Murdoch
Specialised Activity Centre
Structure Plan

2. Structure plan strategy

2. Structure plan strategy

The strategic direction for the activity centre, from spatial planning through to key implementation actions, was defined at the vision and goal setting stage during the project consultation. A number of future scenarios for Murdoch as a major new specialised centre were discussed during this phase.

2.1 Future scenarios for Murdoch Specialised Activity Centre

To help establish the size of place that is being planned for, employment and population profiling for Murdoch has been carried out to inform the structure plan strategy. This builds on growth estimates and targets set by the State Government in *Directions 2031 and Beyond* and metropolitan sub-regional planning strategies. Figure 2.01 reflects an exercise to identify the current population within the activity centre and provide a guide to 20-year and longer-term (optimal) growth. This overview of the activity centre population has been informed by forward planning figures (predominantly up to 10 years ahead) supplied by individual institutions in the area.

In the short term, the significant changes in the activity centre's population in the next five years will arise from the first phase development of the Mixed Use Precinct and the opening of Fiona Stanley Hospital, which will double the present workforce. Beyond this, the growth scenarios are guided by the development expectations of the major institutions and the broader 20-year forecasting (to 2031) carried out at State and Local Government planning levels.

For the longer-term picture (beyond 2031), an optimal scenario has been created to sit within the strategic planning context of *Directions 2031* but with cognisance of the revised population growth estimates for the Perth metropolitan area as set out in the State Government's consultation document Perth at 3.5 Million. This document looks at a notional 40-year time frame of 2050 and presents a view of the capital's growth potential based on significantly increased scale and rate of population growth. For this reason, in this structure plan, a longer-term horizon has been considered, representative of a broader vision and optimal size of Murdoch as potentially becoming one of Perth's largest activity centres outside the CBD.

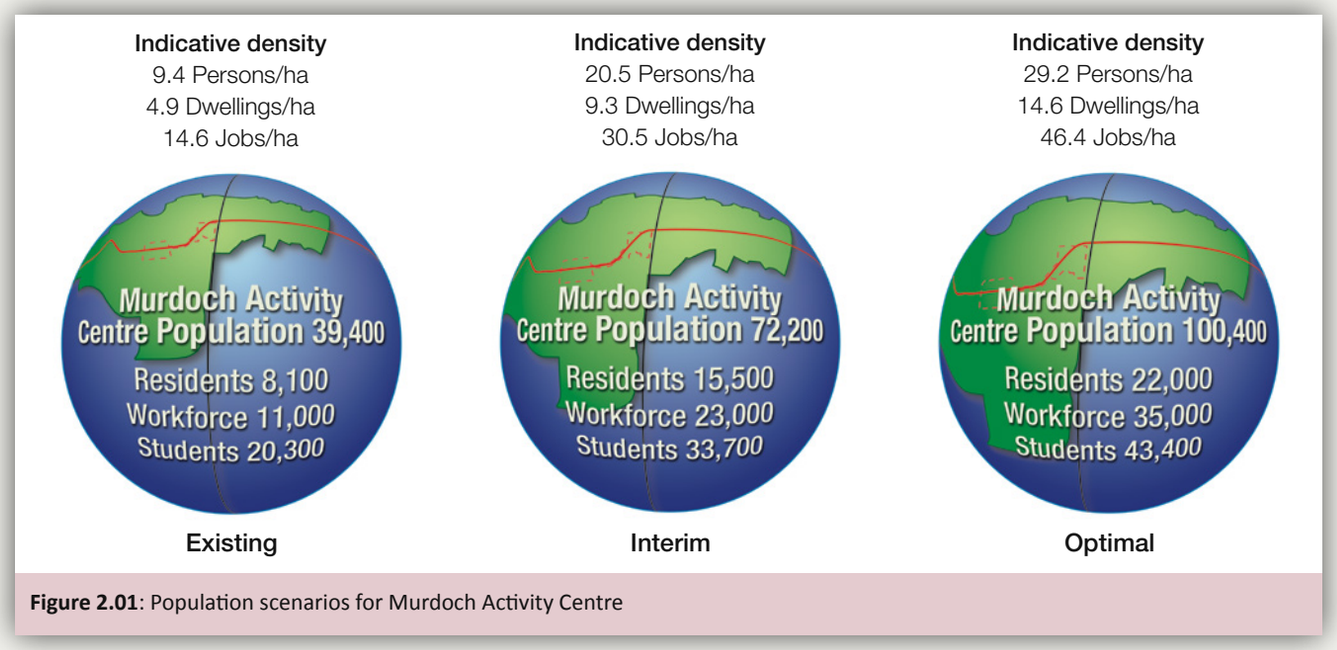

Figure 2.01: Population scenarios for Murdoch Activity Centre

2.2 Profile of a specialised activity centre

The existing activity centres policy (*State Planning Policy 4.2*) for the Perth and Peel metropolitan region denotes five specialised activity centres, including Murdoch, which sit outside the hierarchy of population, retail and business based centres. Perth CBD and traditional city centres such as Fremantle (a strategic metropolitan centre) are significant employment zones within this network of centres.

However, strategic metropolitan centres and lower centres in the hierarchy are generally predicated on population based provision of services and therefore have generally accounted for the demand required by the local population. Even with a significant increase in the population of Perth, the economic multiplication factor for these consumer based centres will not provide as great an opportunity as other centres with a higher knowledge and localisation base, such as the specialised centres.

Of the specialised centres, those with the opportunity to achieve significant economic growth are ones with high levels of knowledge based employment but with an underdeveloped urbanisation economy (Figures 2.02 and 2.03). Urbanisation of a place occurs around the economic drivers by providing the functions necessary to support the localised workforce and population.

Table 2-1: Activity centre profile by employment type

Activity centre type	Employment type by volume*			
	KIEO	EO	KICS	CS
CBD	high-med	-	high	high
Murdoch specialised	med	-	high	high
Strategic metropolitan	low	-	med	high
Secondary	-	-	med-low	high
District	-	-	low	high
Neighbourhood	-	-	low	
Specialised – tertiary education	high-med	-	high-med	low
Specialised – airports and ports	low	high	med-low	low
Specialised – manufacturing	low	high	-	low

*High/med/low is described by an indicative proportion of the number of jobs by type relative to other employment types.

Abbreviations are as follows:

KIEO – Knowledge-intensive export-oriented

EO – Export-oriented

KICS – Knowledge-intensive consumer services

CS – Consumer services

(Source: Pracsys)

Figure 2.02: St John of God Hospital – specialised services

Figure 2.03: Murdoch University – knowledge based activity

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In terms of the five specialised centres, Jandakot Airport and Perth Airport are manufacturing based centres boasting a significant volume of export-oriented jobs but a low intensity of employment and adverse amenity, which inhibit their evolution into more significant urban centres. Accordingly, it is the university based specialised centres, with relationships to a technology park or a major tertiary hospital, which have the greatest potential to expand and achieve an elevated status in the hierarchy of centres.

In this context, the key characteristics which would define evolution into a strategically significant centre of employment are:

- intensity and quality of employment;
- access to high quality transport;
- diversity of activities;
- ability to deliver and/or improve the performance of the above; and
- proximity and connections to other key activity centres and catchments.

As reflected in Table 2-2, Murdoch presents a rare opportunity to develop a more significant centre – see Figure 2.04) given the above criteria. In addition to the key anchor institutions, the absence of an urbanisation economy allows for a transformation to occur through the generation of significant supporting activity. Therefore, at State Government level, Murdoch should be considered for priority investment over other metropolitan activity centres to help provide new infrastructure, key services and other areas of strategic urban delivery. Measures to facilitate the development of the urbanisation economy at Murdoch will also be intrinsic to achieving its full potential.

2.3 Spatial associations within Murdoch Activity Centre

Spatial associations are the physical relationships between given activities. These associations are different to agglomerations because they relate to the spatial configuration rather than purely the existence of activities in an area.

In its current form the activity centre at Murdoch exists as a co-location of activities without any binding elements, which allow the anchor occupiers/tenants to relate to each other both in a physical and activity sense. Other than the proximity to transport infrastructure and historic availability of land, there is currently no rationale for the co-location of the localisation anchors (the academic and health institutions). Given the significant investment in the existing building infrastructure there is limited scope to relocate these anchors closer together to facilitate a greater spatial association. Therefore, in order to overcome the dislocation and lack of connectivity, the urban fabric which is formed around the localisation anchors will need to provide, not just the environment for complementary activities, but also logical connections between these activities.

