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Creating a sustainable Sunshine Coast: the potential contribution of an expanded Sippy Downs

Paper prepared for PIA Queensland conference, Townsville, September 2007 by Dr Daniel O'Hare (Associate Professor of Urban Planning, Bond University, Gold Coast 4229) and Dr Michael Hefferan (Professor of Property and Development, University of the Sunshine Coast, Maroochydore DC 4558)

The reality of the quest for a sustainable urban future is that to get there at an indefinite time in the future, we have to start from where we are, now. In a major greenfield development area at Sippy Downs, in the Sunshine Coast Subregion of South East Queensland, the ingredients for a sustainable regional node are all there. Sippy Downs has a university, and there is firm State Government commitment to the CAMCOS major public transport corridor. But the two don't connect. A new regional hospital has been diverted away from its intended site next to the university. A sprawling housing estate, with disconnected street patterns, separates the university campus from Palmview, one of the subregion's major greenfield sites. Yet with all these challenges to sustainable urban planning, there is still the potential to shape the urban expansion of Sippy Downs in a way that leads towards a more sustainable development pattern for the Sunshine Coast. This paper discusses that potential and proposes a possible urban form that reconciles the sustainability objectives of the South East Queensland Regional Plan, Caloundra City Council, the University of the Sunshine Coast, and the developers of the Palmview urban expansion area.

INTRODUCTION

This paper adopts the standpoint that, to achieve sustainability, at an indefinite time in the future, we have to start from where we are, now. Consequently, attention is restricted to where the major opportunities are for development to take a sustainable, rather than 'unsustainable', direction. In the outer city region, existing infrastructure decisions and greenfield site availability may not at first appear to support sustainability – yet the future urban settlement pattern must be built from these beginnings.

The purpose of this paper is to explore the potential contribution of an expanded Sippy Downs to a sustainable settlement pattern for the Sunshine Coast subregion of South East Queensland (SEQ). The case study is used to support an argument that sustainable development directions are possible despite existing development patterns departing, in important aspects, from the orthodoxy of the current urban sustainability literature.

The paper draws on a research study investigating sustainable development directions for an 855 hectare area of greenfield land on the southern boundary of Sippy Downs (ISR 2006).¹ The site, identified by Caloundra City Council (CCC) as the Palmview

¹ The methodology used in the ISR study combined key informant interviews with literature review and documentary research of current policy and other contemporary documents.

Further Investigation Area (FIA), is designated as one of two New Greenfield (Major Development) Areas in the *Draft Local Growth Management Strategy* (LGMS) (CCC2007).

The paper describes the Palmview site before discussing current theory and leading practice in relation to sustainable urban development. Relevant points from regional and local planning documents are summarised, and conclusions are made as to the potential for the Palmview land to be treated as a sustainable expansion of Sippy Downs linking the Sunshine Coast's designated "knowledge node" (OUM 2005b) and a proposed regional health hub at Kawana. The structure of the paper is influenced by the desire to use Palmview as an exploratory case with which to explore the urban sustainability principles and debate contained in the theoretical literature.

Sippy Downs and the Palmview urban expansion site in regional context

Sippy Downs is a newly developing greenfield area approximately 80 kilometres north of Brisbane. The area is approximately 10 kilometres southwest of Maroochydore, 10 kilometres northwest of Caloundra, and five kilometres west of the developing Kawana Waters major centre. Present development consists of the University of the Sunshine Coast (USC), a largely undeveloped town centre site, a shopping centre and tavern, a large retirement village and the low density suburban area of Chancellor Park.

The 855 hectare Palmview greenfield site, immediately south of Sippy Downs, extends for about six kilometres from east to west, with its northern boundary coinciding with the Maroochy-Caloundra local government boundary, part of which runs along Sippy Creek and the southern boundary of Mooloolah River National Park. The site is bounded on the west by the Bruce Highway, and on the south and east by the Mooloolah River, its floodplain and the Palmview Conservation Park. The Palmview FIA is relatively flat, open farmland, generally framed by trees and the riparian corridors of Sippy Creek and the Mooloolah River. The land is currently owned in four holdings, with Investa owning 355 of the total 855 hectares (ISR 2006) (Figure 1).

URBAN SUSTAINABILITY: CONTEMPORARY THEORY AND PRACTICE

The sustainable development of major greenfield sites in emerging urban subregions requires articulation between regional and local urban design approaches to ecological, social and economic sustainability.

