




innovation
atwardrop.





Jim & Les Dickinson, with Doug & Margot Anthony, and THG's team of multidisciplinary specialists, have created a vision for a self-contained employment-focused community. Innovation at Wardrop will ultimately develop as a highly desirable and affordable place to live, work & play – attracting business expansion, investment and jobs, which will be key to a future sustainable Tweed Shire.

Property Description	Land Owner
Lots 4 to 9 on DP811482	Dickinsons
Lot 1 on DP842157	Dickinsons
Lot 3 on DP1039120	Dickinsons
Lot 34 on DP1128192	Dickinsons
Lot 111 on DP128547	Anthony
Lot 1 on DP227391	Anthony
Lot 16 on DP1037891	Anthony
Lot 1 on DP1069561	Tweed Shire Council



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The vision for Innovation at Wardrop is to be the key opportunity in enabling the Tweed Shire and its community to secure a more sustainable, prosperous future. This will be achieved through creation of an master planned, vibrant community with a strong emphasis on self-containment, whose central framework is an integrated employment hub supported by research, education, business, recreational / leisure activities, social and diverse residential precincts incorporating sustainability and environmentally sensitive design principles.

Innovation at Wardrop will deliver this vision through:

- Provision of employment opportunities critically needed for the Murwillumbah, Shire and northern regional catchments. Ensuring proximity of jobs to the workforce, Innovation at Wardrop will provide various advantages for the Tweed, including increasing lifestyle benefits related to reduced travel times, decreased car emissions as a result of limiting private-vehicle based trips, and promoting a healthy and active community by growing the opportunity for employees to walk and cycle to work.
- Efficient use of land to minimise urban sprawl and better utilise existing and planned infrastructure, as well as assisting the Tweed in achieving employment self-containment.
- Provision of a significant proportion of the employment lands required to support economic diversification of the Shire, generating a range of employment opportunities, and specifically export-driven jobs.
- Creation of key precincts and facilities in close proximity, including nodes focussed on research and development, education, recreation and entertainment in recognition of the critical importance in the decision-making processes of national and multi-national entities that these elements take in the final decision to co-locate their production and corporate facilities.
- Facilitation of a range of job opportunities offered through the various precincts within Innovation at Wardrop will assist in retaining the region's youth, as well as attracting young families to the region; influencing sustainable demographic change in the Tweed. The mix of professional, administrative, trade and hospitality jobs at various levels of qualification, skills and experiences will draw a diverse workforce; which, in combination with the provision of a range of short- and long-term residential dwelling options and recreation and entertainment facilities, will create a diverse and vibrant community at Innovation at Wardrop.
- Implementation of sustainable practices to ensure Innovation at Wardrop has a reputation as a responsible, sustainable community. Environmentally-sensitive urban design will be incorporated leading to the efficient use and reuse of water, including conservation measures to reduce water consumption, a catchment management approach to maintaining and improving water quality and the control and minimisation of air pollutant emissions. Dwellings and buildings will reflect energy efficient design and promote the use of appropriate and renewable source materials.
- Recognition of the character and environment of Wardrop Valley and the surrounding catchment and retaining and enhancing significant areas of vegetation and habitat for conservation, and ensuring linkages with local landscapes and features. Innovation at Wardrop will incorporate the efficient reuse of degraded land for revegetation and be underpinned by an extensive green network that creates a natural and open character and promotes community interaction and activity.
- Creation of strong linkages with the surrounding community and beyond by provision of a highly connected system of movement corridors which provide for walking, cycling and vehicular movement. Priority will be given to pedestrian and cycling opportunities together with facilitation of public transport options. Corridors will enable safe and efficient movement of heavy and domestic transport.
- Creation of a highly desirable lifestyle community incorporating Crime Prevention through Design principles (CPTD) as well as linkages to existing and additional cultural and social facilities to ensure a safe, healthy, vibrant, integrated community is established.

The Need for Job Creation.