Table 2-2: Specialised centre proposition

Activity centre	Employment type by volume*				Access to trunk transport infrastructure (freeway/railway)	Availability of vacant land in government ownership
	KIEO	EO	KICS	CS		
Murdoch	high	low	high	low	yes	yes
UWA/QEII	high	low	high	low	no	no
Bentley/Curtin	high	med	high	-	no	yes
Stirling	low	low	med	high	yes	no

*High/med/low is described by an indicative number of jobs by volume. (Source: Pracsys)

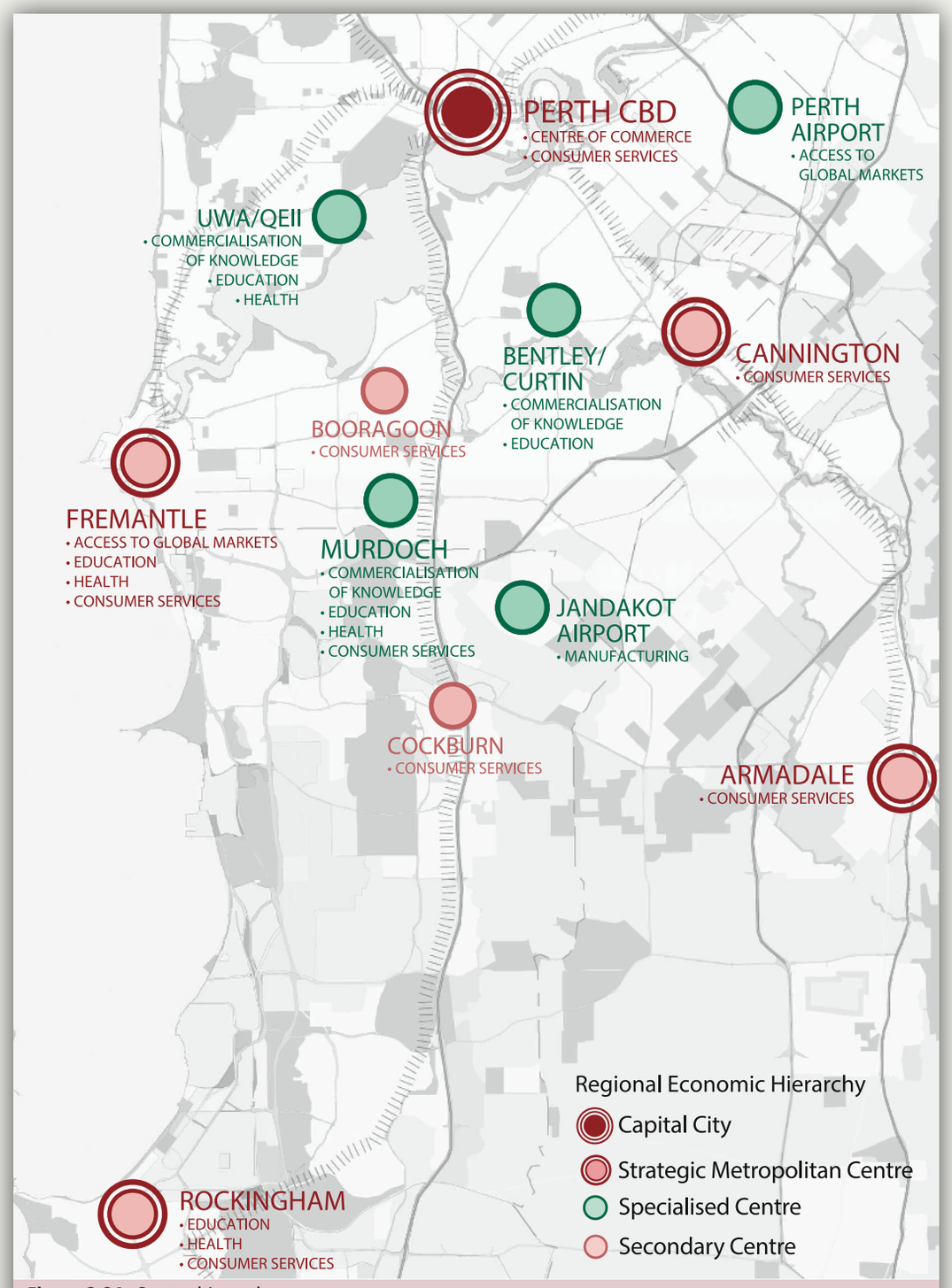


Figure 2.04: Centre hierarchy
(based on amended map from Directions 2031 and Beyond)

2. Structure plan strategy

It is proposed that the disconnection between the anchor users be resolved in Murdoch by providing a dual centered core which denotes two key meeting points between or adjacent to the anchors (Figure 2.05). These two new nodes will house the initial urbanisation functions and provide opportunity for interaction and incidental meetings between organisations which, in turn, will foster further economic expansion. One of the nodes is the currently planned mixed use precinct, with the second being a new centre referred to as Murdoch Square. Both nodes are situated on the axis of an active transit spine through the centre, connecting the anchor institutions and linking the new Murdoch Square to Murdoch Station.

Defining the activity centre around a dual centered core is founded on the principle of a centre composed of a linear series of nodes. Most importantly, it responds to the current situation where there is no interconnecting urban form between the key public institutions that are central to Murdoch – Murdoch University, Fiona Stanley Hospital and St John of God Hospital. Furthermore, the concept accords with the plans already being conceived by the University for the eastern part of its campus, which has been identified for potential development.

This 'eastern precinct' is well placed to act as a catalyst or stepping stone, being equidistant between the health and academic campuses. In effect, this location is the 'centre of gravity' in Murdoch between the two major activity drivers where significant economic localisation and urbanisation can occur. It offers scope to facilitate increased collaboration between all educational institutions, research centres and training facilities in the locality, including private and tertiary public hospitals, schools and technical colleges and a broad range of organisations across the University campus. Additionally, the availability and configuration of land within the eastern part of the University presents the possibility of designing and delivering the diverse, integrated and attractive urban environment which a major centre requires (Figure 2.06).

With respect to the proposed mixed use precinct, this node has been conceived as a transit-oriented development opportunity next to the rail/bus station. Considerable planning has already been committed to creating the mixed

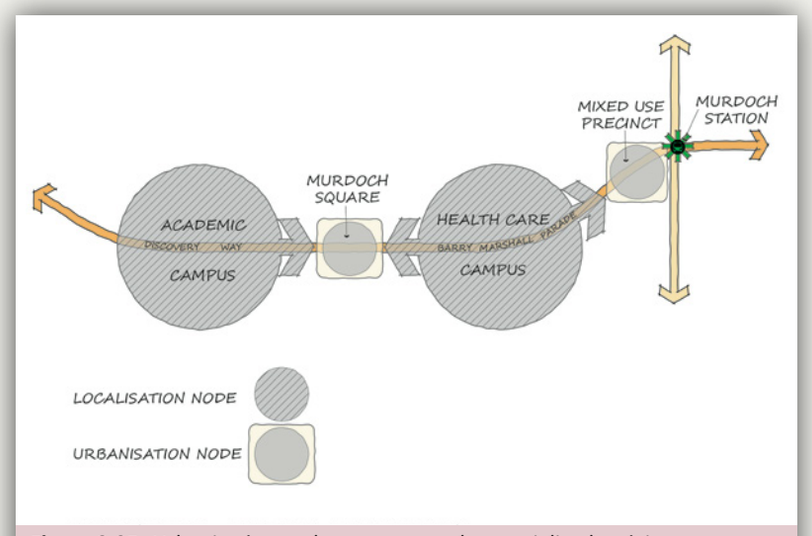


Figure 2.05: Urbanisation nodes to support the specialised activity (or localisation) nodes

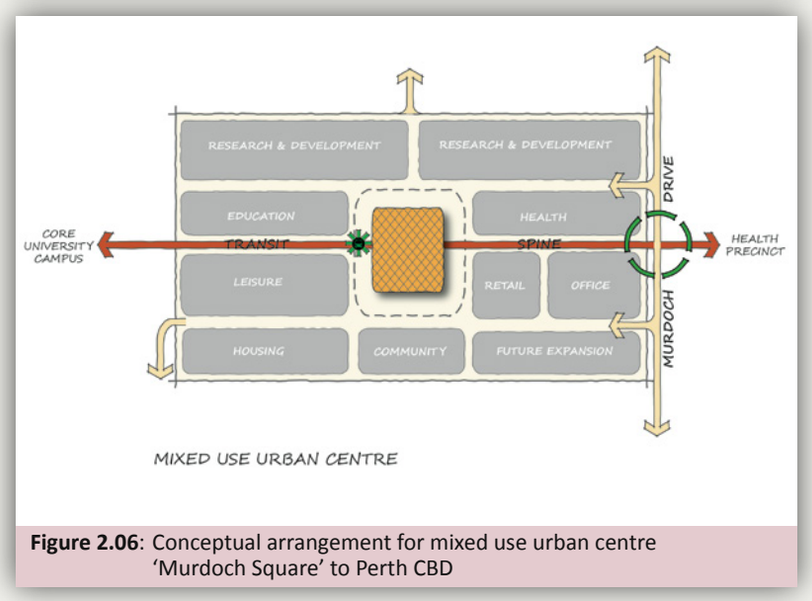


Figure 2.06: Conceptual arrangement for mixed use urban centre 'Murdoch Square' to Perth CBD

use precinct and it is therefore prudent to build on that investment. Indeed, the success of the precinct remains critical to the overall prospects of the activity centre, providing the setting for localisation and urbanisation in close proximity to the two hospitals.

However, this transit-oriented development should not be mistaken for being the natural centre of Murdoch. Its situation on the eastern side of the activity centre means that the mixed use precinct cannot integrate the major activity areas in more central and western locations. The proposed urban core, with Murdoch Square as a second mixed use node, can effect this integration across the centre, along the critical transit axis of Barry Marshall Parade and Discovery Way. Whilst it is recognised that the eastern part of the University campus is situated over a kilometre from the rail station, it is not unusual for a major town or city to have its passenger railway on the edge of its centre. Historically, this pattern developed in former industrial settlements such as Bendigo in Victoria or university towns like Cambridge in England where, today, shuttle buses provide a convenient service between the station and the centre (Figure 2.06).