Sustaining the natural environment: the underlying and overriding imperative

It is now widely accepted that all life depends on the maintenance of healthy natural ecosystems: without attention to sustaining the natural base on which our economies, societies and cultures depend, the other dimensions of sustainability will not be able to be maintained in the long term.

There are two major aspects to sustaining natural ecosystems in urban design and development. The first is the protection of important natural systems of the site and

region undergoing urbanisation, particularly conserving riparian systems, habitat and vegetation, and minimising the impacts of development on those natural systems. The second aspect relates to minimising the short and long term effects of alternative urban forms on the environment, for example the effects of energy demand and air and water pollution.

This paper deals in more detail with the second aspect, the investigation of a sustainable urban form that maximises the sustainability of natural systems (including minimising long term energy demand and pollution impacts) while also enhancing the prospects for economic and social wellbeing at local, subregional and regional levels.

The city region as a global focus for sustainable development

The city region is the dominant form of urban growth around the world at the turn of the 21^{st} century (Simmonds and Hack 2000). According to a global study for the World Commission on 21^{st} Century Urbanization, cities and urban regions are a key focus in national and global efforts toward sustainability:

The aim of urban [sustainability] policy is to produce cities which are economically prosperous, culturally vibrant, socially equitable, clean, green and safe, and in which all citizens are able to live happy and productive lives. (Hall and Pfeiffer 2000:38)

Contemporary thinking on sustainable regional urban design and development is dominated by practitioner-theorists such as Peter Calthorpe (Calthorpe and Fulton 2001) and Jonathan Barnett (2001). Academics in urban design, regional planning and transport policy have also made a significant contribution, eg Peter Newman (Newman and Kenworthy, 1999) and Robert Cervero (2004).

While these opinion-leaders have focused at the regional level, a number of writers and some practitioners have sought to define and promote sustainability at a more local level. These include Rudlin and Falk (2003) and Barton et al (2003) in the UK, who focus on notions of 'sustainable community' and the relationship between urban form and public health. Frank et al (2003) provide evidence of the way that the predominantly car-based urban form of the past half-century limits people's ability to remain healthy by engaging in physical activity – ie walking, cycling – as an incidental aspect of using the city.

Research undertaken by New Zealand's Ministry for the Environment establishes strong evidence that particular urban design approaches, used in combination, "can significantly reduce impacts to habitat, ecosystems and watersheds, and can reduce vehicle travel, which in turn reduces emissions of local, regional and global concern" (US EPA 2001, cited in NZMFE 2005). These more sustainable urban design approaches include compactness, higher densities, mixed land uses, high connectivity (for public transport and active transport), reduced impervious surfaces, improved water retention, and protection of sensitive environmental areas (NZMFE 2005).

Adaptable urban places

Urban sustainability is a condition that planners, urban designers and developers strive towards; it is not something that is likely to be achieved instantly. Places are more sustainable if they have the capacity to adapt as conditions change during the urban life cycle. Cities and suburbs typically have life cycles, moving from new settlements to maturity, and potentially to decline or regeneration. If places are planned to be adaptable to changing circumstances, these life cycle changes are less likely to be disruptive and disabling, and less likely to lead to obsolescence, decay, and costly retrofitting.

Adaptable urban places maximise the life chances and choices of initial and future residents, workers and other users. Places that accommodate a mixed demographic have a greater capacity to adapt to broader social change. Similarly, town centres and retail and commercial spaces need to be sufficiently robust to accommodate different types of tenancies throughout the life of the community. New urban places should be designed and developed so that active transport (walking, cycling and public transport) is viable - even if in the short term high vehicle usage continues.

Higher residential densities will be necessary as the region grows and matures, but may not be so economically viable for developers in the short term. The urban structure therefore needs to have the capacity for increasing density over time, without requiring wholesale demolition and redevelopment with the accompanying waste of resources and social dislocation.

Transit Oriented Development (TOD): local and regional dimensions

The notion of transit oriented development (TOD) combines key ideas from the disciplines of urban design, transport planning and economics. A TOD is a compact, mixed-use community, centred around a transit station that, by design and density, encourages residents, workers, and shoppers to drive less, and walk and use public transport more often (Bernick and Cervero 1997). The core of a TOD extends for about 400m (five minutes' walk) from the station. Ideally, the community's main civic buildings and spaces, and retail functions, are located adjacent to the station, creating a focus for local identity and community gatherings. Densities and housing types accommodate a range of demographic types and lifecycle stages, and streets are well connected to encourage walking.