The Tweed has the urgent requirement to create jobs and stimulate business growth.

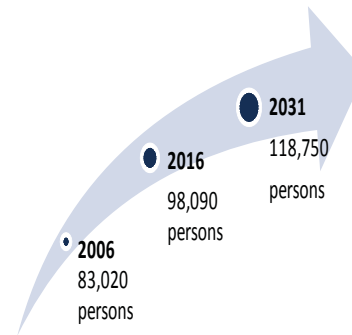
As a key lifestyle destination, the population of the Tweed Shire grew by nearly 25 percent over ten years to reach over 83,000 persons in 2006. The Tweed’s strategic location on Australia’s east coast, in close proximity to South East Queensland and the Gold Coast, will ensure that the Shire will experience sustained, strong population growth rates over the next 20 years. The Tweed’s population is projected to increase by nearly 40,000 persons to nearly 120,000 by 2031.

As a consequence of this population growth, the demographic structure of the Tweed is changing significantly. Offering an attractive retirement lifestyle option and a lack of employment opportunities to attract young working families, the median age of the Shire’s population is anticipated to increase from 42 years in 2001 to 54 years in 2031. In 2001, 21 percent of the population of the Tweed were aged over 65 years. This proportion is anticipated to increase to 35 percent of the population over the 30 years to 2031. This is a significantly smaller proportion than for New South Wales as a whole (14 percent in 2006 and 21 percent in 2031).

The Shire also faces major challenges in relation to unemployment and workforce participation rates. In 2008, while the Tweed’s population increased by nearly 3 percent for the year, its labour force in fact shrank by 3.4 percent. Conversely, New South Wales workforce growth exceeded its population growth; with a 1.4 percent population growth compared to a workforce growth of 1.9 percent. To exacerbate this, the Tweed is also subject to relatively high levels of unemployment. At December 2008, the Tweed Shire recorded an unemployment rate of 5.8 percent, while NSW recorded a rate of 4.7 percent and Queensland had only 3.8 percent unemployment.

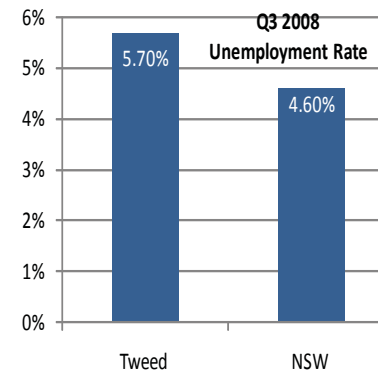
An increasing population but decreasing workforce indicates a decreasing work participation rate, illustrating the Tweed’s population profile’s bias towards retirees. The fact that this decrease in work participation is also accompanied by an increasing rate of unemployment indicates that the actual number of employment opportunities within the economy is decreasing. This is a fundamental structural flaw in the Tweed economy. These trends are not sustainable from both an economic and social perspective and as such require urgent attention.

The creation of employment lands has been identified as a key element in addressing the Tweed’s critical undersupply of employment in various local and regional strategies and policies. The Tweed Economic Development Corporation estimates that the Tweed Shire needs to create 25,000 jobs by 2031; while the Far North Coast Regional Strategy has forecast that 17,000 jobs will be required over the same period to sustain the forecast population growth. Regardless of this difference in projections, it is obvious that the Tweed needs to create opportunities for business and industry growth and generate jobs to underpin a sustainable future economy and community.

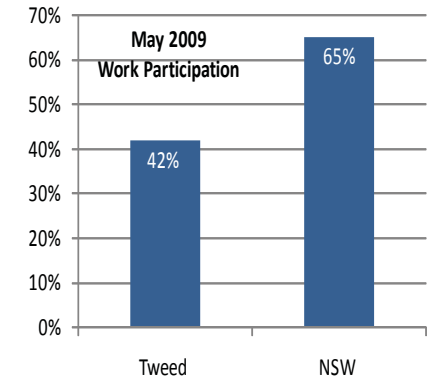


By 2031, the population of the Tweed will have grown by nearly 40,000 persons.