Having regard to the Perth model, few stations on the Perth-Mandurah rail line are within the heart of activity or city centres. The rail line connecting Murdoch was developed within the Kwinana Freeway reserve. Its positioning means that stations are on the periphery of the settlements they serve. The rail line therefore acts as a major spine through its regional catchment, with bus services and park and ride facilities designed to collect and feed in passengers from surrounding centres and communities.

At Murdoch, it is envisaged that the heavy rail station will remain on the edge of the central activity area, with other transit services introduced to provide convenient connectivity into the centre and adjacent suburbs. As ped-shed (pedestrian catchment) analysis has shown, the station is largely severed from its local community by the road environment of South Street and the Kwinana Freeway slip roads. For this reason, without considerable restructuring of the freeway intersection to provide at-grade pedestrian connections to adjoining residential areas, significant development around Murdoch Station to transit oriented development principles is unlikely to occur. Only the south-west quadrant within the mixed use precinct is expected to see significant development in association with redevelopment or relocation of Public Transport Authority car parks.

The structure plan strategy meanwhile is that transit-oriented development within the overall activity centre is directed in a linear fashion along the high frequency transit corridor forming, in effect, a poly-linear centre of nodes (Figure 2.08).

Figure 2.07: Bendigo, Victoria - university town

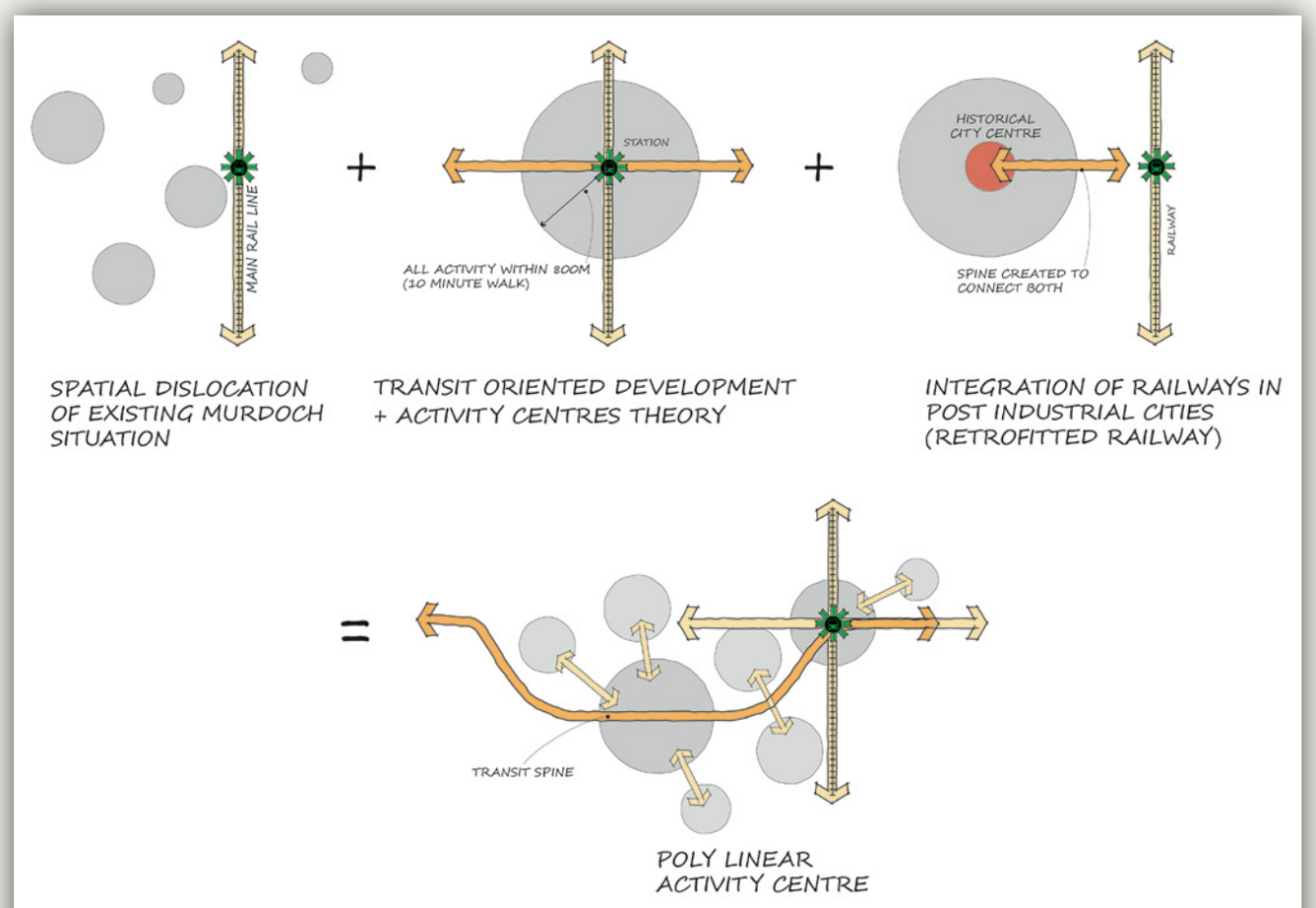


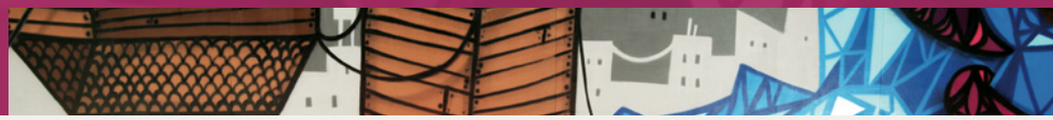
Figure 2.08: Relationship of centre to transit

2.4 Proposed spatial structure

The overall structure of the activity centre is defined by a core, a corridor and a frame (Figures 2.09–2.11). The intent of this structural hierarchy is to allow activity to be focused into key areas which maximise their diversity and intensity to create the appropriate localisation economies. A simple planning hierarchy will direct and support growth in a sustainable manner within the core, corridor and frame.

The core is comprised of the two primary urban nodes — the mixed use precinct and a new town centre at Murdoch Square — which interconnect the anchor components of this specialised activity centre, being the University and the two hospitals. As well as health, education and research uses, the core will support the elements required to make up an activity centre such as office/commercial, high-density residential and local catchment retail.

The core will become a hub for the community with the mixed use precinct and Murdoch Square providing excellent amenity and the shopping, dining and entertainment needs of a significant new workforce. Planning policy will prioritise development within the centre's core in preference to other parts of the activity centre, subject to urban form performance based tests.



The two primary nodes in the core are linked by an active transit spine which would evolve on the alignment of Barry Marshall Parade and Discovery Way as transport and public realm enhancements come forward. The dual centered core will therefore take shape as new development infills along the edges of this route over time.

The second tier in the structural hierarchy of the centre is an urban corridor. This is a linear zone across the activity centre which is focused around the high-frequency transit spine. It is a development corridor that extends beyond Barry Marshall Parade and Discovery Way, following South Street to the east of Murdoch rail station and west of Murdoch University's campus. The corridor boundary will be broadly defined by a 400 metre walkable catchment either side of the transit spine, representing a comfortable and convenient level of pedestrian accessibility within the Western Australian climate. The urban corridor extends outside of the defined activity centre boundary, forming part of a broader activity corridor centered on the South Street alignment.

Development within Murdoch that cannot be accommodated in the core will be directed to available land within the high accessibility corridor, thereby meeting sustainability principles for integration of transport with land-use planning. This approach will also support the intensity model outlined in Section 2.7, which