While the physical aspects of a TOD are crucial, TODs also have important social and economic dimensions. These include the ability to accommodate a broad socioeconomic demographic, a strong sense of place, and more prosperous settings for local businesses and services with larger numbers of patrons within a short walk or viable transit ride (Bernick and Cervero 1997:6). Economic benefits include higher property values and commercial rents, higher rate and tax receipts for governments, opportunities for joint development and leasing of station area concessions.

Calthorpe's (1993) diagrammatic representation of a TOD (Figure 2) is well known in planning and development circles. However, Calthorpe has always promoted his idea as a regional urban network of TODs interconnected by effective and viable rapid transit (Calthorpe and Fulton 2001). Figure 3 reproduces Newman and Kenworthy's

(1999) more sophisticated multi-dimensional depiction of a regional urban network of TODs. This diagram directly places "knowledge nodes" and "health hubs" (OUM 2005b) at multiple highly accessible points of the TOD network.

Global city villages and the creative class

The change to an Information City economy (Newman, no date, p2) is accelerating the obsolescence of land use zoning, due to the blurring of exclusive categories such as home/work, city/suburb and full-time/part-time employment. These new conditions raise the need for "the development of urban centres for the face-to-face, creative development of knowledge-based services" (Newman, nd, p4). This "village-isation" of cities means that urban extensions are no longer envisioned as merely dormitory suburbs of exclusively residential development for a specific demographic group.

TOD, with its mixed use, housing diversity and walkable streets, is regarded as desirable by the "creative class" who are the key knowledge economy workers. The "global city villages" Newman (nd) advocates would be based around the urban design qualities and urban infrastructure associated with the Global City, including:

- information/knowledge economy employment nodes;
- mixed use centres;
- high quality public places enabling civil society and economic networks to operate;
- high quality, high frequency public transport;
- higher density residential development around the centre; and
- a range of housing affordability levels (Newman, nd).²

Worldwide trends towards the development of specialist functions at each regional centre/node, work against urban sustainability, due to the generation of car trips between such specialist nodes spread across the city region (Simmonds and Hack 2000). Over-specialisation could also restrict an area's ability to adjust to changing economic conditions.

Hack (2000:191) points out that it is impossible for planners to achieve regional sustainability through focusing their attention solely on the regionwide issues, or by trying to spread their efforts evenly throughout the region. He advocates, instead, a focus on "the detailed planning and coordination necessary in critical development areas" (ibid). Greenfield development areas, if in regionally strategic locations, may provide a key opportunity to contribute to reduced car dependency, the health benefits of walkability, local employment development, affordable housing for knowledge workers and other service workers.

² Affordable housing housing models include a range of community housing types (Productivity Commission 2005), and innovative tenure and financing methods such as those described by Kobus Mentz at the Urban Design Forum conference in Brisbane in 2006.

PLANNING CONTEXT IN RELATION TO SUSTAINABLE URBAN SETTLEMENT PATTERNS

Two significant recent regional and local planning documents provide a statutory context for consideration of the expansion of Sippy Downs by the development of the Palmview site: the SEQRP and the draft Caloundra LGMS. The SEQRP and draft LGMS are largely consistent with the urban sustainability theory discussed in the literature review above.

South East Queensland Regional Plan 2005-2026 (SEQRP)

The SEQRP provides a detailed statutory prescription for a sustainable region in 2026. These characteristics are quoted here in full, because of their consistency with the urban sustainability literature:

- compact urban forms that minimise impacts on natural resources and environmental values;
- low levels of water and energy consumption and waste regeneration, and high levels of reuse of natural resources and waste products;
- minimal physical, chemical, waste and nutrient impacts on the natural environment;
- buildings that are designed and oriented to maximise climatic benefits and reduce the demand for energy;
- a well-protected system of wildlife habitats and open space;
- well-designed activity centres focused around public transport hubs;
- efficient infrastructure and well-utilised public transport;
- high levels of accessibility to activities and services through transport and communications systems;
- vibrant communities with a strong sense of place and local identity;
- healthy, safe communities and high levels of physical activity;
- respect for diversity and cultural heritage; and
- a diversified and dynamic economy providing local employment opportunities. (OUM 2005b:23)

The potential for the 855 hectare Palmview FIA, to contribute to a sustainable settlement pattern for Caloundra City and the Sunshine Coast subregion, must be determined in the context of these desired characteristics. Desired regional outcome 8 (DRO 8) is "a compact and sustainable pattern of well-planned communities supported by a network of accessible and convenient centres close to residential areas" (OUM 2005b:60).