Demographic Change (2006-2031)
 - Under 50s - 13.8 % increase
 - Over 50s - 100% increase



The Tweed’s unemployment rate is 1.1% greater than the state’s rate.



The Tweed’s work participation rate is 23% behind the state’s rate.



3.0 Regional Context.



The Market for Employment Lands.

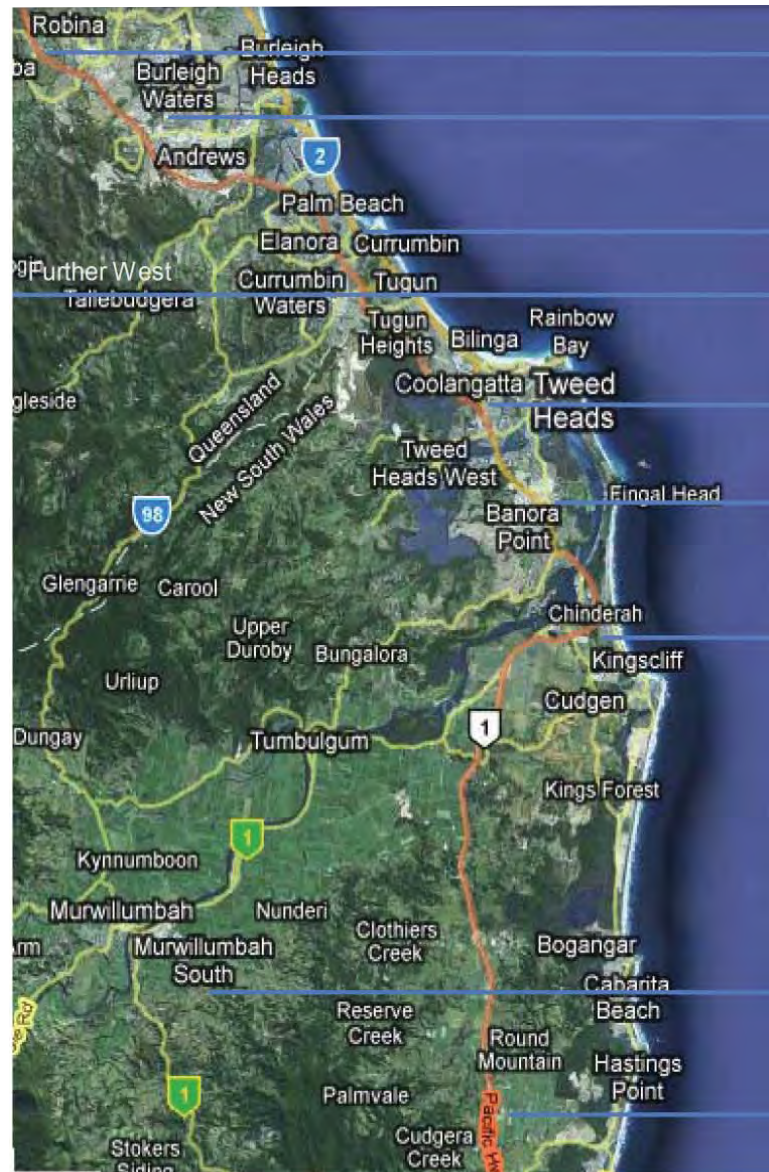
The Tweed Shire is strategically located adjacent to South East Queensland (SEQ), Australia’s fastest growing region. With a forecast population of 4.4 million by 2031, SEQ provides a growth market right on the Tweed’s door step. The Gold Coast population alone is anticipated to grow to 788,231 persons by 2031.

At the same time, regional planning in SEQ is restricting the availability of land and therefore escalating the cost of land for urban purposes, including employment. On the Gold Coast, the majority of remaining employment lands are located to the north in the Yatala Enterprise Area; with very limited land available in the south. The employment land developments illustrated on the map to the right are generally fully-developed and only cater for light industry uses. Key employment lands earmarked for future growth have been identified in less desirable lifestyle destinations than the Tweed.

