustainable and vibrant Northern Beaches appeals not only to younger generations and single person households, but also families. Demand for suburban living will continue. The opportunity is to provide a point of difference in the market place by satisfying ongoing demand for larger housing, only within a compact, walkable and diverse neighbourhood fabric.

Together, these opportunities can be realised only through collaboration, courageous leadership, perseverance, and a willingness to challenge conventional wisdom.
NORTHERN BEACHES SMART GROWTH PLAN 2030 QUICK GUIDE

1. WHAT ARE THE OPPORTUNITIES?
Find out about the Housing Affordability Fund initiative, the study area and the opportunity to create a vibrant community in the Northern Beaches.

2. WHY IS SMART GROWTH NEEDED?
Find out what Smart Growth is, why it is needed and what the benefits are.

3. WHAT IS THE VISION?
Find out what the plan is and what the key components for Smart Growth are.

4. HOW DOES THIS AFFECT ME?
Locate your site, nominated community type and assigned target density.

5. HOW DO I PREPARE A MASTER PLAN?
Read a step-by-step introduction to master planning including principles and illustrative examples for each community type.

6. WHERE DO DESIGN GUIDELINES APPLY?
Find out about Guidelines on larger scale planning and more detailed planning particularly densities, character, public domain and built form.

7. WHAT DO THESE NEW TERMS MEAN?
Find the definition of terms included in the Glossary.
02  CONTEXT ANALYSIS

FIGURE 01
REGIONAL CONTEXT PLAN

LEGEND

- **STUDY AREA**
- **URBAN AREAS**
- **CITY CENTRE**
- **MAJOR PARKS**
- **MAJOR THOROUGHFARES**
2.1 REGIONAL CONTEXT

The Northern Beaches Study area is located approximately 10-12 kilometres (kms) from Mackay City Centre within Mackay Regional Council Local Government Area. The North Queensland coastal region is located around 390 km south of Townsville and 970 km north of Brisbane.

The study area accounts for a significant proportion of the existing Mackay urban land area. It extends about five km across and 4.5 km north to south. Most of the Mackay urban area extends north and south of the Pioneer River. Currently the Northern Beaches study area is made up of the suburbs of Rural View, Eimeo, Blacks Beach and Dolphin Heads. Completing the Mackay urban area to the north is Bucasia and Shoal Point. Mackay Harbour, Slade Point, Beaconsfield and Andergrove are situated between the study area and City Centre.

At June 2010, the population of the Mackay Regional Council area was 118,842 people, an increase of 10% over the years from 2006. Strong growth is forecast to continue for the Mackay region and it is critical to plan for the provision of necessary infrastructure and housing accordingly.

The Northern Beaches is expected to attract about 65% of Mackay’s population growth over the next 15 years. Other locations forecast for expansion include Ooralea and Walkerston. To accommodate these population forecasts, it can be estimated that the Northern Beaches would provide an additional 5,450 dwellings, in addition to the 3,200 already existing. This would bring the total number of dwellings within the study area to 8,650, equating to a potential future population of over 21,000. Combining these figures with the estimates for Shoal Point and Bucasia, the Greater Northern Beaches Area can expect a total of 13,200 dwellings and a total population of 34,000 by 2031.

As of 2007-08, Mackay contributed $15.4 billion to the Australian economy, or 7.1% of Queensland’s GDP. This is largely on the back of its export-oriented industries of sugar and mining.

The resources boom, particularly in the area of mining, continues to create local growth opportunities across a range of sectors which has caught the eye of many potential investors and financiers. The Mackay, Isaac and Whitsunday (MIW) region is a world-class mining province that’s home to the Bowen Basin which contains much of the State’s coal reserves including virtually all of Queensland’s prime coking coal reserves. With more than 45 coal mines in operation across the Bowen basins and a number of new mines planned, increased production will continue to fuel demand from this world-class sector.

The majority of inputs to and exports from the MIW region enter via Mackay. The Port of Mackay has a long history as an export port for bulk commodities of sugar, grain and ethanol and is Queensland’s fourth busiest multi-commodity port in terms of cargo throughput. The Port of Hay Point, located near Sarina, is one of the largest coal export ports in the world and hosts two coal terminals – Hay Point Coal Terminal and Dalrymple Bay Coal Terminal.

The Mackay Region does not rely solely upon mining. The local sugar industry has underpinned the region’s economy for more than 100 years. Four sugar mills operate within the Mackay region, these are: Farleigh mill, Marian mill, Racecourse mill (Mackay Sugar Limited) and Plane Creek mill (Sucrogen). Mackay Sugar Limited currently contributes around $300 million per annum to the local economy through grower shareholders and employees. When complete, Mackay Sugar’s 36-megawatt renewable biomass Co-Generation Power Plant, a $120 million green-energy project located at Racecourse Mill, will satisfy 33 per cent of the city’s power requirements. Also located at this site is a bio-refinery pilot plant; Mackay Sugar is part of a consortium looking into the creation of second-generation ethanol (cellulosic ethanol) using cane, electricity and recycled water sustainably via council’s $154 million Mackay Water Recycling Treatment Plant. These figures and future goals are a clear indication that the Mackay region’s local industries will continue to thrive and, in many cases, outperform other industries across the state and country.
02 CONTEXT ANALYSIS

FIGURE 02
SITE ANALYSIS PLAN
2.2 EXISTING CONDITION

The existing condition of the Northern Beaches study area can be understood by analysing urban and natural systems, particularly the way in which systems coalesce.

2.2.1 URBAN SYSTEMS

The urban environment is characterised by large single type housing concentrated along a major road system that provides vehicular access to Mackay City Centre, other centres and only very limited local daily needs. Put simply, the urban environment is a poorly connected network of arterials, collectors and cul-de-sacs designed around the needs of the automobile.

Back fence settings are prevalent in open spaces. This setting fails on a number of levels, including safety and security, aesthetics, the usability of open spaces and movement possibilities. For the private developer, there are significant commercial opportunities lost by not drawing the value of open space amenity into the internal fabric of a neighbourhood.

The locality includes the Richmond Mill ruins, a place of state heritage significance. The Richmond Mill is situated on the Habana Road and includes the remnants of the mill train foundations and many other artefacts.

Currently there are four main land uses within the Northern Beaches, namely Urban Residential, Public Purposes, Commercial and Open Space. Service Industry is a secondary use.

Urban residential areas are predominantly standard house lot sizes (400-800 sqm) with few rural residential lots in the western portion of the study area.

2.2.2 NATURAL SYSTEMS

The eastern portion of the study area is a stunning coastal environment comprising swimming beaches and an elevated headland to the north. Planning and development in the locality should take into account coastal management issues such as erosion prone areas and sea level rise.

Estuary environments lead into Eimeo Creek to the north and McCreedy’s Creek to the south. This ecosystem gives way to vast wetland areas, which effectively form a ‘greenbelt’ in the northern and southern portions of the study area.

Scattered throughout the wetland systems are substantial water bodies and areas of mangroves. There is currently very limited access for people to the linear wetland systems. No formalised movement systems exist within the wetlands, such as pedestrian and bicycle trails. The large water body feeding into McCreedy’s Creek within Plantation Palms Estate has high environmental significance, particularly as a habitat for rare migratory birds. Adjacent to the water body are large stands of palm trees. Visually, this lush topical environment is spectacular and a unique quality of the study area.