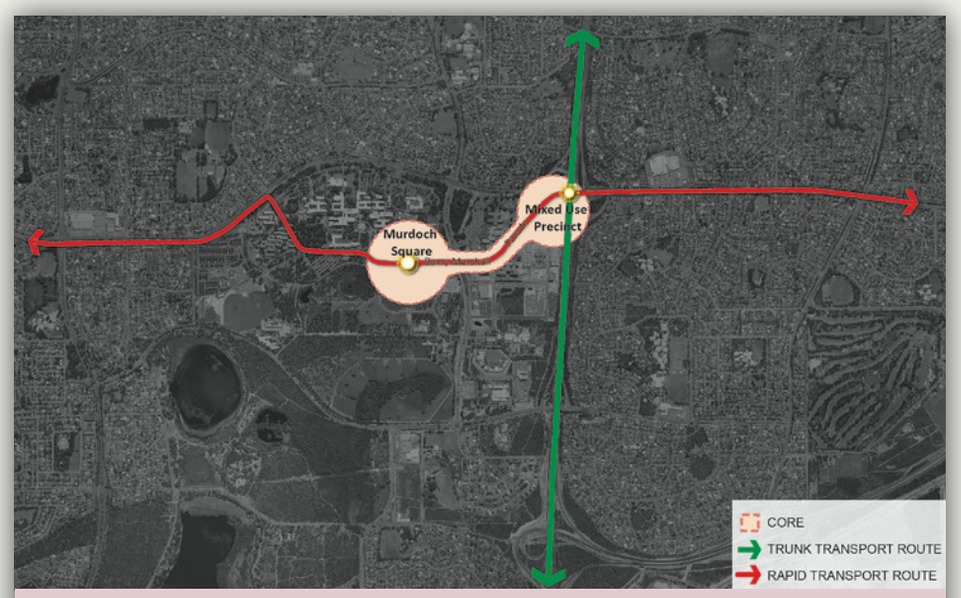


Figure 2.09: Urban core

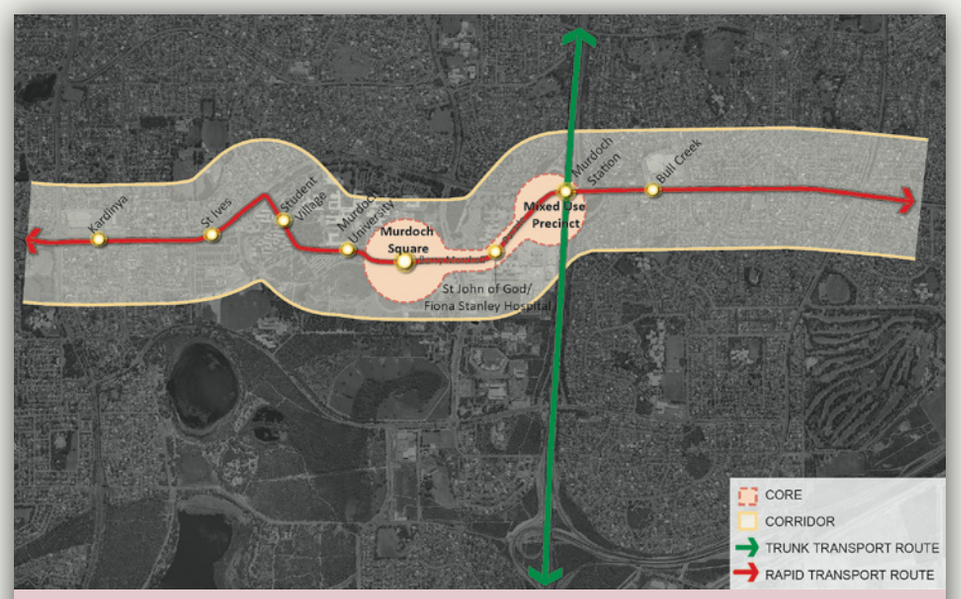


Figure 2.10: Urban corridor

2. Structure plan strategy

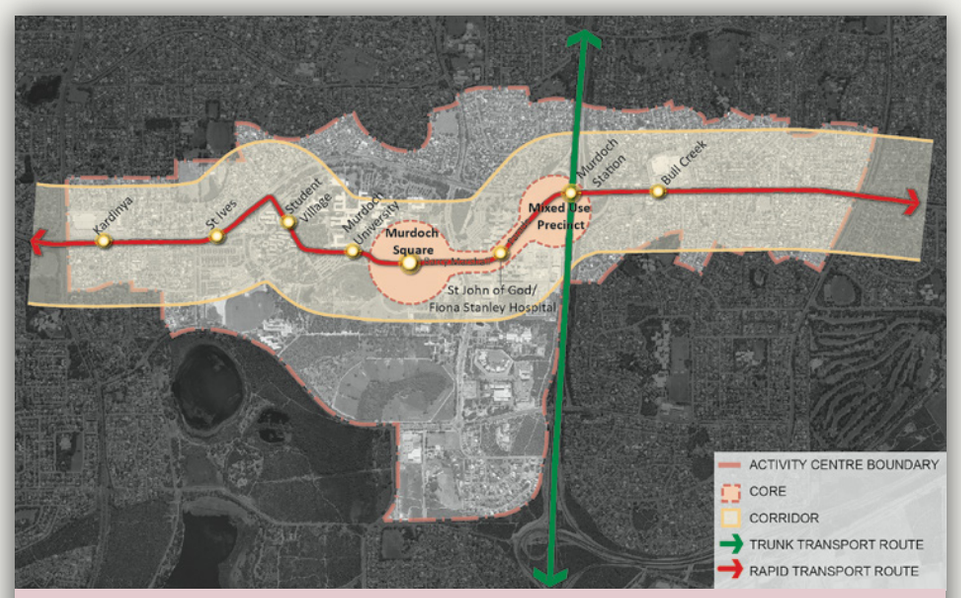


Figure 2.11: Urban frame

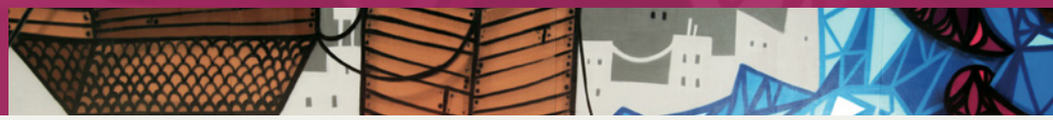
underpins growth of the core and the overall concept for this centre. The corridor will not simply house major employment sites, such as the hospitals, adjacent to the urban core. It will also contain other elements of the supporting urbanisation economy that will be attracted to the location, as well as new forms of housing within a convenient 400 metre walk of frequent transit services.

The activity centre's frame consists of the wider Murdoch landscape north and south of the transit corridor, which includes significant natural habitat, land with long-term development potential and suburban and other built-up areas which have lower accessibility to the planned transit zone.

The frame extends to the southern reaches of the study area around Farrington Road, taking in land subject to future road configurations linking to the proposed Roe Highway Extension and Kwinana Freeway and also low lying areas of Murdoch's natural environmental setting, which are both distinctive and important to the ecology of the wider Beeliar area. As such, development within the frame will be limited in the medium term and particularly within undeveloped greenfield areas. Development within this wider frame should be subject to testing against sustainability criteria and proposals which fail the tests will, by default, be considered unsustainable development and not compatible with the overall concept of a compact and intense urban centre at Murdoch.

In preparing for the next phases of the planning process for the activity centre, priority should be to establish Murdoch Square and the mixed use precinct as complementary urbanisation nodes. This needs to be supported by guidelines that initially direct or allocate activity to each part of the core, while allowing for natural market competition.

The concept of Murdoch Square as a new nodal centre within the activity centre is one of the key proposals of this structure plan. Establishment of Murdoch Square is important, not only to embrace the notion of 'town and gown' within the University campus, but also to demonstrate a commitment at the outset from the University, State Government, local government and partners, to long-term development of Murdoch as a multi-centred and integrated urban core (Figure 2.12).