Sippy Downs (in Maroochy Shire) is designated as one of the Sunshine Coast's six Major Regional Activity Centres (along with Caloundra, Kawana Waters, Beerwah, Nambour and Noosa), while Maroochydore is designated the Principal Activity Centre for the Sunshine Coast (p73). It is therefore arguable that Palmview FIA should support the development of the Sippy Downs Major Centre, and Palmview's own local centre/s should be subsidiary to Sippy Downs.

Of 13 designated "knowledge-based" economic centres in SEQ, Sippy Downs is the only one designated in the Sunshine Coast subregion (p88). Sippy Downs is therefore critical to the participation of the Sunshine Coast in moves towards SEQ, as a whole, developing a regional network of "knowledge nodes". Realisation of Sippy Downs'

status as a knowledge node could be positively influenced by supportive development of the adjacent Palmview FIA.

TOD is the SEQRP's major mechanism for integrating development with transport infrastructure, community services and employment. Policy 8.7.5 requires that suitable greenfield sites be developed as integrated communities with appropriate connections to surrounding communities. If Palmview is to include lower order transit oriented centres to complement the Sippy Downs Major Centre, these "transit oriented communities" would be expected to achieve residential densities of 30-80 dwellings per hectare (OUM 2005b:75, 77).³ Transit oriented communities are defined in the SEQRP as "mixed-use residential and commercial areas, designed to maximise the efficient use of land through high levels of access to public transport" (p134).

Achievement of TOD in Sippy-Palmview will be highly dependent upon the provision of appropriate transit links to the urbanised coastal strip and the committed CAMCOS public transport route. Individually, CAMCOS and the University constitute two of the major sustainability elements of the Plan, but unless they are linked, sustainability outcomes will be limited. SEQIPP commits to "a quality bus system between Caloundra and Maroochydore" by 2016, as well as improved services and connections to USC (OUM 2005a:19,21). This link will be necessary in order to realise the sustainability potential of the CAMCOS infrastructure and the existing and proposed public and private investment at Sippy Downs.

Adaptability is highlighted in the Regional Plan's TOD design principles, so that built form is sufficiently robust and flexible to allow adaptation or redevelopment over time "to a variety of uses, increased densities or increased employment intensities" (OUM 2005b:77). Given that the public transport rollout in the Infrastructure Program is scheduled to cover periods of 10-20 years, such adaptability will be extremely important to the ultimate achievement of a sustainable settlement pattern.

Draft Caloundra Local Growth Management Strategy (LGMS)

Consistent with the SEQRP's growth targets (OUM 2005b:66), CCC's Draft LGMS plans to accommodate 76,000 new residents by 2026, in addition to the existing citywide population of 92,000. This will require around 34,750 new dwellings, including 8,200 infill dwellings, by 2026 (CCC 2007). The Draft LGMS predicts that 25,000 new jobs will be needed to service the population growth (ibid). This means new greenfields development is important to the future of Caloundra and the region. The Draft LGMS designates the Palmview site as one of two New Greenfield (Major Development) Areas. The other one is a much larger area at Caloundra South, straddling two proposed stations on the CAMCOS line.

While Caloundra South has the benefit of direct public transport connections to Brisbane, Caloundra and Maroochydore via the CAMCOS line, Palmview benefits from proximity to the emerging designated major centre and knowledge node of Sippy Downs, as well as the regional hospital at Kawana.

³ Densities proposed in CCC's draft LGMS are at the lower end of this range, as discussed later in this paper.

For the Palmview site, the "development intent" of the Draft LGMS is for 390 hectares of the 855 hectare site to be developed as a "world class master planned transit oriented community, accommodating an ultimate population of 17,000 people in up to 8,000 dwellings" (CCC 2007:111). The Draft LGMS prioritises environmental conservation; sustainable energy, water and waste management infrastructure; integrated bus connections to nearby employment centres and the Kawana CAMCOS rail station; a district activity centre meeting *some* employment needs; neighbourhoods that foster community; and high quality urban design highlighting regional distinctiveness (ibid, pp111-112).