Man-made water bodies exist in close proximity to McCreedy’s Creek within the Plantation Palms landholdings and the land south of Northern Beaches Central Shopping Centre. These water bodies are a legacy of agricultural and quarrying activity, respectively. Water quality appears high for both water bodies, which are again set within very picturesque humid subtropical environs.

The expansive low-lying wetland areas are accentuated by undulating terrain. This more elevated land generally extends along Mackay-Bucasia Road and on a diagonal alignment that follows Eimeo Road towards Dolphin Heads. There is a noticeable pattern of north-south ridge systems and knolls, which facilitate views of the rural hinterland, wetland and coastal environs.

There are a number of cases, particularly in Rural View, where creek and major drainage line systems have been severed or are compromised by sprawl.
2.3 OPPORTUNITIES

Site opportunities and issues have been identified by a range of stakeholders involved in the Northern Beaches Smart Growth Plan. At the beginning of the HAF process, expert local planning officers presented ideas on key opportunities to Mackay Councillors. A comprehensive range of opportunities were identified and illustrated in a Preliminary Structure Plan (below). This body of work provided an effective foundation for developing the Northern Beaches Smart Growth Plan. In particular, the work played an important role in informing the formal consultation undertaken on the project.

Consultation commenced on February 21 2011 with a one day Master Plan workshop in Mackay involving key stakeholders. Attendees included Councillor Hatfield and some 13 Council officers covering a wide range of expertise. Major developers represented Plantations Palms Estate, Northern Beaches Central Shopping Centre, Blacks Beach Cove and Kerrisdale Estate. State Government agencies included the Department of Environment and Resource Management (DERM), Education Queensland (EQ) and Department of Transport and Main Roads (DTMR).

Key opportunities identified as part of the consultation process and subsequent context analysis are illustrated in Figure 03 on the previous page and summarised below.

- Enhance the urban realm by creating better access to existing high quality open space. The greatest potential exists along McCready’s Creek for the development of an east-west linear link making full use of the existing creek line across Mackay-Bucasia Road through to Boveys Road in the southern portion of the study area.

- Promote an efficient public transport system with Northern Beaches Centre as a proposed interchange and an internal bus system that links up with an express service at the interchange.

- Provide an aged care and retirement living located close to the centre.

- Provide adequate community facilities, such as a library potentially with an Mackay Regional Council office or co-located with the future High School, indoor multipurpose recreational centre and cyclone shelter, community halls, after school care facilities, and day care centres.

- Expand development with a mix and availability of uses within walking and cycling distance which expands employment opportunities including: office, commercial, tourist, short term accommodation, recreation, and entertainment (restaurants, bars, cinemas, cafes, etc.).
• Utilise the drainage line to the north of Kidston Avenue linking into Dawson Boulevard and continuing onto proposed drainage route in the central area.

• Intensify the recreation and sport uses in the vicinity of the Northern Beaches Bowls Club and the future High School. The co-location presents an additional opportunity for a Public/Private Partnership (PPP) in shared facility use between the future High School and the community.

• Capitalise on the extension of Norwood Parade (in Kerrisdale Estate) to provide a link from Northern Beaches Central over McCready’s Creek, continuing further south to Beaconsfield via Golflinks Road.

• Upgrade and extend Wallmans Road in the west.

• Create a new access east of the signalised intersection of George Fordyce Drive and Mackay-Bucasia Road into the land just south from the Northern Beaches Central Shopping Centre.

• Provide a series of cycle and pedestrian pathways to Northern Beaches Central in an attractive and safe environment to promote active transport as a viable mode choice.

• Enhance connectivity with a continuous network of pedestrian and cycle paths and trails along ‘greenway connections’, providing strong connections between Northern Beaches Central, surrounding residential development, Blacks Beach Cove and the beach.

• Ensure that the extension of Chenoweth Drive linking through Plantation Palms Estate and continuing to Rosewood Drive provides a crucial pedestrian and cycle link.

• Establish linear open space linking neighbourhoods and park equipment concomitant with increased densities. The goal should be to consolidate and link into linear open space as activity nodes.

• Co-locating the future High School and the Northern Beaches Central Shopping Centre provides activity during the weekday while centrally located community facilities would provide activity outside of school hours. This ensures that there is continual activity 7 days a week, making the Rural View Major Centre a true centre of activity.

• Incorporating a variety of uses allows for centrally located services such as public transport, major shopping, community, and educational facilities which create savings on infrastructure and maintenance costs.

• Developing housing proximate to such a centre of activity provides passive surveillance. This also could result in reduced automobile reliance.

• Encourage some community title housing with shared facilities to attract higher densities.

• Ensure that the character of the numerous localities is consistent throughout the study area by creating a seamless interface between Blacks Beach Cove, Plantation Palms Estate and Northern Beaches Centre.

• Ensure that there is sufficient flexibility in residential zones to enable local retail services.

• Establish frame areas with a concentration of a certain use to support the Rural View Major Centre, such as community facilities and higher density housing.

• Envision five walkable neighbourhoods fronting the McCready’s Creek Greenway connection between Northern Beaches Central and Blacks Beach Cove.

• Envision seven Villages in the landscape west of Mackay-Bucasia Road, feathering out into the rural hinterland.

• Create a transit oriented centre of activity at the confluence of all major urban and natural systems. The Rural View Major Centre should support a diverse mix of day and night-time uses, higher residential densities and a sense of community within a high quality public realm.
NORTHERN BEACHES SMART GROWTH PLAN 2030 REPORT

02 CONTEXT ANALYSIS
03 SMART GROWTH IN THE NORTHERN BEACHES
SMART GROWTH IN THE NORTHERN BEACHES

3.1 WHY SMART GROWTH?

Over the past 30 years in Mackay, the most common type of development has been suburban sprawl. Invariably, this type of development is characterised by large houses, cul-de-sacs and collector roads, which are designed primarily to meet the needs of the automobile. Suburban sprawl requires that most people drive to meet their daily needs, such as dropping the children at school, picking up milk or bread, or going to the park. Worldwide this pattern of development is widely recognised as being unsustainable, particularly following the Global Financial Crisis (GFC).

Suburban sprawl is not a sustainable pattern of growth in terms of the:

- Financial costs;
- Human health costs; and
- Environmental costs.

Following in this part of the report is a more detailed discussion about the existing impacts of suburban sprawl in Mackay and the corresponding benefits of the alternative approach.

Traffic congestion, social isolation, pollution, inactive lifestyles and, above all, lack of housing affordability are in combination having significant impacts on people now, which are predicted only to get worse in the future. Cities throughout Australia are feeling the impacts of a historical pattern of suburban sprawl.

Below is a quick snapshot of the key impacts against leading liveability indicators:

**Access:** Cities are still mostly designed around the needs of automobiles and yet some 50% of Australians do not have access to one.

**Ecology:** Cities account for 75% of the world’s CO₂ emissions and Australia per capita is the worst carbon polluter in the world.

**Economy:** Traffic congestion is costing the Australian economy $12.8 billion a year and, without urgent action, will hit $30 billion a year in 2015, according to Professor Graham Currie.

**Health:** An adult living in a typical outer suburb of Sydney, for example, has 50% more chance of being overweight than their inner city counterpart.