2.5 Landscape structure and legibility

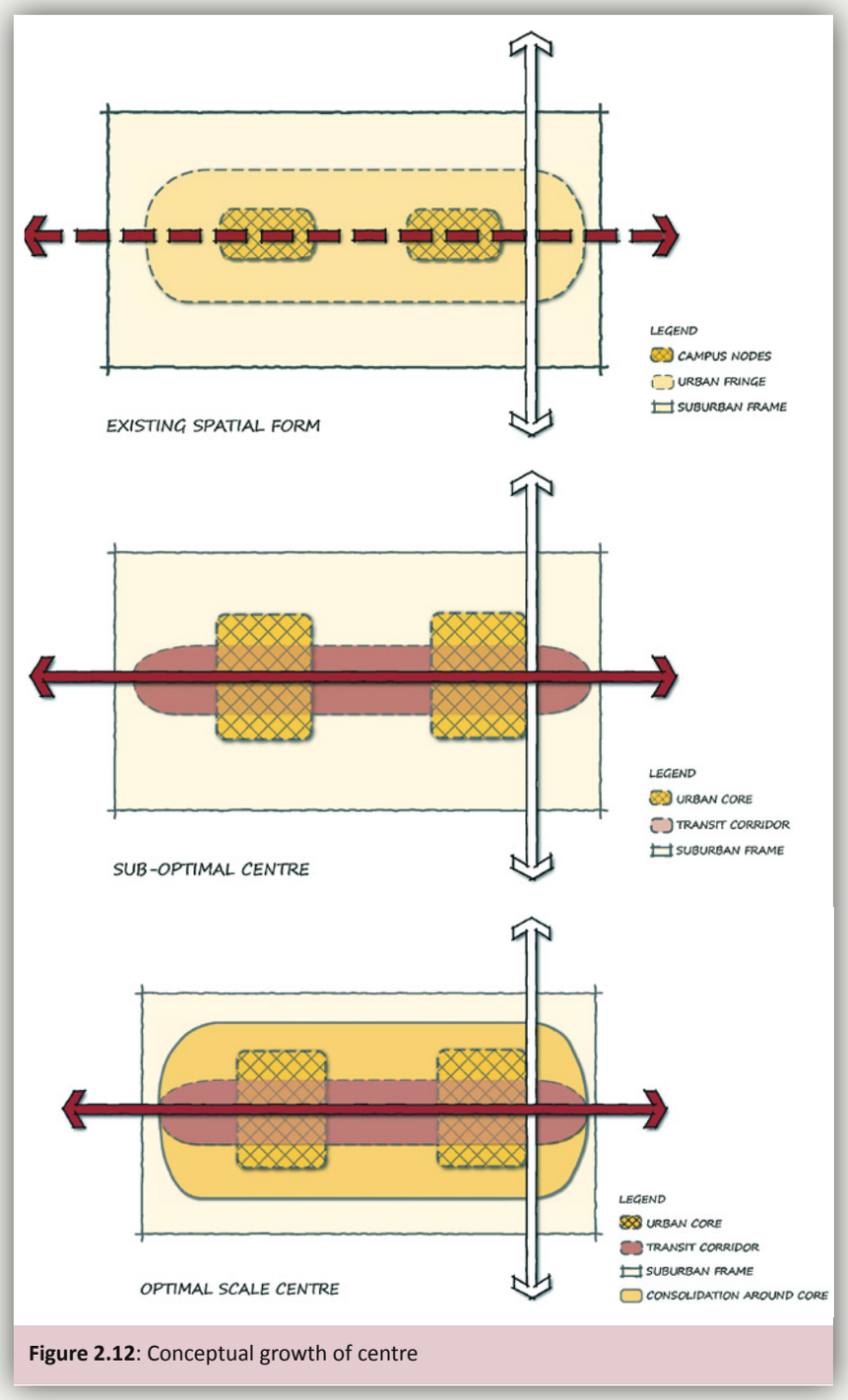


Figure 2.12: Conceptual growth of centre

The existing natural environment is the most significant large-scale spatial determinant for the Murdoch Activity Centre structure plan. Respecting the broader landscape setting, including both visual and ecological values will provide the centre with the high level of amenity required for successful high-density activity. Retaining and enhancing the existing natural landscape assets will be the most cost effective way to develop a unique visual amenity, and an identity and sense of place that will distinguish Murdoch Activity Centre from the other activity centres. While this amenity will add value for all the mixed use activities it is particularly important for attracting a broader demographic to proposed medium and high-density residential development. In addition, this structure provides for the inclusion of high value natural amenity and ecological resources to protect and rehabilitate ecological and hydrological systems however, fire management will need to be taken into account during local structure planning for fire prone areas.

The existing topography, wetlands, remnant vegetation, public open space and hydrology have shaped the structure plan by determining a broad landscape framework for development. The natural grain of the land, and accordingly the drainage flow, is from north to south as gradients fall gradually towards North Lake and Bibra Lake. Over time as Murdoch has become more developed and the urban area has intruded into agricultural domain, this channel has eroded as vegetation (and therefore wildlife) has been cleared. The introduction of extensive urban surfaces where once natural ground cover provided for passive water flow and drainage through

the landscape, has affected the ecological balance of the area with unreplenished groundwater sources falling to low levels.

In order to attempt to repair this critical north-south link within the local ecosystem, a landscape led design response has been adopted in the structure plan. This recognises that there are competing urban and natural landscapes within the activity centre, with the urban form largely set out on an east-west grain. Public transport proposals are set to reinforce this lateral grain via the South Street corridor diverting through the activity centre to Murdoch train station. The conceptual response is in the form of a green spine running not on a direct north-south alignment, but on a complementary rotated axis from north-west to south-east (Figures 2.13–2.14).

This east to west landscape corridor already contains a number of significant natural assets such as Chelodina Reserve and Melaleuca Swamp, and is also strengthened by man-made recreational features such as golf courses and the University's sports fields. In addition, it takes in remnant bush and other vegetation surrounding freeway interchanges and embankments which are valuable wildlife habitats. If enhanced and properly managed as an active urban fringe, this backbone can provide an enduring landscape setting for the wider activity centre, facilitate restoration of natural ecological and drainage flows from north to south and also provide new links between existing conservation reserves.

Sitting to the immediate south of the current urban extent of the activity centre, the spine can provide an appropriate transition between built and natural environments. There are a number of potential pathways from north to south through the urban area which can act as ecological tributaries feeding into this spinal channel, before distribution into the broader lakes system to the south. The

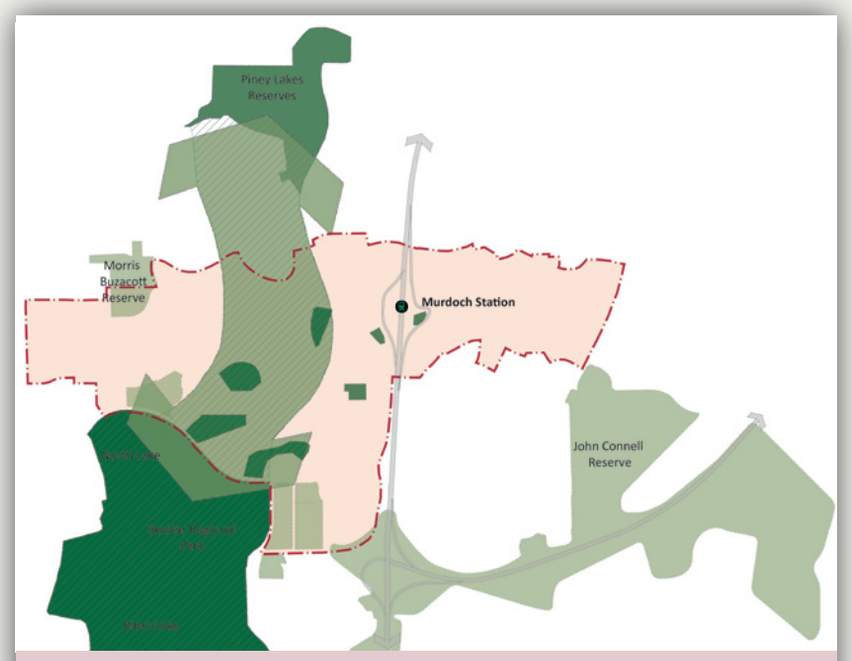


Figure 2.13: Development of landscape structure – north to south grain

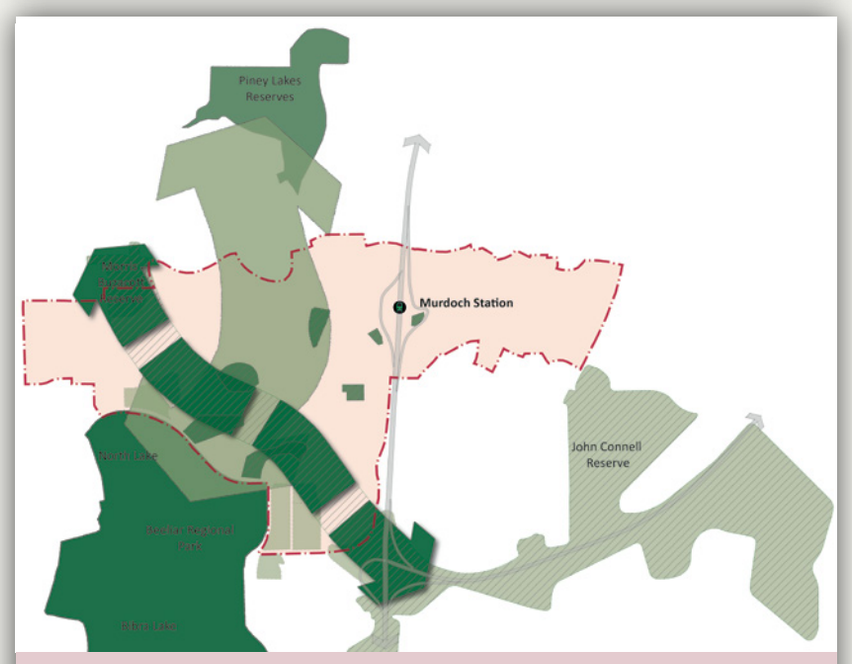


Figure 2.14: Development of landscape structure – east to west link

axis of Murdoch Drive and the existing open space corridor through the centre of the University campus (centred on Bush Court) can be enhanced to fulfil this role, providing strong legible landscape corridors. These prominent eco-routes could be supplemented with more passive systems, such as urban wetlands, that could be canalised or partially undergrounded through the more developed parts of the activity centre (Figure 2.15).

Looking to longer term growth options for the centre, the green spine also sits at a key interface with future development land to the south along Farrington Road. This is represented in the structural concept as a series of urban pods locking into either side of the 'backbone'.

It can be seen that the orientation of the green spine supports linear development to its north and south, which is in keeping with the transport planning approach of high frequency transit spines servicing dense walkable corridors. In this respect, future development along the Farrington Road axis could be supported on the basis of improvements to transport services. This would provide the activity centre with parallel growth axis based on transit corridors along Barry Marshall Parade/Discovery Way and Farrington Road. This landscape structure also provides clear boundaries to contain urban development to a moderate walking scale environment. Using high amenity open and green space to define precincts or neighbourhoods (rather than barriers such as main roads) will allow the potential Farrington Road development pods to be strongly integrated annexes particularly with respect to encouraging active transport (cycling and walking) throughout the activity centre (Figure 2.16).