Whilst South East Queensland has a decreasing supply of available employment lands, the growth in the region’s population and its economy will increase demand for these lands. The Tweed Shire is perfectly positioned to capitalise on this pending demand for employment lands.

Due to the attractive lifestyle, people of all skills and backgrounds are drawn to live in the Tweed Shire. Unfortunately however, due to the narrowness of the Tweed’s economic base and job offering, the Shire has a daily net out-migration of 7, 000 workers to south-east Queensland. Whilst the majority of Australia faces a situation where their economic growth is restricted by the availability of labour, the Tweed is exporting their labour to the Gold Coast.

With excess labour, available land and close proximity to Australia’s growth hub South East Queensland, the Tweed is perfectly positioned to become a key employment lands source for the broader region. Land available in the Tweed is therefore considered part of the South East Queensland market and will cater not only for local business growth but also potentially significant regional business expansion and investment.



Robina – Future Commercial Hub

West Burleigh – Light Industry Park

Currumbin – Light Industry Park

Bromelton – Intermodal Logistics & High Impact Industry Hub

Coolangatta – International Airport and Future Education & Business Precinct

South Tweed – Light Industry Park

Chinderah – Light Industry Park



Pottsville – Proposed Warehousing & Logistics Precinct

Self Contained Opportunity to Work, Live & Play.

The Tweed Urban Land Release & Employment Lands Strategy identified a series of key areas for future development for both residential and employment lands to cater for the projected growth of the Shire.

- In the short-term, the Shire plans to focus residential growth in the Tweed's urban area to the north and also the Tweed Coast, with over 50 percent of current and future growth to occur in these areas in the next ten (10) years.
- Over the same period, only eight (8) percent of urban residential growth is to occur in the balance of the Shire, for which Murwillumbah is the service centre.
- However, through the approved Industry Central and expansion at Wardrop Valley West, 20 percent of the Tweed's future employment land supply will be available in close proximity to Murwillumbah in the short-term.

A distinct opportunity exists to balance this residential and employment growth in the broader Murwillumbah area to create an employment-focused, self-contained community.

Industry trends indicate that businesses are increasingly cost sensitive as well as being increasingly focused on strategic locations which allow for the co-location of their corporate offices with productive operations. Innovation at Wardrop offers this potential, but also presents complementary facilities attractive to both employers and employees.