**Housing:** Housing is essentially half as affordable in Australia compared to 15 years ago.

**Place:** ‘It is place, permanent position in both the social and topographical sense, that gives us our identity.’ (J.B. Jackson)

There is a fundamental concern that there will be a repeat of the mistakes made in larger Australian cities, unless an alternative approach to growth is adopted at the Northern Beaches.

Council’s Draft Residential Density Strategy concludes that a more diverse and compact pattern of development is required to meet the changing demographical, environmental, cultural and economical needs of Mackay in the future. The Smart Growth approach offers what is needed in the Northern Beaches.

The Australian Bureau of Statistics states that the overall demographics of the family structure, and therefore households, are changing due to the ageing population as well as a reduction in fertility rates. According to the Australian Bureau of Statistics, in 2006-07 couple families with no children were the most common type of family (40%), followed by couple families with dependent children (37%); this was the reverse of the situation in 1997 where couple families with dependent children were the most common (40%), followed by couple families with no children (35%) (ABS, Measures of Australia’s Progress, 2010). Additionally, as the average household size is decreasing, changing demographics has created an increased demand for smaller lots and increased densities.
3.2 TWO WAYS TO GROW: SUBURBAN SPRAWL OR SMART GROWTH

There are two clear choices for how the Northern Beaches can grow. They are to continue down a path of suburban sprawl or to adopt Smart Growth. Council’s Draft Residential Density Strategy draws some important conclusions about development patterns in Mackay and how they have changed with the passage of time. South of the Pioneer River there is a traditional pattern of development radiating out from the City Centre. It is characterised by a highly connected grid of streets, a mix of uses, a more compact form and an environment that encourages walking and cycling. This historical pattern of development within Mackay is founded on the principles of Smart Growth.

This approach of highly connected streets and housing diversity is therefore not new in Mackay. It is only in the recent past that the model has changed to suburban sprawl in Mackay and throughout the western world. The predominant development pattern north of the Pioneer River is suburban sprawl. Mackay, like many Australian cities, therefore represents a case of two cities in terms of its physical form.

It is important to understand the disparities between suburban sprawl and Smart Growth before proceeding to explain the principles and benefits for Mackay. The diagram below provides a very simplistic comparison between the physical attributes of the two approaches.

3.2.1 SMART GROWTH MODEL

The Smart Growth approach is based on the Neighbourhood Unit, which is a comprehensive planning increment. When combined with others of its kind, it becomes a community. When freestanding in the landscape, it becomes a Village or Hamlet. The Smart Growth model has the following key attributes:

• The physical size of a neighbourhood is defined by a five minute walk from its geographic centre to its edge.

• The basic needs of daily life are available in close proximity. The neighbourhood offers transit, employment, and shopping, plus civic and leisure activities.

• Streets form a connected network, providing alternative routes that assist in dispersing traffic and providing equitable movement for vehicles, pedestrians and cyclists.

• Diversity in the type, size and placement of buildings, streets and open spaces provides an array of options in environments, experiences, uses and prices.

• A more compact urban form results in the conservation of energy, natural resources, farmland, open spaces, time and money.

3.2.2 SUBURBAN SPRAWL MODEL

Sprawl development is not organised into a neighbourhood structure. In contrast to the Smart Growth Model, the Suburban Sprawl Model has the following attributes:

• Commercial, residential and civic uses are separated from each other with no regard to proximity.

• Daily needs are typically accessible only by private automobile use.

• Roads are arranged as a discontinuous pattern that reduces choice of routes and modes of transport, thereby creating traffic congestion.

• Within the separate land uses are building, thoroughfare and open space types that look and feel almost identical, thereby significantly limiting the range of experiences, functions, uses, and prices.

• This more sprawling pattern of development represents a far less efficient use of energy, natural resources, farmland, open spaces, time and money.

Smart Growth versus Suburban Sprawl Model diagram (Source: Duany Plater-Zyberk)
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3.3 SMART GROWTH CHECKLIST

The checklist below further explains the physical attributes of Smart Growth. It should be used as a guide for preparing Master Plans within the Northern Beaches, in conjunction with the Master Planning Framework contained within Part Five of this Plan.

√ There is a discernible centre. This is often a plaza, square, or green and sometimes a busy or memorable intersection. A transit bus stop should be located at this centre.

√ There is a discernible centre. This is often a plaza, square, or green and sometimes a busy or memorable intersection. A transit bus stop should be located at this centre.

√ Buildings at the centre of the neighbourhood are placed close to the footpath and to each other, creating an urban spatial definition. Buildings at the edges are placed further away and further apart from each other, creating a rural spatial definition.

√ Most of the dwellings are within a five minute walk from the centre. This pedestrian shed (or area people find comfortable to walk) averages 400 - 500 metres.

√ There are a variety of dwelling types. These take the form of houses, attached houses and apartments, so that the young and the elderly, singles and families, middle-class and wealthy, can find places to live and interact with each other.

√ There are places to work in the form of commercial or live/work units.

√ There are shops sufficiently varied to supply the daily needs of a household such as a convenience store, cafes and post office.

√ There should be a primary school close enough for most children to walk to/from their home. This distance should not be more than one kilometre.

√ There are playgrounds or green spaces near every dwelling. This distance should not average more than 200 metres.

3.4 SMART GROWTH PRINCIPLES

The key principles that underpin the Northern Beaches Smart Growth Plan include:

• Providing more affordable lifestyles;
• Learning from past practice in Mackay;
• Improving access and movement for people;
• Mixing together land uses;
• Promoting building diversity and adaptability;
• Protecting and preserving environmental values
• Promoting lifelong communities; and
• Providing a framework for diverse character.

The following section includes some context about why each principle is important for the Northern Beaches.

3.4.1 PROVIDE MORE AFFORDABLE LIFESTYLES

3.4.1.1 Context

Housing affordability is recognised as one of the biggest challenges facing the nation. Australia is among the most unaffordable nations in the world when it comes to housing and Mackay is no exception to this trend. More recently, however, the more pressing challenge has become the overall rising cost of living. Transportation, energy, food and water prices are increasing exponentially and raising significant questions about the way in which we live and the cities we live in.

Central to the Northern Beaches Smart Growth Plan is the need to improve household affordability in Mackay. Affordability, after all, is the key objective of the Federal Government’s Housing Affordability
Funding Program. Accordingly, the benefits of Smart Growth for improving affordability are a focus of the discussion.

3.4.1.2 Discussion

The costs of suburban sprawl have ultimately been passed onto the consumer. In the past these costs could largely be absorbed by the buyer, but this has become increasing difficult following the GFC where the high cost of living is now at unprecedented levels.

A viable and time-tested alternative is Smart Growth. Using infrastructure more efficiently, being prominently walkable, supporting public transport and underwriting community infrastructure through higher densities, this model creates significant economies of scale to assist in bringing more affordable and diverse housing onto the market.

Outlined below are the benefits of Smart Growth on household affordability compared to the Suburban Sprawl Model.

Reduction in Vehicle Ownership & Costs

The segregation of housing, work, retail and education by large hostile arterial roads, has forced households into multiple vehicle ownership in Mackay. Due to the absence of efficient and viable public transport, there is generally no choice but to drive to/from work, the shops, the park and school. Of increasing importance is the impact on the ageing population and the elderly who have no self-sufficiency living in a vehicle dependent society.