Figure 2.15: Development of landscape structure – ecological corridors

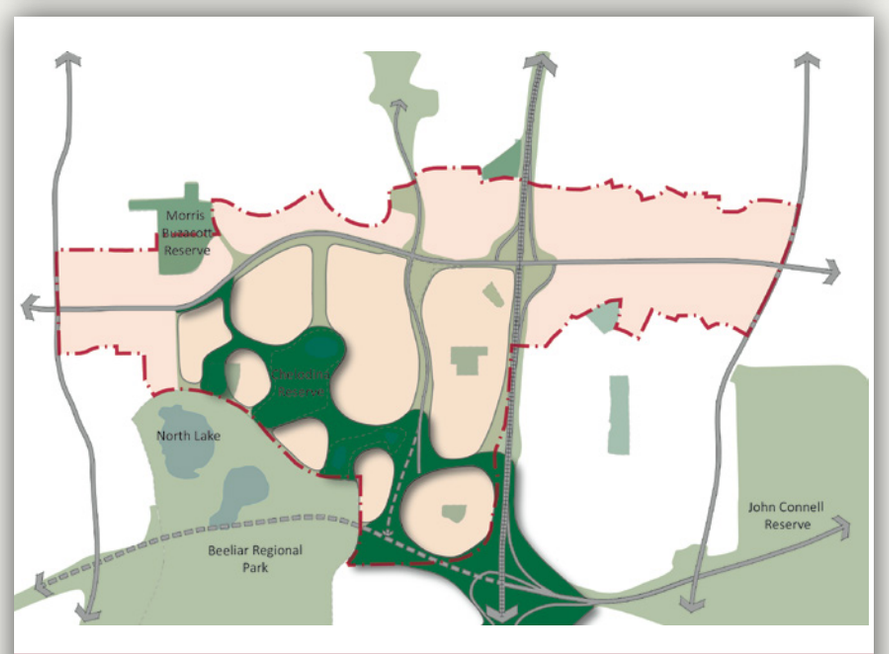


Figure 2.16: Landscape spine

2.6 Precinct areas and guidelines

The precinct plan for Murdoch is based on eight precincts, seven of which are situated within the central area of the activity centre, with the eighth precinct relating to the wider suburban frame that forms part of an activity corridor centered on the South Street alignment. (Figure 2.17).

The precincts are the basis for stipulating land use and activity priorities within the centre and guiding future development. Guidelines are set out on pages 23-26.

In addition, the precincts have been used to establish employment profiles, indicative floorspace, density targets and land tenure interventions set out in other sections of this structure plan.

The core area (outlined opposite) comprising Murdoch Square and the mixed use precinct is the focus for new development. However this could not be planned in isolation of the other precincts. The mixed use precinct has a defined boundary as a result of a previous structure planning exercise. Murdoch Square is not identified as a separate precinct at this stage. The boundaries of the area shown are indicative and need to be appropriately defined through the next stage of planning for Murdoch University's eastern precinct.

In each precinct, a local structure plan will be required to be prepared prior to the approval of development or, where agreed, updates to existing campus masterplans or local structure plans. Proposals would also be subject to tests and conditions applicable to sites and buildings within bushfire prone areas.

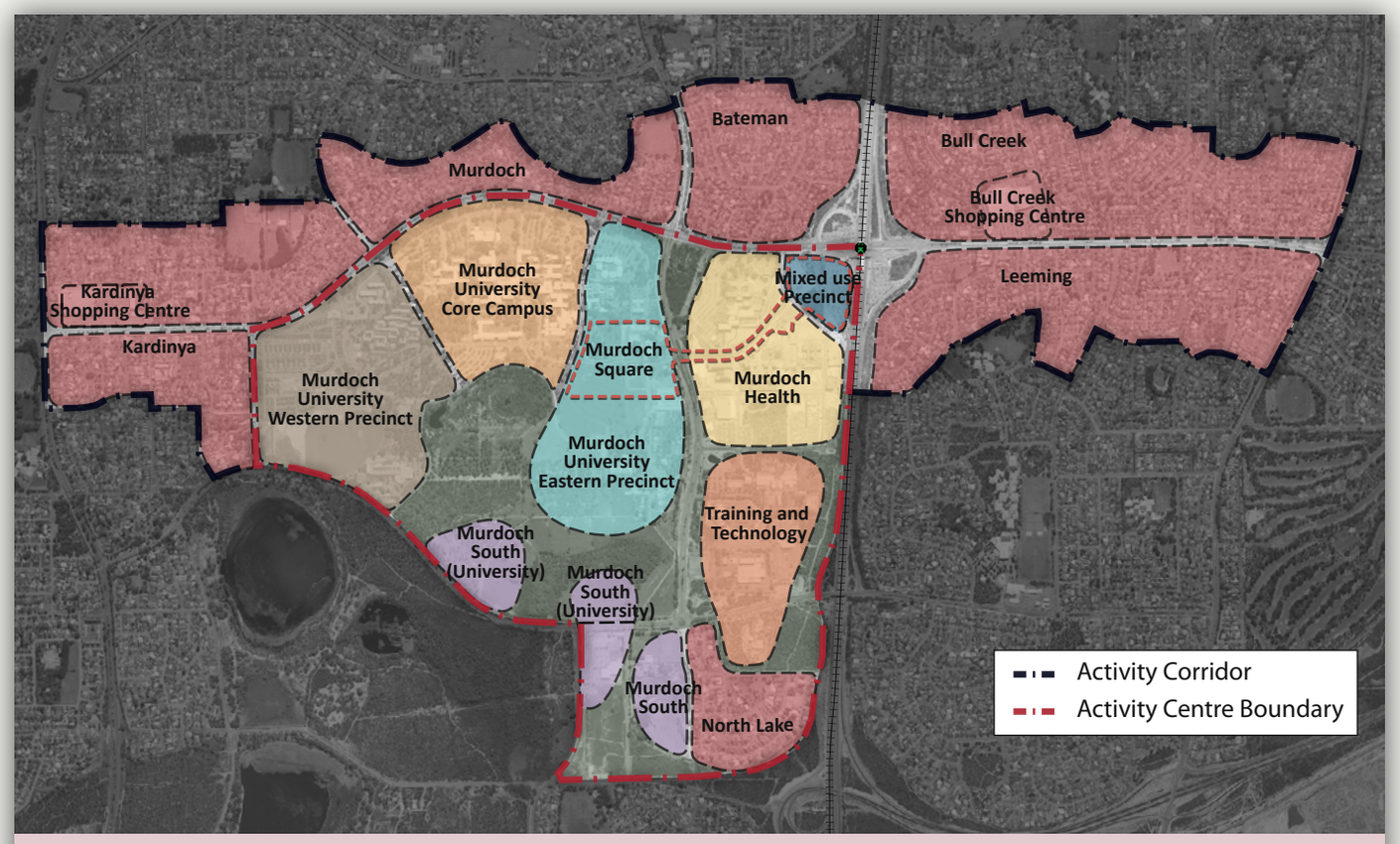
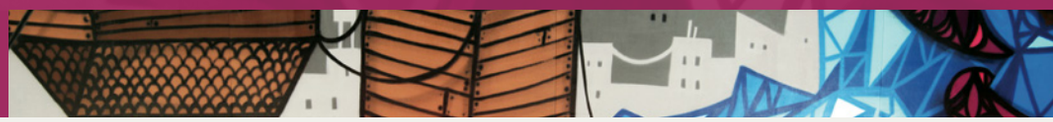


Figure 2.17: Activity centre precinct areas



Precinct 1 – Murdoch University core campus

Murdoch University will retain its principal educational land use function and, infill development aside, there will be little change to the function and form of the existing core campus. With a new focal point (Murdoch Square) located on Discovery Way, development within the core campus is encouraged to interface with the transport corridor. The campus will breed new life with the development of its eastern precinct (Precinct 4). Linkages between the core University campus and Murdoch Square will need to be enhanced to capture the benefit of the integration of these activities and overcome some of the current spatial dislocation.

Precinct 2 – Murdoch health precinct

St John of God and Fiona Stanley Hospitals will continue to support the predominant activity of health services but these campuses will be heavily augmented by the adjacent mixed use environment in the mixed use precinct which will add vibrancy to the area. The urban character of the hospitals will largely remain unchanged, but may densify with infill development over time — surface car parks being opportunities to redress spatial dislocation of activity and urban form.

Although the two major hospitals are contained within one precinct, it is recognised that it will be more practical for the institutions to progress with campus masterplanning individually. Any separate local structure plans submitted by/on behalf of SJOGH and FSH will meet with the local structure planning requirement, stipulated in the Structure Plan.

The overall urban design guidance set out in this Structure Plan will help to foster improved integration of urban design across institutional boundaries and ensure that any local structure plans submitted by the two hospitals in the Health Precinct provide appropriate co-ordination of the two campuses, particularly where they interface at Barry Marshall Parade.

Precinct 3 – Mixed use precinct

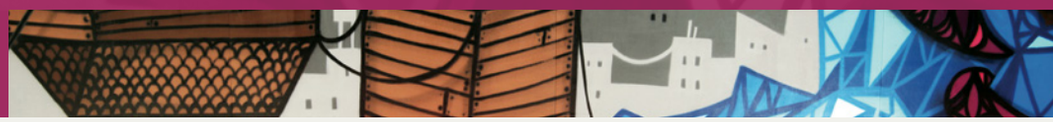
The mixed use precinct, located adjacent to the Health precinct, will contain associated health care and accommodation facilities. Its broader function, as part of Murdoch Activity Centre's diverse urban core, will be a key arrival gateway between Murdoch Station and the central area of the activity centre. Its urban setting adjacent to the rail station and freeway also lends to the development of a mix of offices, retail and entertainment amenities which will support an intense workforce throughout the day and night.

Should Lot 110 Barry Marshall Parade be identified as surplus to health requirements, it should be included in the Mixed Use Precinct and developed accordingly.

Precinct 4 – Murdoch University eastern precinct

Development within Murdoch University eastern precinct will be focused on the new town centre node at Murdoch Square to implement the notion of 'town and gown'. Aside from prioritising research and education and other complementary uses, Murdoch Square will also be the location for a vibrant mix of uses to provide the diversity and intensity required at the heart of the centre, as well as the main local convenience functions for the wider Murdoch population. South of the new centre at Murdoch Square, development of greenfield areas should be contained to the 400 metre transit corridor allowing for the University's veterinary farm and other research centres to continue in the medium term. In the longer term, the area to the south provides a significant opportunity, as high-density housing in a strategic location, to assist in meeting Perth's growing population demands.