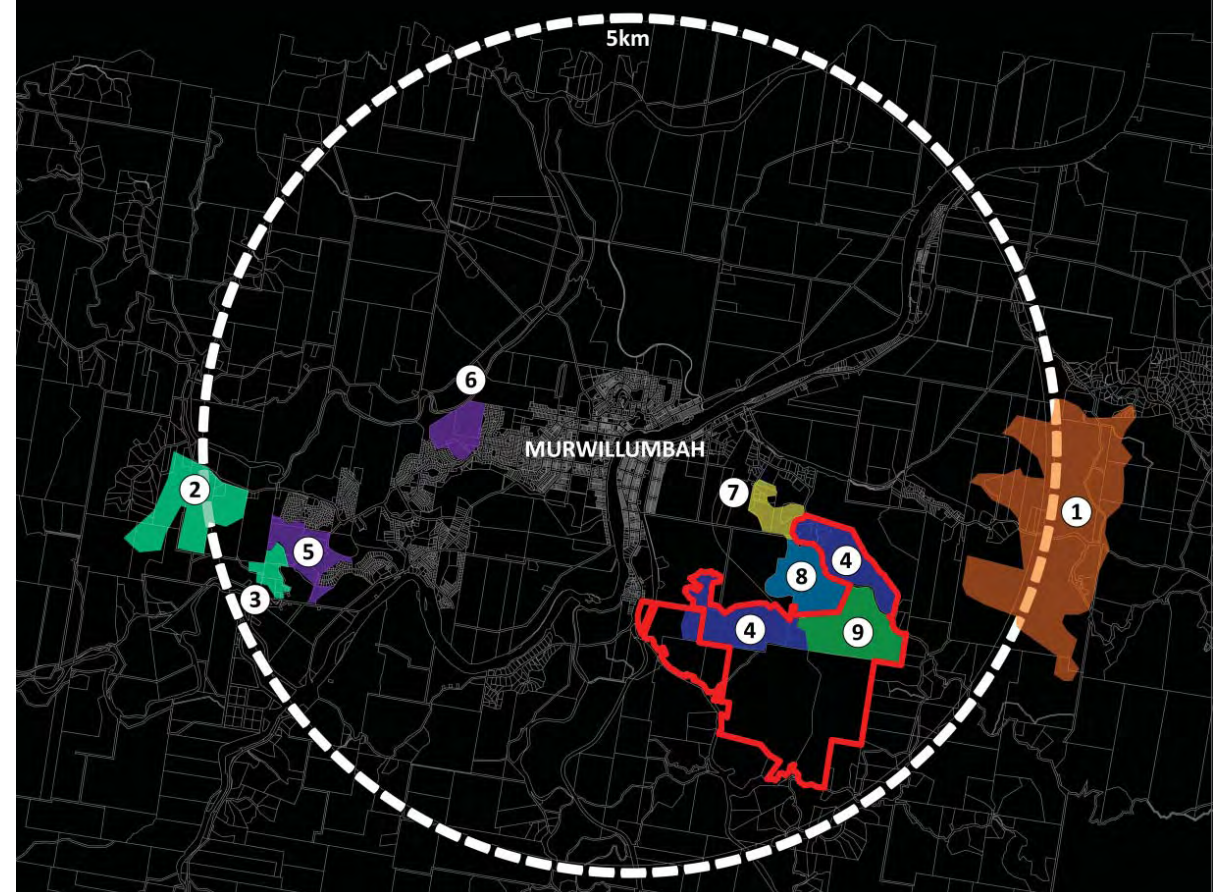
The masterplan incorporates:

- golf course, club house, resort, conference and function centres for personal recreation, as well as corporate entertaining and events;
- residential accommodation to allow the workforce to potentially live within walking distance of their work, reducing private vehicle-based emissions and greatly improving lifestyle;
- a range of facilities, including gyms and cafes to cater for the convenience needs of the local residents and workforce; and
- the knowledge precinct facilitating direct linkages between business and the research and technology sector.

Few sites in close proximity to existing major centres and markets offer the quantum of land, under such a small number of owners, required, to achieve this vast collection of facilities. All of these facilities will be located in a masterplanned community that maximises open space and offers enviable views of Mount Warning and over cane fields.

The achievement of a work-life balance and the reduction in environmental impacts are strong drivers for the creation of this self-contained community. The use of best practice masterplanning techniques will result in Innovation at Wardrop being a national leader in fully integrated community design.

1. TWEED URBAN LAND RELEASE STUDY (AREA 1) POTENTIAL FUTURE RESIDENTIAL
2. TWEED URBAN LAND RELEASE STUDY (AREA 2) POTENTIAL FUTURE URBAN
3. TWEED URBAN LAND RELEASE STUDY (AREA 3) POTENTIAL FUTURE URBAN
4. TWEED URBAN LAND RELEASE STUDY - POTENTIAL FUTURE INDUSTRY
5. STOCKLANDS APPROVED 316 LOT SITE
6. METRICON APPROVED 96 LOT PLUS FUTURE POTENTIAL
7. FUTURE COUNCIL INDUSTRY
8. INDUSTRY CENTRAL (EXISTING)
9. COUNCIL LAND OWNERSHIP