On the other hand, walkable and mixed-use neighbourhoods that support public transport are proven to reduce the necessity for households to own multiple vehicles. The average yearly cost of private automobile ownership is $9,000, which is the equivalent of a $90,000 mortgage repayment over a typical 10 year span. The possibility of owning one less automobile is the single most important subsidy that can be provided towards affordable housing. Smart Growth in the Northern Beaches, therefore, is an opportunity to reduce high household vehicle ownership rates within Mackay and lower household costs.

Walkability, Wellbeing & Health Costs

The influence of the built environment on our health, happiness and general wellbeing can no longer be denied. With Australia now recognised as the fattest nation in the world, with more than 9 million adults considered obese or overweight, the benefits of a built environment which promotes physical activity at a community level is imperative to managing the health and health costs of our nation. Current health statements estimate that the cost of obesity could be as much as $1.3 billion per year. This epidemic did not exist in previous generations. We lived in communities where we were not dependent solely on the vehicle - where children cycled to school and adults walked to the store and to work.

It has been documented that people in high density mixed-use neighbourhoods with housing diversification and a connected street network achieve 50% more moderate physical activity than those in conventional homogeneous and solely residential neighbourhoods with cul-de-sacs. Smart Growth promotes walking and cycling as the most viable modes of travel for meeting daily needs. By bringing the activities of daily life into walking and cycling distance, all people gain independence of movement, particularly the young and elderly. For other trips such as commuting to work or school, a critical mass of population makes public transport a viable option.

The opportunity exists in the Northern Beaches for 90% of its residents to be within walking distance of a bus stop.

The walkable neighbourhood promotes a lifestyle where moderate physical activity is part of our daily lives - keeping people happier, healthier and reducing health related costs. Studies in 2006 have shown that the built environment impacts on demand for active transportation alternatives, work-related activity and leisure time activity resulting in increased moderate physical activity that saves approximately $750 per person per year in direct medical costs. This immediate saving is in addition to the broader national savings from addressing obesity issues, including lost productivity, costs to the health system, carer costs, and the total burden of this disease on the community.

Affordable Infrastructure

Infrastructure provision is the most significant cost associated with urban development, particularly as it is a cost that is borne upfront in the development process, before land and/or housing can be sold. If the per lot cost of providing infrastructure is too great, lots are simply not affordable and hence will not be constructed. Whilst certain infrastructure costs are
unavoidable, conventional suburban engineering practice often applies a one-size-fits-all solution, particularly for traffic and water management. The result is a range of inefficiencies that, together, have substantial impacts on infrastructure affordability.

The Smart Growth infrastructure alternative is known as ‘Light Imprint’ planning. This approach is founded on providing cost-effective and environmentally-friendly infrastructure alternatives to current practice. Also important is their role in contributing to more diverse streetscapes and authentic environments. This is an important principle in itself for Smart Growth in the Northern Beaches and is addressed in section 3.4.7 of this chapter.

For example, Light Imprint planning addresses stormwater runoff at the scale of the neighbourhood and the block through a combination of techniques including low environmental intervention drainage, conventional engineering infrastructure and innovative infiltration practices. The range of methods available offers a set of site specific design solutions that function in a coordinated manner across the development. By introducing rain gardens and tree protection fences, underground piping systems, kerbs and gutters can be reduced considerably in size, which results in significant infrastructure construction savings and also reduces the environmental impact of the development.

Other cost effective techniques, which are not exclusive to Light Imprint planning but are inherent to Smart Growth, include reducing road pavement widths and substituting asphalt in rear laneways and surface parking areas with permeable materials, such as permeable paving. Both techniques in combination can result in significant savings due to reduced costs on land-take and materials.

Implementation of the above Light Imprint engineering methods has been documented to result in a cost savings of up to 30% per lot in actual construction dollars.

Zero Maintenance Landscapes

The importance of high quality open spaces cannot be underestimated as they have a direct bearing on our quality of life. A high quality public domain promotes incidental physical activity through increased walking and cycling. A community that is physically and socially healthy, places a lower economic burden on the public health system, which can in turn reduce upward pressure on taxes relating to public health at all levels of Government.

In the humid subtropics of Mackay, the key objective for landscaping is to provide shaded footpaths and micro-climate inducing landscape settings for cooling households and public spaces in which people should want to spend time. In this context, vegetation should be selected based on the following principles:

• Select species that are locally available in order to reduce transportation costs.
• Select species that have been tried and tested in Mackay.
• Select species that require minimum maintenance.
• Choose water-wise and drought tolerant species in order to reduce irrigation and water costs.

Fuel and Food: Affordable Local Produce

The rising cost of fuel has had a crippling effect on households under financial stress. For even the most basic necessities, driving is becoming an increasing cost, whilst for those with significant distances to travel to and from work, petrol costs can be as much as weekly rent. Further, the rising cost of fuel has also resulted in a rise in the cost of food, particularly fresh produce.

The previous discussion about affordability outlined how Smart Growth can reduce the necessity for local vehicle trips by promoting a walkable, mixed-use environment. The Northern Beaches community will increasingly over the lifetime of this Plan be given the choice to significantly save on fuel costs without reducing their quality of life.

Smart Growth communities also have the capacity to produce their own fresh produce, thereby protecting the community from increased food costs. From the parkland to verges and the private lot, inter-urban agriculture could be incorporated into the community. Its ability to provide affordable fresh produce will counteract not only the general rising cost of food, but will also contribute to healthier people, community development and reduced medical costs.

Community gardens can reduce household costs, as well as promote community development and health.
3.4.2 LEARNING FROM PAST PRACTICE IN MACKAY

3.4.2.1 Context

There are two patterns of development present in Mackay - a traditional pattern of development south of the Pioneer River and suburban sprawl north of the Pioneer River. This Smart Growth Strategy calls on a return to the tried and tested principles that underpinned the historic pattern of development in Mackay - south of the Pioneer River.

3.4.2.2 Discussion

Traditional neighbourhoods surrounding major Australian cities all have one thing in common - they are highly sought after places to live. Although many years old, traditional neighbourhoods have proven to be sustainable. In fact, they have become increasingly valuable over time.

These and thousands of other communities around the world were developed using Smart Growth techniques. Narrow streets are laid out in an interconnected pattern. Blocks are typically short. Parks are located in an accessible network and civic sites with important community buildings are placed in prominent locations. Uses are mixed and the housing stock varies from detached single family homes, to attached houses, and apartments. As the years pass, they age gracefully and residents take pride in their appearance.

The methods used to develop these communities have been absent in the planning and development industry and also in the curriculum of planning and design schools since the late 1950s. Today, as planners, architects and developers seek to combat the adverse impacts of ‘Conventional Suburban Development’ (CSD), good precedent from the past has begun to inform contemporary urban development practice. Smart Growth or Traditional Neighbourhood Development (TND) is modeled on the best time-tested precedents for application within contemporary contexts. Among these has been the reintroduction of building typology and coding to shape the public realm. With minimal guidance, many of the greatest examples of urbanism were constructed by individuals working across disciplines. Over time, refinements and adaptations within the knowledge base shaped the different regional vernaculars which exist today.

Planning has gone through various changes during the last 60 years. After the Second World War, suburban development and zoning, or the separating of land uses, became the planning trend in most Westernised countries. This shift in direction was brought on by the post-war economic boom and the consequential increase in popularity of the automobile. Many people had a relatively larger disposable income than before and were ready and willing to spend it on the increased costs of new housing away from the city or town centre as well as the associated transportation costs of commuting. Essentially, sprawl development evolved around catering to the automobile and now private automobile ownership is critical for residents living in sprawl communities around the world to access employment, goods and services, which essentially creates growing traffic congestion to and from urban centres. This is one of the major challenges to continued growth and prosperity for communities worldwide.