These priorities arguably address urban sustainability in all its dimensions: ecological, social, economic and cultural. CCC is concerned to maintain and enhance riparian biodiversity corridors and connectivity of ecosystems. Ultimately, however, determination of a sustainable development approach for Palmview will depend on a balancing of the natural environmental dimension with the economic and social dimensions of urban sustainability, both of which are also important to the Council. The Draft LGMS sets out 20 detailed "overall outcomes" consistent with the prioritised development intent statements.

As can be seen in the extract from the Draft LGMS in Figure 4, the Council's vision for Palmview supports the SEQRP by proposing a Transit Oriented Community with a district centre surrounded by "medium density" and "mixed density" housing, and with an adjacent "Industry and Enterprise Area" capable of complementing the Sippy Downs Knowledge Node and the Kawana Health Hub. Public and active transport corridor links to both major centres are also indicated.

STRENGTHENING REGIONAL SUSTAINABILITY OUTCOMES BY LINKING THE KNOWLEDGE NODE AND HEALTH HUB

Regionally strategic benefits of the Palmview site include the proximity of one kilometre to the USC and 1.6 kilometres to the emerging Sippy Downs town centre, both of which are at the heart of the designated Sippy Downs Major Regional Activity Centre and knowledge node. The eastern end of the site is as close as one kilometre to the CAMCOS public transport route proposed by the *SEQ Infrastructure Plan and Program* (SEQIPP) (OUM 2005a), while the bulk of the site is approximately five kilometres from CAMCOS. The Sunshine Coast Regional Hospital is proposed to be adjacent to CAMCOS at Kawana Waters, one kilometre east of the Palmview site.

Leaving aside the political element, the State Government's choices for siting the regional hospital provide an illustration of how the available regional sustainability options may fall short of the ideals described in the theory and in Figures 2 and 3. In this case, the Government's 2006 choices were constrained by the 1990s decisions that had already separated USC from CAMCOS. The Government decided against one sustainability-supportive option of co-locating the hospital with USC at the knowledge node of Sippy Downs. Nevertheless, the decision to locate the regional hospital at Kawana, has major sustainability benefits by linking the hospital - an important social facility and major workplace - to the CAMCOS line and the adjacent Kawana Waters Town Centre.

To capitalise on potential synergies between Sippy Downs knowledge node and the health hub at Kawana, a quality public transport connection between the two is essential. The Draft LGMS indicates this connection via the Palmview FIA – though perhaps too tentatively. Such a move will support sustainable outcomes by enabling Palmview to develop support services for both the knowledge node and health hub. This potential needs to be built into the LGMS; the current draft downplays the economic role of the Palmview town centre to a mainly local role. This would mean that Palmview remains primarily a dormitory suburb with economic activity below the level required to service the local population's employment needs.

The opportunity for Palmview to play an active subregional role, supporting and linking the Sippy Downs knowledge node and the Kawana health hub, thus receives only minimal support from the current draft LGMS. Palmview needs to be seen as supportive of both these specialised centres, thereby offsetting the potential for the two major nodes to suffer the disadvantages of over-specialisation noted earlier.

If the designated Palmview Industry and Enterprise Area were to be enlarged to an area equivalent to that nominated at Kawana, and connected directly to an expanded Palmview District Activity Centre, it would improve the internal synergies of the Palmview development, while also maximising external synergies with and between the adjacent major centres at Sippy Downs and Kawana. It will, of course, be necessary to ensure at every step that Palmview is complementary rather than in direct competition with the major nodes, otherwise the sustainability potential of all three places, and the subregion as a whole, will be reduced. The restrictions imposed by the Draft LGMS on Palmview's economic function are, in planning terms, a quite reasonable attempt to guard against such an outcome. Taking a broader approach to the means for achieving sustainable development, regulatory mechanisms need to be combined with partnership approaches with the developers and operators of the knowledge node and health hub. Important parties include the two councils (Caloundra and Maroochy), USC, Queensland Health, and the developers and current land owners.