Figure 2.18: Precincts 1–4



Precinct 5 – Murdoch University western precinct

Development potential in the western end of the activity centre is predominantly based on the student and retiree populations within the University campus. There is considerable long-term redevelopment scope in this area which could realise a more dense urban form, upgraded student accommodation, enhanced village facilities and improved public realm, with safe pedestrian connections to schools and homes. The catalyst for regeneration in this area will be the introduction of rapid transit to the centre and diversion of the transit spine through this precinct to activate more central parts of the campus. There is capacity within this area to expand the secondary education facilities and there is also an opportunity to develop a recreation and sporting precinct in accordance with the strategic direction of Murdoch University.

The long term diversion of the western part of the transit boulevard through the university campus is shown only as an indicative planning option at this time. The proposal remains to be tested through a detailed study of optimal re-alignment options taking into account transport, civil engineering, environmental and urban design merits.

Precinct 6 – Training and technology precinct

The area directly south of Fiona Stanley Hospital will be a services and technology precinct, with a number of important training facilities and larger businesses supporting both hospitals. This precinct should provide opportunities for growth, in particular, to accommodate the commercialisation and manufacturing functions associated with research. This precinct also supports other key government infrastructure, including the Western Power substation and the Wandoo Reintegration Facility, both of which are likely to remain in the short to medium term, but which are non-intensive land uses which would be desirable to relocate out of the central area of Murdoch in the longer term.

Challenger Institute of Technology occupies a key site in this precinct on the edge of the urban corridor. As one of the original tenants of the activity centre, it has future plans to expand its campus which will bring much needed student vibrancy and complementary training activities to the centre. Therefore, as part of the further planning of this precinct, the long-term future and urban form of the Challenger campus should be explored to maximise its integration with the core of the activity centre.

It is acknowledged that the southern-most section of the Training and Technology Precinct (south of Farrington Road) contains the Industrial Foundation for Accident Prevention (IFAP) site. Should this land use be relocated in the future, the primary land use should be reviewed for potential residential land use.

Precinct 7 – Murdoch South precinct (part Murdoch University)

This precinct relates to land parcels along the Farrington Road corridor which may have alternative development potential. The WAPC owns a significant land holding south of Farrington Road that forms part of the precinct which is currently leased to the City of Cockburn for recreational uses. This land is also planned to accommodate the proposed southern extension of Murdoch Drive and connection to the proposed Roe Highway extension. The WAPC land is identified for sport and recreation uses in the Beeliar Regional Park Management Plan 2006. Lakeside Recreation Centre, North Lake Spanish Club and Murdoch Pines Golf and Recreation Club are located on the land and these uses will continue for the foreseeable future.

Two distinct area of cleared land north of Farrington Road (part of Murdoch University) may also have longer term potential for infill development for university and/or residential purposes.

Redevelopment of these sites would assist with consolidation of the urban form and contribute to the optimal development of the activity centre. However, development proposals should be subject to sustainability testing, bushfire tests and subsequent planning conditions and the achievement of desired intensity targets in the urban core and corridor. This area could accommodate a government

led initiative to provide, for example, exemplar high-density housing, designed to assist builders to lead the market into more sustainable forms of housing.

It is acknowledged that the WAPC owned land in the Murdoch South precinct is within the Beeliar Regional Park boundary and is currently reserved as Parks and Recreation in the MRS. Should the land be considered for urban (residential) use in the future, there will need to be an amendment to rezone the land from Parks and Recreation Reserve in the MRS as well as a review of the Beeliar Regional Park Management Plan.

Precinct 8 – Suburban frame

The surrounding residential suburbs largely abut the proposed strategic transit corridor along South Street. They present opportunities to increase densities and improve local convenience retail/services. Particular support will be applied to the eastern corridor along South Street in the vicinity of Murdoch Station, where public transport journeys can be maximised and where there may be scope for redevelopment of more significant tracts of land for mixed use or high-density residential living. The activity nodes which house the two district shopping centres of Bull Creek and Kardinya present opportunities to evolve into local hubs with a mix of activities and more attractive urban form.

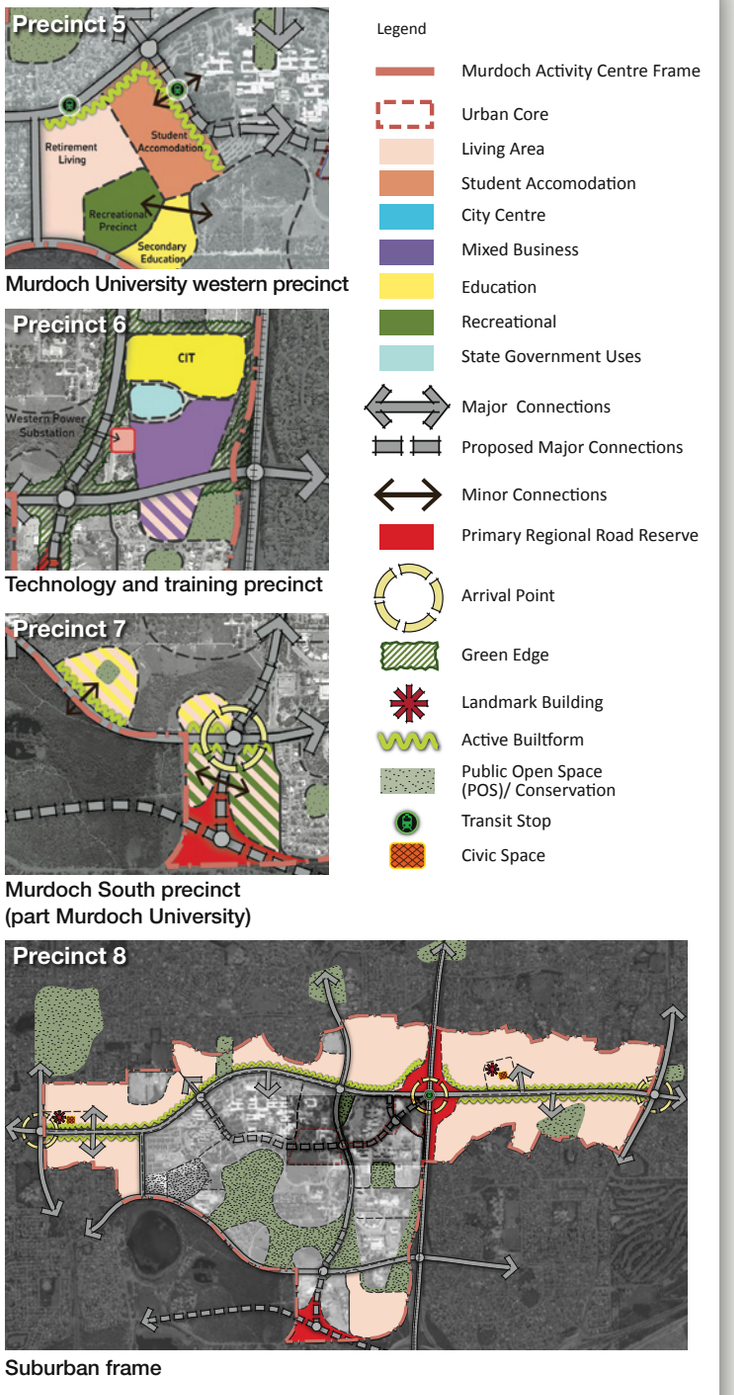


Figure 2.19: Precincts 5–8

2.7 Prioritisation of intensity

The notion of the core, frame and central area is to define the intensity of both urban form and activity. This is to be used as a guide in determining where particular activities are best suited and the form in which these activities should appear (Figure 2.20 and Table 2-3).

The core

The core is the area which should be most intense and active within the centre, with the greatest proportion of jobs and highest density of buildings. Except for specialist development (e.g. new hospital buildings) the urban core is the area that is to be prioritised for new activities over all others. Development proposals outside of the core should have an ambition to locate within the core. Approval of development outside the core should only be granted where a core location is considered incompatible.