For countries where CSD became the most popular model for new development, a pattern of new road building persisted which often changed communities completely. Road widening, new bypasses, and kilometres of cul-de-sacs, built to help alleviate traffic, actually increased traffic because they promote private automobile use. Under this system, traffic is funneled from a large system of lower capacity roads into a small system of higher capacity roads. Even minimal growth, therefore, ends up generating a disproportionately high level of traffic congestion.

Twenty five years ago in the United States an alternative to CSD was attempted in Florida. The first traditional neighbourhood development in the United States since the Second World War, named Seaside, proved that towns and neighbourhoods can still be planned and built using Smart Growth principles and that people will purchase and build within these settings. Seaside has attracted international attention. The urban and architectural codes have been widely mimicked by others seeking to reintroduce traditional design and planning to their own communities.

Today, municipalities and government agencies around the world employ the techniques and principles developed at Seaside in their planning and design ordinances. The design code controls the visual outcomes and shapes the experiences for residents and visitors. The code introduces a design discipline that enables compatibility at all scales, from different types of uses within a development to various types of developments within a region. The code is the learning mechanism by which community building can once again rest on a knowledge base that adheres to precedent, particularly for traffic and water management. The result is a range of inefficiencies that, together, have substantial impacts on infrastructure affordability.
03 SMART GROWTH IN THE NORTHERN BEACHES

3.4.3 IMPROVE ACCESS AND MOVEMENT FOR PEOPLE

3.4.3.1 Context

Vehicle dependency is high in Mackay, particularly in the Northern Beaches. Walking and cycling are generally not a viable mode of transport due to the disconnected pattern of streets and open spaces, combined with the vast distances separating existing suburban sprawl communities. Public bus services are infrequent and limited. People, therefore, spend more time in their automobiles, instead of walking, cycling, enjoying the outdoors and interacting with each other in a way that is proven to benefit physical health and mental wellbeing.

Understanding the street network and ease of navigation is an important urban design objective. This objective might sound obvious, but the ‘legibility’ of most suburban sprawl areas in Mackay is poor, making it very difficult for access and movement. The experience of moving through an urban environment should be memorable for the right reasons. This is another layer of legibility, where qualities that are unique to a place make it easy to remember and to connect with - not just physically but also emotionally in terms of the memories that a place evokes.

The current road standards used in most suburban sprawl communities, including in Mackay, are conventional in nature and reflect an approach for the design of vehicle dominant environments. The carriageways are generally very wide, particularly where there is an absence of on-street parking. Footpaths often appear on one side of the street, if at all. Utility requirements tend to focus exclusively on ease of operation and maintenance, with little to no regard for pedestrian scale or aesthetics. Importantly, higher density Smart Growth can assist in funding better urban design outcomes for utilities in streets, which can also cater for the needs of pedestrians and cyclists. Wide streets are usually tamed by employing ‘traffic calming’ methods, such as chicanes and speed humps, speed tables, horizontal changes in movement paths and many others. These techniques, however, are used where there is a failure in the initial design and a correction is needed. The Northern Beaches Design Code recommends alternative thoroughfare types that better balance the needs of the motorist, pedestrian and cyclist.

3.4.3.2 Discussion

Connections are critical to walkability and liveability of a neighbourhood. They allow movement of pedestrians, cyclists, and automobiles to flow through various alternative routes to their destinations. As a result, traffic congestion is dispersed on many roads and the permeability of the network is high, allowing people to easily find their way to their destinations.

Smart Growth aims to include many connections to move people, bicycles, automobiles, and even buses, effectively and efficiently. Many connections are possible when the road network is designed to promote connectivity. Interconnected roads give people alternatives and thus aid in dispersing traffic. Because all roads share the traffic, no single road is overburdened. Therefore, most roads can be designed to foster pedestrian use with narrower roads, wider footpaths, and, in some cases, street furniture to encourage civic use. Narrower roads and on-street parking slow traffic, which makes them safer for children and the elderly. It also means quieter neighbourhoods even on the busiest roads.

Although older neighbourhoods and communities had many connections, in the latter part of the twentieth century since planning priorities shifted to accommodate the automobile, many connections have been severed during redevelopment. In new CSD, multiple connections are discouraged and replaced with cul-de-sacs where garages and driveways front the street preventing on-street parking. Traffic is channeled into large collector and arterial roads, with high capacity and wide rights-of-way. Such roads are designed to handle large flows of traffic, because the number of alternate routes available is limited. Limited road connectivity has replaced tightly knit, pedestrian-friendly design with CSD.

The most noticeable result of CSD is traffic congestion. High volumes of traffic congestion create an unattractive environment within which to walk, cycle or drive. Downgrading footpaths creates difficulties and discourages walkability. Just as detrimental is the loss of social connection. Places with a long history of CSD and subsequent lack of connections find that residents often feel isolated with fewer opportunities for community interaction. Moreover, the ‘inward’ looking nature of suburbia hastens the decline of social responsibility and community consciousness.

A connected open space network is integral to Movement Systems
3.4.4 MIX LAND USES TOGETHER

3.4.4.1 Context

Mackay City Centre contains a mix of land uses that make for an interesting place offering convenience and walkability. Uses are mixed vertically within buildings, as well as horizontally, throughout the highly connected street grid network. Land uses north of the Pioneer River are typically separated into single-use zones, such as retail, industrial, community, residential and open space. These single-use zones result in people needing to drive from one location to the next to meet their daily needs. This arrangement is inconvenient and costly. Single-use areas are typically less interesting, as they generally look the same and are more predictable in the way that they function. They also create areas that might be more interesting at one time of the day and completely devoid of activity during another. This has implications on community safety and crime due to fewer ‘eyes on the street’.

3.4.4.2 Discussion

Smart Growth promotes the use of traditional planning principles of mixing uses rather than continuing the current practice of developing separate, single-use estates within a suburban setting.

In the past, town planning was executed by people who knew a little about all the elements of community building. Looking back at their work today, it is difficult to tell if a person was an architect, planner, landscape designer, developer, builder, marketing expert, banker, or engineer. Every plan addressed all the elements of community in a single, comprehensive effort. It is difficult today to believe that a majority of the world’s most admired places were developed in this manner and without a regulatory framework to administer them.

After the Second World War, however, community designing changed radically. Zoning schemes were adopted by governments to separate land uses to make the delivery of development safer and more efficient. Each zone could now more readily be modeled and the number of parking spaces determined. The added benefit of the model was the perceived correlation between parking capacity and trip generation, which allowed engineers to ‘size’ road infrastructure for anticipated traffic volumes and to design the local, collector, arterial, and highway system of classification. Each design further impacted how and where buildings could be built coinciding with a particular road classification as well as what open spaces remained. Due to escalating infrastructure costs, many estates were designed to minimise the costs in providing infrastructure.

Within a short period of time, the entire CSD system had become coded and standardised throughout the world—the professions became obsessed with ‘capacity’ at the expense of ‘character’.