The ISR (2006) study established that there is support within the Sunshine Coast Knowledge Precinct for Palmview to be developed in a way that actively complements Sippy Downs. Palmview affords a suitable location for an Enterprise Centre to provide "3rd stage" premises supporting and linking to the "1st stage" business development functions of the Innovation Centre and "2nd stage" Accelerator at Sippy Downs (ISR 2006). Such a centre would contain flexible spaces for light industry and enterprise, and be located adjacent to Palmview's main town centre, thereby contributing to its economic viability and providing centrally located workplaces and opportunities for exchange. An Enterprise Centre has potential to reinforce and diversify regional development anchors and infrastructure in both Sippy Downs and Kawana.

In addition, Palmview's development could support Sippy Downs and Kawana by:

• having the integrated urban village form of development that attracts the kinds of workers and residents who can connect the region to the global knowledge economy (ISR 2006);

- reducing the subregion's car dependency by concentrating employment along the bus connection linking Sippy Downs to CAMCOS and the regional hospital at Kawana;
- offering the attractive affordable housing critical for the students and creative workers essential to Sippy Downs, and for the health workers and knowledge workers associated with the regional health hub at Kawana.

Fine-tuning the mandatory development parameters of the LGMS

The "mandatory development parameters" of the draft LGMS (CCC 2007:114-115), for the Palmview FIA, include:

- minimum residential densities (20 d/ha overall; 40 d/ha within 800m of the district centre; and 25 dh/ha within 400m of local centres);⁴
- maximum retail and commercial GFA of 4,000 m2 by 2026 and 16,000m2 total by 2035;
- medium and long term development timing, specified as 2018-2035.

Sustainability arguments are made for these parameters throughout the draft LGMS. The commercial capacity of developers to work within these parameters is a further sustainability hurdle for the draft LGMS; a hurdle that would be best overcome prior to its formal adoption. A *Sippy Downs Sustainable Development Authority* (see below) may well be the best way to:

- resolve potential conflict between these ideal parameters and the commercial realities of the development industry (particularly the holding costs between now and 2018-2035);
- ensure that development at Palmview complements and supports rather than competing with and diluting the development intensity of the Sippy Downs Major Centre.

There has been much general discussion of the challenge of achieving higher densities in the early stages of greenfield development where there is not a major attraction such as water frontage, spectacular views or excellent accessibility and local services.⁵ The potential attraction for the LGMS densities at Palmview would be the presence of a thriving enterprise area, integrated locally into the district centre, functionally linked to both the Sippy Downs' knowledge node and the Kawana health hub, and connected to both by excellent active transport. The draft LGMS restrictions on the employment base of Palmview may need to be reviewed if the densities are to be achieved. The recommended development corporation offers a mechanism for resolving these important matters in a way that benefits the sustainability of Palmview, Sippy Downs, Kawana and the Sunshine Coast subregion.

⁴ The majority of the developable 390 hectares (LGMS p111) would appear to be within 800m of the district centre.

⁵ For example, Guy Gibson, current Vice-President of the Property Council of Australia (Qld) stressed this point, and competition from cheaper low density product, at the PIA seminar on regional planning for SEQ held at QUT in 2005. Others have made the same point in the media.

Sustainable governance: balancing development between centres

The SEQRP (OUM 2005b:76) provides for the establishment of locally focused TOD Taskforces to ensure that key transit nodes are supported by transit oriented development. In the case of greater Sippy Downs, including Palmview, there is a strong argument for establishing a statutory taskforce or development authority to ensure that Sippy Downs and Palmview are developed as an exemplar of sustainable urban development in the SEQ region. Such integration is essential if sustainable urban outcomes are to result from the existing and committed investments in USC, Sippy Downs Town Centre, CAMCOS, the Kawana hospital, and other infrastructure.

There is a major opportunity for Investa, other major land owners, and USC to play a leading role in this integration. Sippy Downs, including Palmview, should be the focus of a '*Sippy Downs Sustainable Development Authority*'⁶ using an expansion of the TOD Taskforce provisions of the SEQ Regional Plan (see OUM 2005b:76).

Development authorities and corporations, whether or not operating across council boundaries, have been effective in coordinating planning and development in key urban locations, eg the Sydney Harbour Foreshore Authority, the East Perth Redevelopment Authority, Brisbane's South Bank Corporation and the Urban Renewal Taskforce in its 1992-2005 structure.