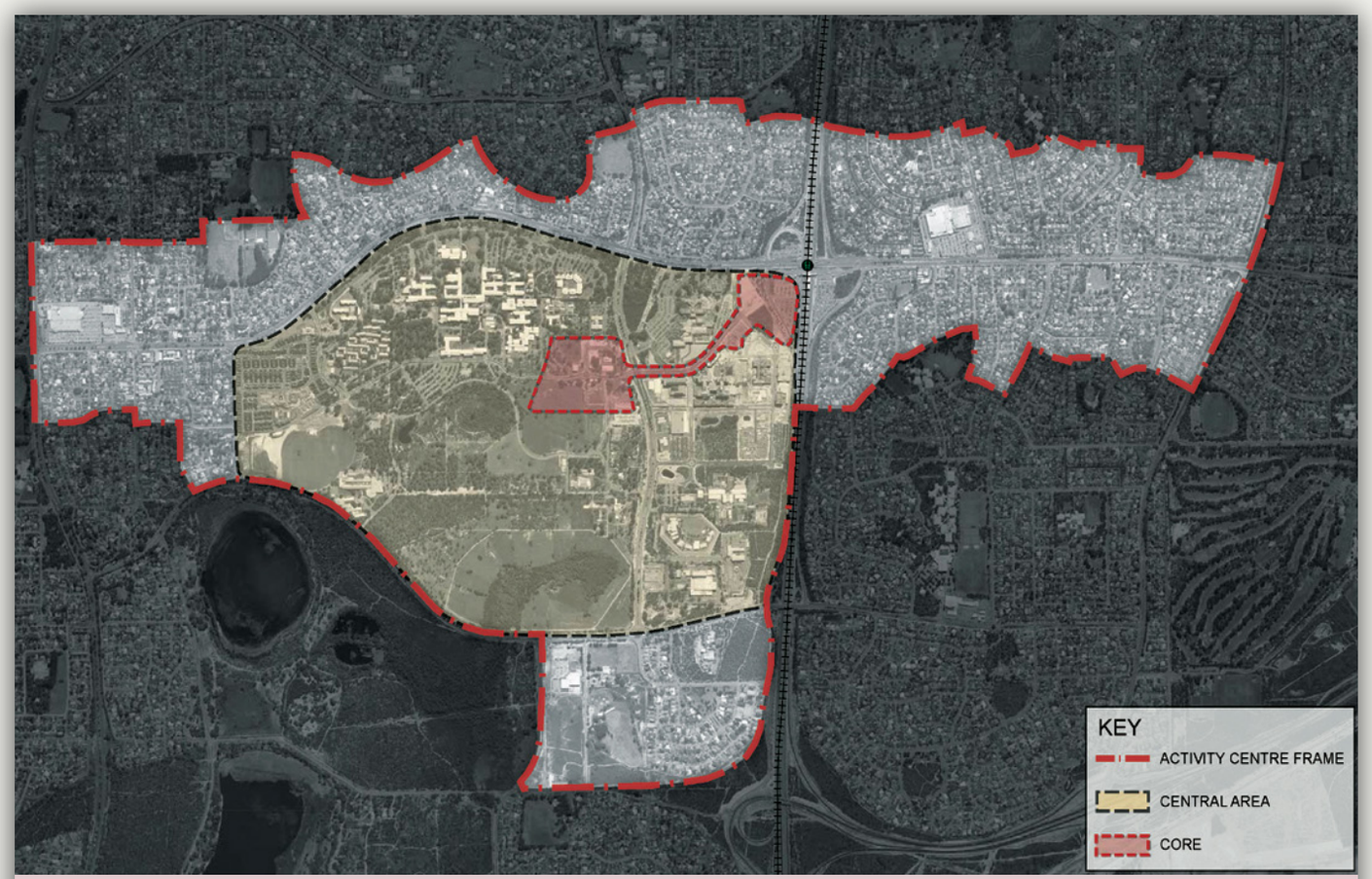


Figure 2.20: Murdoch Activity Centre – urban core and central area

Table 2-3: Murdoch Activity Centre spatial intensity (targets and capacities)

	Baseline (2011)	Target / Total	Urban core (Mixed Use Precinct + Murdoch Square)	Non-core SP area
Land area (structure plan area)	-	754 ha	24 ha	730 ha
Developable land area (Net est.)	-	144 ha	17 ha	127 ha
Population	39,400	100,400		
Residents	8,100	22,000	2,800	19,200
Employees	* 11,000	35,000	20,000	15,000
Students (enrolment)	20,300	43,400	4,000	39,400
Employment (jobs)	* 11,000	35,000	20,000	15,000
Office, Education and Health	* 9,600	32,000	19,000	13,000
Retail and Consumers Services	1,200	2,500	1,000	1,500
Technology and Training	200	500	-	500
Employment floorspace (m^2)	212,800	664,000	371,000	293,000
Office, Education and Health (Employment density 18m^2/job)	172,500	575,000	342,000	233,000
Retail and Consumer Services (Employment density 25m^2/job)	30,300	64,000	29,755	35,000
Technology and Training (Employment density 50m^2/job)	10,000	25,000	-	25,000
Residential (dwellings)				
Housing targets	3,700	** 7,100	-	-
Dwelling capacity (estimate)	3,700	*** 11,000	1,500	9,500
Min residential density (gross)	-	60/ha	80/ha	40/ha
Student accommodation	900	**** 1,900	400	1,500

Notes:

* Includes Fiona Stanley Hospital staff (at opening 2014). Total excludes minor employment categories.

** Based on *Directions 2031 Central Sub-Region Strategy* target of up to 3,400 new dwellings.

*** Based on indicative capacity of greenfield land, mixed use precinct and suburban housing stock

**** Proportional estimate based on projected growth in students

SP Structure plan

The central area

The central area is comprised mostly of government owned land which is largely underdeveloped. The existence of the key anchors within this area underpins the opportunity for it to be further developed to augment the anchor activities or to become the area for spillover development once the core is fully established.

As described in Section 2.4, development within 400 metres proximity of the transit spine (the urban corridor) will be supported over proposals within the central area which are beyond the 400 metres catchment.

The frame

The frame is the balance of the structure plan area, generally defined by the existing suburban environment within a five minute walk of the transit corridor. The frame includes land outside of the defined activity centre boundary which forms part of an activity corridor along the South Street alignment. Whilst it is desirable that the frame would intensify over time, the structure plan is not contingent upon it. The fragmented ownership patterns and economic cycle may prove to be an inhibitor in the short term but in the medium to long term it is anticipated that residential densities in particular will increase. Specifically, properties and infill sites within the transit corridor catchment will be encouraged to build to appropriate urban scales and densities as part of the incremental process of change in the wider Murdoch frame.

The wider frame of the structure plan area also takes in existing district activity centres — Bull Creek and Kardinya Shopping Centres — situated on South Street on the fringes of the study area. These centres serve a traditional population catchment in adjacent suburbs. The intensity and development objectives for these centres and adjacent areas are less than those for core areas of the activity centre. However, this does not preclude, indeed the structure plan strategy supports, redevelopment of the smaller retail based centres into more diverse places of activity and urban form.

Increasing diversity

The mono-land use legacy of postwar planning theory has resulted in land uses being segregated from each other. This has caused a low level of activity diversity both on a broad and local scale. Improving the diversity of land use in the core and central area is a key focus of this structure plan. Subsequently, strategies have been engaged within this plan that promote a move away from strict land-use based controls, with more focus on encouragement of particular activities and development forms which will improve the diversity of the centre around the core specialised uses (Figure 2.21).

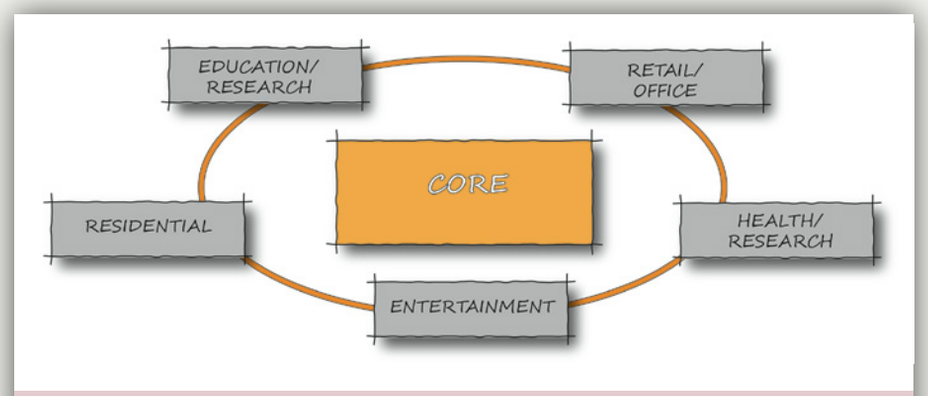


Figure 2.21: Activity concept for urban core

2.8 Economic development strategy

The significant amount of relatively unencumbered land in government ownership presents an opportunity to provide the urbanisation functions for Murdoch Activity Centre. Should Murdoch achieve its potential, the value of the currently vacant land will provide significant economic benefit to the Perth and Western Australian economy.

However, the economic pressures relating to this land provide the temptation to sell off, in the short term, to the free market and to the highest bidder, particularly given the current economic climate. It is important, therefore, to distinguish between the uses which are of value to the current market and those of which are of value to the broader economy and success of Murdoch as a specialised centre.

Subsequently, land may need to be quarantined to ensure that it is not sold for inappropriate activities and that intensity/capacity targets, shown right, are achieved. Land releases will need to be staged to the market to encourage the development of appropriately intense activities and urban form over time.

A business case and economic strategy will need to be prepared to determine how best to achieve this. The strategy should be developed as an all-of-government approach and value the land for its economic potential, not just current market value. The strategy should take into account alternative revenue streams (such as ongoing taxes generated by additional economic activity and not just a singular transaction for the land) and consider the financial status of government institutions which currently preside over that land to ensure that any development assists to underpin their long-term business model.

A case for a reduction in upfront costs for developers (or 'loss leaders') should be considered in order to stimulate appropriate activities and urban form. The strategy should also address the opportunity for easy wins which include activities or urban form which do not align completely with the diversity and intensity targets but generate early sales to stimulate momentum and provide cash flow for investment in other infrastructure.

Recommendations in relation to development of an economic strategy and strategies to support specific land-use types in the structure plan area, are contained within Chapter 7. Chapter 3 reviews the various land uses and principal activities expected to grow within the centre at Murdoch, as summarised in Table 2-3.