The negative consequences of suburban sprawl, such as the isolated communities it produces, was not foreseen at the time. The increase of traffic, commuting times, pollution, fuel prices, obesity, and health problems were not considered as potential issues of the future during the spread of CSD. A recognition of these issues today, however, enables us to better plan for our future, and for the futures of our children. The principles of Smart Growth should be adopted in the Northern Beaches as a means of delivering more walkable, liveable, and sustainable communities for its current and future residents to thrive in.

At the Northern Beaches, new guidelines and variances to existing regulations will be required to permit the development of an authentic, compact, walkable mixed-use community. The promotion of mixed-use development in the Northern Beaches would require reverting to principles of TND, which have guided the development of great places throughout history. Examples of mixed-use development include ground floor shopfronts with a residence above, corner stores in a walkable catchment in a residential area, a studio residence above garage (‘Fonzi Flat’), and shared sporting fields between a school and community. Essentially, mixed uses bring variety and choice into urban development.

Mackay City Centre consists of a concentration of diverse land uses within a highly connected grid network of streets.
3.4.5 PROMOTE BUILDING DIVERSITY AND ADAPTABILITY

3.4.5.1 Context

Suburban development in Mackay is characterised by buildings designed to accommodate a very specific use or perceived market demand at a given point in time. For instance, a large single-family house has limited alternative uses without significant building interventions. Another example is a purpose-built shopping centre. Buildings that are not designed with adaptability in mind have a more limited life expectancy than an older building in Mackay City Centre, which might have accommodated a diversity of uses over many decades, including residential, office, retail and services uses.

It is important that housing can meet the financial and personal needs of a household over a complete life cycle, ensuring that people are not forced out of established communities. Typical suburban building typologies, therefore, are a short term investment that do not represent the most efficient use of the significant resources that go into the building construction.

Visually, the impact of concentrating building types within one location is the creation of monotonous streetscapes. In residential areas, there is a predominance of large single-family homes that do not interact with the street. When this condition is repeated, it simply fails to create enough interest for people to make the choice to walk, even over very short distances.

3.4.5.2 Discussion

Sustainable neighbourhoods include a variety of housing types. These housing types may include mixed-use apartments, terraces, cottages, ancillary ‘granny flats’ and large detached houses. All of these housing types are encouraged for the Northern Beaches. Providing a range of housing types is important because it allows a neighbourhood to accommodate a variety of lifestyle choices, including singles, young couples, families and retirees. Without this choice, people are either forced to live in a building which does not suit their financial position or maintenance requirements. In particular, for retirees this has often meant that the only alternative to a large detached house is to prematurely downsize into a retirement village.

The other important benefit of providing for a diversity of housing types is affordability. By reducing the size of the house, the land component for individual lots can be reduced thereby providing an immediate saving to purchasers. Other techniques, such as allowing ancillary granny flats off a rear lane can provide home buyers with a rental income allowing them to service a mortgage that would otherwise be beyond their means.

In providing for this range of housing types, there are two key factors that need to be considered for the Northern Beaches: streetscape and climate.

Streetscape refers to how these different housing types can coexist to create attractive, walkable streets. Fundamental to achieving this is ensuring that garages are carefully integrated with the building design so that they do not dominate the view of the street. On wider lots (over 12m) the garage is setback at least 1.5m behind the front elevation of the house. On narrower lots (under 12m) the garage is ideally located off a rear lane or is a single width garage setback 1.5m behind the front elevation of the house. By setting back or removing the garage from the front elevation, it provides the opportunity to design the building where the windows, entry and a balcony or verandah can activate the streetscape, creating the preconditions to support walking and cycling.

Housing design should also respond to the humid, subtropical climate in Mackay. Careful attention should be given to the seasons, sun and cooling breezes to encourage housing design which reduces the necessity for air-conditioning and maximises natural ventilation. At present, it is ironic that people move to Mackay to enjoy the climate, but spend the majority of their time in air-conditioned buildings because of poor design. A key element of responding to the climate can be the reintroduction of louvred verandahs addressing the street. Beyond contributing to safe, attractive streetscapes, verandahs can extend the usable area of a house with the louvers providing a low-tech solution to engaging with the weather.
3.4.6 PROMOTE LIFELONG COMMUNITIES

3.4.6.1 Context

Problems associated with the social dislocation of communities are well documented. They include depression, anxiety, obesity, a lost sense of belonging and a general yearning to be closer to family and friends. History suggests that these types of problems could become more apparent in Mackay as the population grows and pressure increases on housing affordability. This has certainly been the trend in larger cities within Australia, where the high cost of housing has forced people out of their established communities and into undesirable situations. Lifelong communities are needed in the Northern Beaches. A key opportunity of the Northern Beaches Smart Growth Plan is to provide new housing options for existing and future residents that will significantly enhance their options of remaining within their community for their complete life cycle, if desired.

3.4.6.2 Discussion

Australia’s population, like other countries, will age substantially over coming decades. The proportion of people aged over 65 years in Australia is anticipated to grow from 13% as at June 2002, to 25% of the population by 2051. In the more immediate future, Mackay is forecast to have a proportionately lower number of over 65s. Nonetheless, the Smart Growth 2030 Plan needs to cater for the long term and the possibility that forecasts might not correspond with reality.

Ageing Australians and people with disabilities often want to live, work and play in a community that provides housing which is affordable to own, maintain and easy to take care of, with good access to public transport, services, family and social networks. Additionally, they want to be part of a community with opportunities and access to social, cultural and recreational activities. They rely on a home and community where they feel safe and secure - not alienated and lonely.

Smart Growth in the Northern Beaches needs to promote safety and security, which responds to the needs of an ageing community. Affordable, accessible and adaptable accommodation for everyone, from young families to older people and individuals with a temporary or permanent physical impairment, is needed in the Northern Beaches.

As the new communities are established in the Northern Beaches, values around family and community could be propagated through the inclusive design of housing through the likes of builders guilds and community-based housing associations. Community cohesion can be strengthened by participation in community events as well as community groups, such as religious groups or the established Northern Beaches Community Network.

Lifelong communities avoid social dislocation and better meet the needs of Australia’s ageing population.
03 SMART GROWTH IN THE NORTHERN BEACHES

3.4.7 PROVIDE A FRAMEWORK FOR DIVERSE CHARACTER

3.4.7.1 Context

Streetscapes north of Mackay’s Pioneer River, including the Northern Beaches, have a very similar and hence repetitive character. This is largely due to one predominant pattern of development in the form of suburban sprawl. Council’s Draft Residential Density Strategy concludes that, while there will be a significant increase in demand for smaller housing by smaller households, larger suburban housing is likely to continue to be the most popular housing type in the future. It is therefore important to ensure that this ongoing demand is met, in addition to satisfying the new demands of changing demographics. In meeting both of these key needs, there is an opportunity at the Northern Beaches to diversify the character of the public realm. The Transect Planning Approach provides a framework for understanding the character of the Northern Beaches and diversifying that character in a manner that is authentic to Mackay, focusing on the suitable allocation of building, thoroughfare and open space typologies.

3.4.7.2 Discussion

A key part of the vision for the Northern Beaches Growth Area is to respect the dominate lifestyle choice of suburban living, whilst introducing the opportunity for other lifestyles to coexist in a manner which is authentic, mutually supportive and will ultimately benefit the region. In terms of planning for the Northern Beaches, the best way to achieve this is to allow neighbourhoods to include a variety of transect zones or character zones.