CONCLUSION

The Sippy Downs area exemplifies the challenges to sustainable regional urban form that are experienced in many growing regions. There is no such thing as a blank canvas for the development of settled areas, even those that are only recently developed and still sparsely settled. Planning for sustainable urban development takes place in an environment constrained by prior decisions and existing development patterns.

Sippy Downs is a critical development area for Caloundra and Maroochy Councils, for the Sunshine Coast and for South East Queensland. Sustainable outcomes at the local level of both Sippy Downs - Palmview will make a major contribution to the achievement of regional sustainability in SEQ. Expanding Sippy Downs through the appropriate development of greenfield land at Palmview offers benefits in terms of social, cultural and ecological sustainability. The strategic location of Palmview, between the Sunshine Coast's designated Knowledge Node (Sippy Downs) and Health Hub (Kawana), provides an opportunity for complementary facilities within the Palmview town centre to support the economic, social and cultural functions of the two major centres, and to add to the viability of active transport linkages between them.

A significant sustainability challenge will be the early resolution of potential conflicts between the developers' and CCC's positions on Palmview's densities, employment base and development staging. The formation of a Sippy Downs Sustainable

⁶ The SDSDA would primarily be charged with ensuring that Sippy Downs Town Centre achieves the knowledge node and major centre outcomes envisioned by the SEQRP and by USC and other interested parties.

Development Authority would serve to resolve these critical matters in a way that supports regional sustainability.

This paper provides support for the argument that significant moves toward the sustainable development patterns advocated in the literature are possible for greenfield development in a growing city region. SEQRP and the Caloundra draft LGMS broadly support the theoretical preference for compact cities amenable to walking and other forms of active transport. The paper has highlighted the benefits of developing connected networks of knowledge based TOD nodes, even where the starting position falls short of the ideals presented in the theory. A sustainable regional urban structure has been argued as crucial to the long term adaptability of the city region, for example to gradual or sudden changes from car-dominant transport.

In addition to the broader contributions of the research, it is also hoped that the paper will inform current decision making by Caloundra City Council, the adjoining Maroochy Shire Council, the forthcoming amalgamated Sunshine Coast Regional Council (Parliament of Queensland 2007), the State Government, local communities, major landholders and developers regarding the future expansion and development of this area.

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Figure 1: Aerial view of Sippy Downs, with the Investa Palmview land outlined (image courtesy Investa Property Group)



Figure 2: Transit Oriented Development (TOD) (Calthorpe 1993, as reproduced in Barton 2000:133)

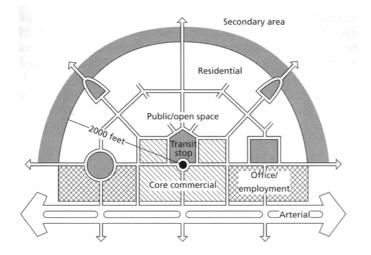


Figure 3: TOD as a regional network – Newman and Kenworthy's (1999:185) conceptual plan for the future Nodal/Information City.

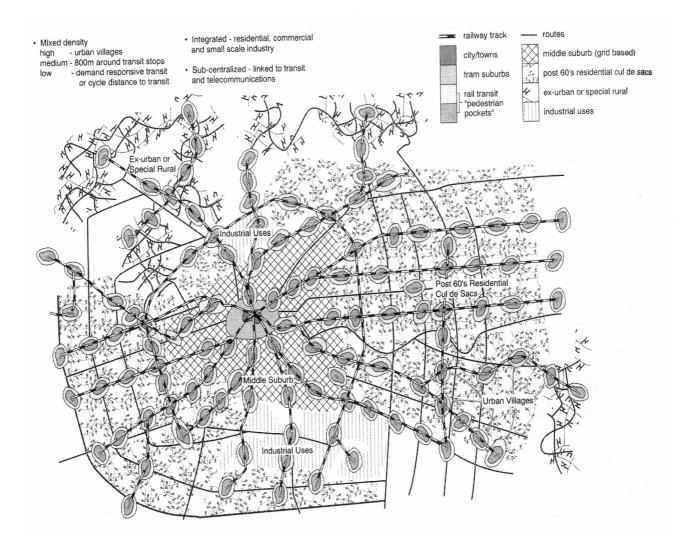


Figure 4: Section of LGMS map showing transit oriented Palmview linked to Sippy Downs and Kawana health hub (source: CCC 2007)