Borrowed from the environmental movement, the idea of transect-based planning is now recognised throughout North America and Australia as being the best way to accommodate differences in lifestyle. The transect concept acknowledges that in order for people to enjoy an authentic lifestyle choice, all of the physical elements of the built environment must be arranged in a way to support that lifestyle choice. For example, a person living in a vibrant town centre typically desires an ‘urban character’ supporting their cosmopolitan lifestyle aspirations, whilst a family typically desires a ‘suburban character’ where larger homes and quieter streets are considered ideal for raising a family.

Within this context, the vision for the Northern Beaches provides the opportunity for neighbourhoods to include the full spectrum of lifestyle choices ranging from rural to urban. Within each neighbourhood, developers are required to provide at least three transect zones or character zones. This approach provides the logic for how housing types, thoroughfares, landscaping and other elements should be designed to create authentic environments and different market segments.

The idea of the transect originated in the 1900s as an ecological tool used to describe a series of natural habitats. A typical example is the transect that runs from ocean to beach to dune line, then on to a coastal forest. The transect allows scientists to study each habitat and observe the constituent elements of each. The idea has been found to apply equally well to the human habitat.

The transect extended into the human habitat is divided into six zones. Each zone is defined by very specific rules that can form the basis of a code. The transect, in contrast to suburban sprawl, provides real choices for human preferences.

For example, those who choose to live in a T5 Zone, such as a Main Street, prefer being at the centre of the urban activity and do not mind the energy generated there both day and night. Those who want a quieter life, however, can get a townhouse on a T4 side street with an elevated front entry and footpath. Some prefer even more tranquillity and require a larger residence, maybe because of children or a desire to be adjacent to nature. They can choose a detached single family home on its own lot along a T3 road on the outskirts of the community where the footpaths and street lights end and the countryside begins. The common thread for each resident is that they can still access the other lifestyle choices within a 5 minute walk. Transect-based designs find a place to suit various lifestyle needs.
The Transect Diagram (Source: Duany Plater-Zyberk)
04 NORTHERN BEACHES STRUCTURE PLAN
4.1 THE VISION

The Vision for the Northern Beaches 2030 is for a highly connected series of coastal neighbourhoods, inland villages, and evolving neighbourhoods and hamlets, which converge in a vibrant Major Centre that is full of public life and vitality around the clock. Shown on the following page in Figure 04 is the Structure Plan which illustrates the Vision and the key elements that need to be regulated as part of its implementation.

By 2030, it is envisioned that the Northern Beaches will include five new dense coastal neighbourhoods focused on a unique natural habitat with a world class pedestrian and cyclist promenade. It is also envisioned that there will be a series of inland villages and hamlets with similar attributes to the coastal neighbourhoods but at a lower density as to gradually address the rural residential and agricultural areas to the west. The principles of Smart Growth encouraged in this Plan can also be used to retrofit existing estates in order to achieve more liveable neighbourhoods and improve the character of the Northern Beaches. It is envisaged that the Rural View Major Centre will evolve into a vibrant centre with employment, retail, housing, educational and community uses within a walkable and mixed-use environment.

A world class green system is envisioned to be the signature of the Northern Beaches. From coast to country, it should connect all of the neighbourhoods, villages and hamlets, converging in the Rural View Major Centre and celebrating the unique humid subtropical wetland environment fronting the new communities that extend toward the beach.

A walking and cycling trail and path system will extend some six kilometres from the Rural View Major Centre Community Frame through to Blacks Beach. It will be punctuated by a diverse range of experiences, places and facilities that appeal to all members of the community. This series of destinations is aimed at stimulating interest and encouraging people to walk or cycle more than they normally would. In fact, the open space should become a destination in its own right, attracting people from various parts of Mackay. The open space network and the Northern Beaches should be synonymous with active living and a healthy community within a compact setting.

The vision for the Northern Beaches includes reducing automobile dependency and promoting walkability. The urban design should encourage incidental physical activity which is any physical activity done for a short time as a means of completing daily tasks. Some examples of incidental physical activity are walking to a bus stop, using the stairs instead of a lift, or walking the dog. Good urban design encourages incidental physical activity by creating spaces and places where people enjoy doing such tasks, such as a well-landscaped park to walk the dog.
4.2 NEIGHBOURHOOD STRUCTURE

The Neighbourhood Unit is the fundamental increment for designing our villages, towns and cities. The neighbourhood structure of the Northern Beaches Smart Growth Plan provides us with the framework for organising all aspects of this evolving region, ensuring all households and workplaces are within walking or cycling distance of local public transport service and the Rural View Major Centre.

The Neighbourhood Structure enables:

- Each neighbourhood, village and hamlet to have a defined edge and a discernible centre;
- The extensive wetland corridors to define the edges of the neighbourhoods, villages and hamlets. Significant thoroughfare alignments (such as Mackay-Bucasia, Eimeo and Blacks Beach Roads) and natural features such as ridge-lines and watercourses also define the neighbourhood boundaries;
- The neighbourhood unit to be contained within an area generally five minutes walking distance (400-500 metres) from centre to edge, with the Rural View Major Centre contained within a larger (800-900 metres/10 minute walk) catchment; and
- Each neighbourhood to have a discernible centre, and the potential for a small ‘neighbourhood green’ ensuring most residents are within 400-500 metres walk of key facilities. Community facilities may be located at the heart of the neighbourhood or at the edges, shared between adjoining neighbourhoods.
4.3 OPEN SPACE NETWORK

The linear open space network will link residential neighbourhoods, promoting walkability and connectivity through its potential to function as an active transport link. It will also provide habitat corridors and corridors for stormwater management. The open space network will serve a multitude of functions and be utilised especially for active recreation. Above all, the open space network gives people meaningful connections to the natural environment. Open spaces within the neighbourhoods, villages and hamlets should also serve more localised functions. These more economical spaces can enable investment to focus on the linear open space system, particularly the wetland link from the Rural View Major Centre to Blacks Beach.

The open space network is critical to realising the Structure Plan vision. It makes the difference between having either an amorphous spread of housing or, rather, compact communities with strong identities. At its most extreme, the open space system will effectively form a greenbelt to the north and south, distinguishing the Northern Beaches from Bucasia and Beaconsfield. At its least extreme, the open space system would create a village in the landscape setting by modest gestures separating villages such as widened verges and medians opening up views to the rural hinterland. Along McCready’s Creek and feeder drainage lines, the open space system would protect environmental values and connect existing land zoned for open space.

More detailed background studies are required as part of the design, acquisition and zoning of the land to complete the open space network proposed by the Structure Plan. Innovative incentives such as the transfer of development rights might be required to ensure that this key objective is achieved.

A range of open space types is encouraged within the Northern Beaches, from neighbourhood greens and urban plazas to playing fields and community gardens.

The open spaces will become destinations and key community gathering spaces within the community. More importantly, they will also provide the amenity required to support and encourage higher density residential living and high quality settings within the Northern Beaches.

LEGEND

- **NATURAL SYSTEMS**
  - **STUDY AREA**
  - **OPEN SPACE CONNECTION**
  - **OCEAN**
  - **CREEKS + WATER BODIES**

1. Passive recreation
2. Active recreation
3. Walking and cycling connections
4.4 MOVEMENT SYSTEMS

Movement systems include all thoroughfares and open spaces for the movement of vehicles, pedestrians and cyclists.

The transformation of Mackay-Bucasia Road over time into a transit corridor is integral to the comprehensive transport movement system proposed by the Structure Plan. The corridor could become in many ways ‘the face’ of the Northern Beaches, providing rapid transit connections in both directions with a potential commute time to Mackay City of 15 minutes. Importantly, an urban boulevard treatment of Mackay-Bucasia Road will support not only rapid transit but also walking, cycling, commerce and a sense of community. The intention is that a boulevard will act as a seam that binds the neighbourhoods and villages and, above all, the Rural View Major Centre east and west. The most suitable location for the rapid transit stop will be central to the Rural View Major Centre.

A key transit feeder bus system is proposed as a closed loop via: Old Eimeo Road, Dolphin Heads Road, Chenoweth Drive, Rosewood Drive, Golf Links Road, Mackay-Habana Road, Dawson Boulevard and Wallmans Road. The capacity and character of this secondary network should balance the needs of vehicles, pedestrians and cyclists.

Locating the bus route on established and proposed major thoroughfare alignments will ensure that the Northern Beaches is ‘transit ready’. Over time, a secondary feeder network could connect the centres of the new communities, providing each with a bus stop within a comfortable 5 minute walk. Bus stops should also be located in close proximity to education and community facilities and within the heart of centres.

A comprehensive bicycle network will offer a vast choice of routes to important destinations, accommodating the needs of all types of cyclists. This ranges from parents with children, through to recreational and commuter cyclists. The Plan shows the primary network only. It is important to note that the thoroughfare types contained in the Northern Beaches Design Guidelines promote cycling on the road. While this type of route does not appeal to all cyclists, it does significantly expand the network and the choice of experiences on offer.

Streets should have footpaths that will vary in character across the various neighbourhood types in order to encourage walking and social interaction. Lot layouts should promote walkability and connectivity through the provision of a legible street network. Landscaping should take into account the humid subtropical climate of Mackay in regard to the provision of shade in order to create more pedestrian and cyclist friendly environments.
4.5 NEW COMMUNITIES

New Community types include Neighbourhoods, Villages and Hamlets which will be built as greenfield development.

A neighbourhood has all of the attributes included in the Smart Growth Checklist in section 3.3 of this Plan. Villages and Hamlets are neighbourhoods freestanding in the landscape with relatively weak retail centres.

The more urban Neighbourhoods have been allocated to areas of high amenity and accessibility where they can coalesce with each other to support higher residential densities and mixed use. The less urban Villages and Hamlets have been allocated to areas away from the coast west of Mackay-Bucasia Road. All New Communities are connected by the Open Space and Movement Networks. Each is distinguishable by a legible edge and central gathering space.

In terms of regulating development, each new community has an overall density target. There is also a requirement in each new community for a minimum of three different character or transect zones. The transect zones are important as they promote a range of lifestyle choices within each and every new community.
4.6 SPRAWL REPAIR COMMUNITIES

A Sprawl Repair Community is an area of existing suburban sprawl identified as having potential to become a complete community over time through a series of physical interventions.

Retrofitting suburbs has not yet occurred on the same scale in Australia as it has in the United States where, more recently, shopping centres and entire suburbs have collapsed. ‘Recycling the suburbs’ has been ranked by Time Magazine as the second most significant idea ‘changing the world right now’. Making the most of existing infrastructure, the opportunity exists for the transformation of shopping centres to town centres, arterial roads to tree-lined boulevards, housing estates to walkable neighbourhoods, and drainage corridors to water harvesting and productive farmland.

The greatest challenge facing the retrofitting of the suburbs lies in the thoroughfare system. When the grid road network of Mackay City Centre was drawn, the planners would not have had any idea what lay ahead in the future. The design, however, proved flexible enough to accommodate a variety of building typologies and functions. The high connectivity of the street grid provided maximum flexibility for future developments. By contrast, suburban sprawl lacks connectivity and choice, which limits adaptability. The suburban thoroughfare system is relatively inflexible and presents challenges for improving walkability and access to daily needs.

There is not a one-solution-fits-all approach to sprawl repair, as each case has to be evaluated individually. The first step in amending existing neighbourhoods usually requires interventions to establish a fine-grain street network to improve connectivity, pedestrian and cyclist safety as well as transit viability.

Sprawl Repair requires significant political will, development incentives and community support that could be more likely to occur in the later stage of the Northern Beaches 2030 Smart Growth Plan.

1. Arterial roads could be transformed into urban boulevards
4.7 CENTRES

Centres are areas with varying degrees of concentrated built form, uses and community activity.

A range of centres and employment districts are proposed within the Northern Beaches, including:

- Mixed-use Rural View Major Centre with a retail core at Northern Beaches Central Shopping Centre and a series of frame areas;

- One District Centre at Blacks Beach;

- Three smaller potential Walking/cycling destinations, at Plantation Palms, Blacks Beach south, and Blacks Beach; and

- Service Industry district supporting the Rural View Major Centre.

The Rural View Major Centre is located at the confluence of Mackay-Bucasia Road, Rosewood Drive and Eimeo Road. The benefits and key attributes of the Rural View Major Centre include:

- An adequate capture of a growing movement economy;

- A central location between the western villages and eastern neighbourhoods;

- An optimum location proximate to McCready's Creek and Mackay-Bucasia Road, which are critical walking and cycling conduits for local residents and workers to the centre;

- A direct street connection for a rapid public transport link into Mackay City Centre;

- The highest level of intensity of uses including a range of retail, commercial, community, education, entertainment and residential uses;

- A potential library and community hub in the southern Community Frame;

- A main street environment within the core part of the Rural View Major Centre, reminiscent of traditional North Queensland centres and main streets, with a focus on pedestrian priority and creating an attractive, vibrant setting;

- Higher density residential dwellings within the centre such as apartments, townhouses and dwellings above shopfronts; and

- Strong connections and a high quality public domain will provide a seamless interface with Plantation Palms Estate.

For more information on centres in the study area, refer to Council’s Draft Centres Strategy.
Education and community facilities are critical to the Smart Growth of the Northern Beaches.

With a potential future population of some 34,000 people within the greater Northern Beaches (including Bucasia and Shoal Point) by 2031, a number of education and community facilities will be required. Concentrations of civic, educational and commercial activity will be co-located and embedded within the neighbourhood pattern and not isolated in remote, single-use complexes. These facilities should generally be located within or in close proximity to the Rural View Major Centre, Blacks Beach District Centre and smaller potential Walking/cycling destinations. Higher order facilities, such as libraries and indoor recreation facilities, should be located within the mixed-use Rural View Major Centre.

Traffic congestion in suburban communities often results partly from parents driving children to distant schools and child care facilities. Placing schools and day care facilities proximate to centres enables time-saving multipurpose trips and the ability for older children to walk to school.

The educational facilities can be co-located with active recreation reserves to promote the sharing of playing field facilities, thus reducing the overall need for larger school sites. They are also located adjacent to linear open spaces/riparian reserves promoting access for people and children to cycle and walk to and from their destination instead of depending on the private vehicle.

These community hubs potentially include land uses such as:
- Health facilities;
- Civic space;
- Child care;
- Early education;
- Library;
- Community halls; and
- Multipurpose spaces.

Community hubs should be located within urban centres and the Rural View Major Centre.

1. High school integrated into an activity centre streetscape

2. Playing fields