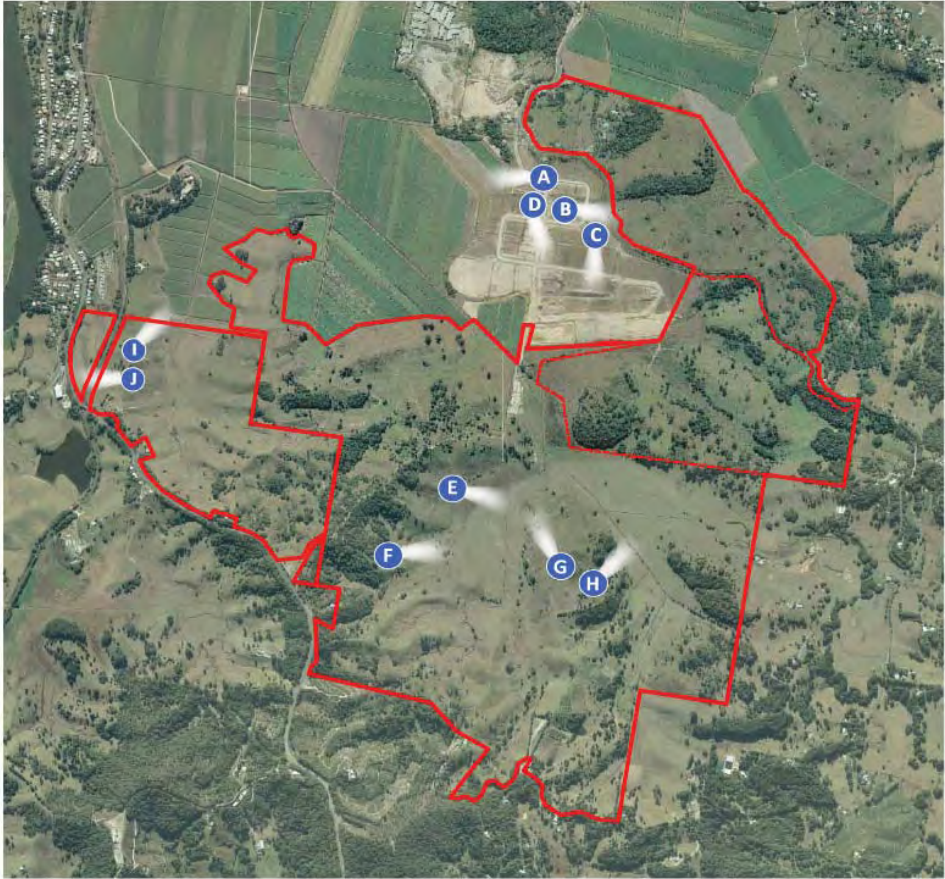


5.1 Visual.

A photographic study of the site was undertaken as part of the master planning process to record views to and from the site as a mechanism for ensuring the retention and enhancement of the natural qualities of the site and surrounds.

This study records views to and from the site as a mechanism for ensuring the retention and enhancement of the natural qualities of the site and surrounds.

The Master Plan builds on this analytical process and strengthens key natural place-making elements to ensure continuity of the genius Loci for the Wardrop Valley area.



5.2 Key Constraints.

Data and mapping overlays, as well as site visits, and local knowledge have contributed to an assessment of major constraints affecting future development of this site. The masterplan identifies these constraints to prepare a base footprint for planning and design of the masterplanned community. The masterplan considers the following key constraints:

5.2.1 Land with a slope greater than 20 percent has been identified as undesirable for construction purposes



5.2.2 Flood prone areas under the Q100 flood level have been considered not suitable for construction purposes.



5.2.3 A small number of key areas have been identified as having significant vegetation that require retention.



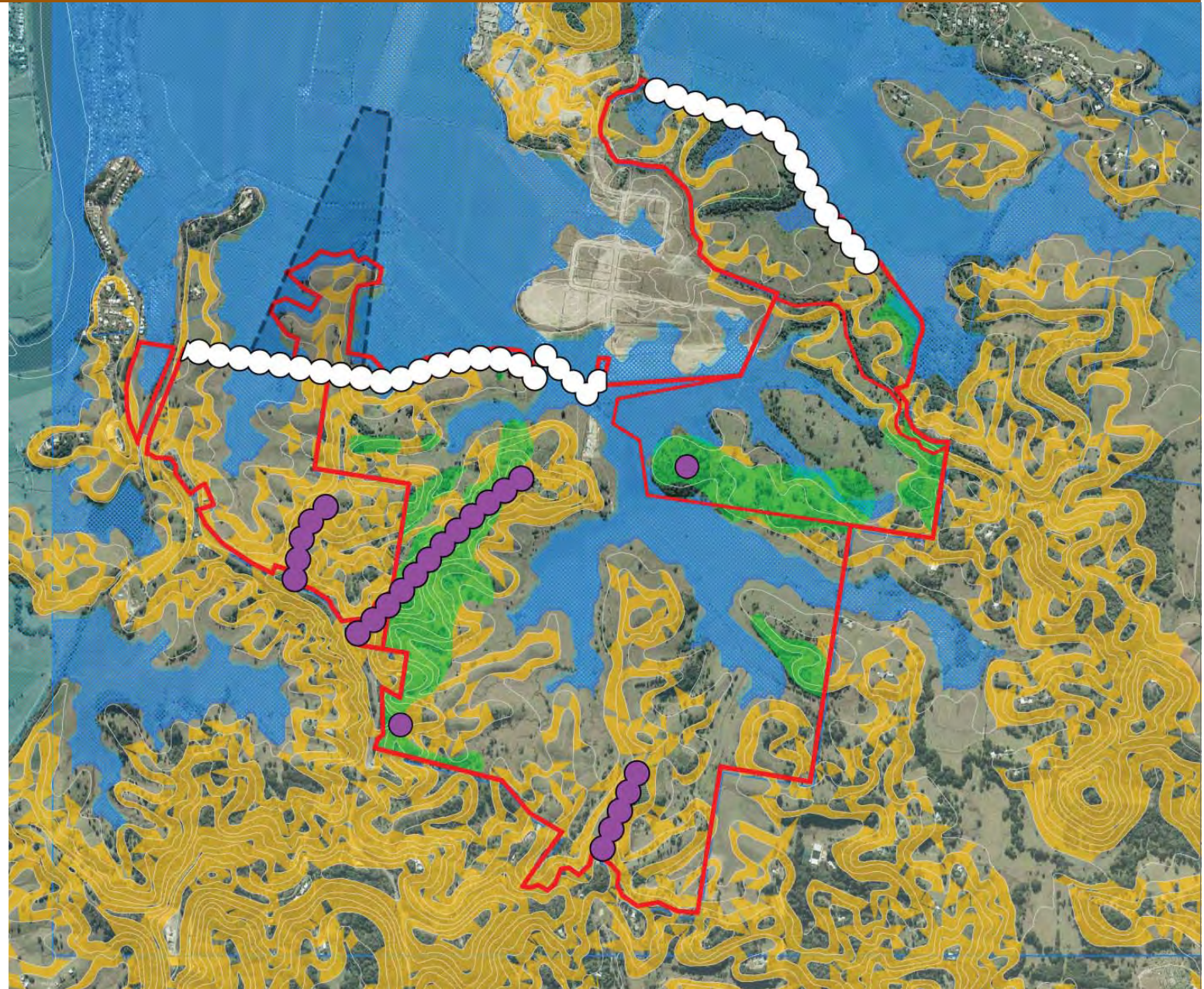
5.2.4 Visually important ridge lines are considered key features of the site to be retained to preserve the sense of place.



5.2.5 Areas have been identified that may require mitigation measures for noise and visual impact.







5.2.6 Airport fly path



5.3 Existing Infrastructure.

This plan graphically captures the network of existing investment in infrastructure, including:

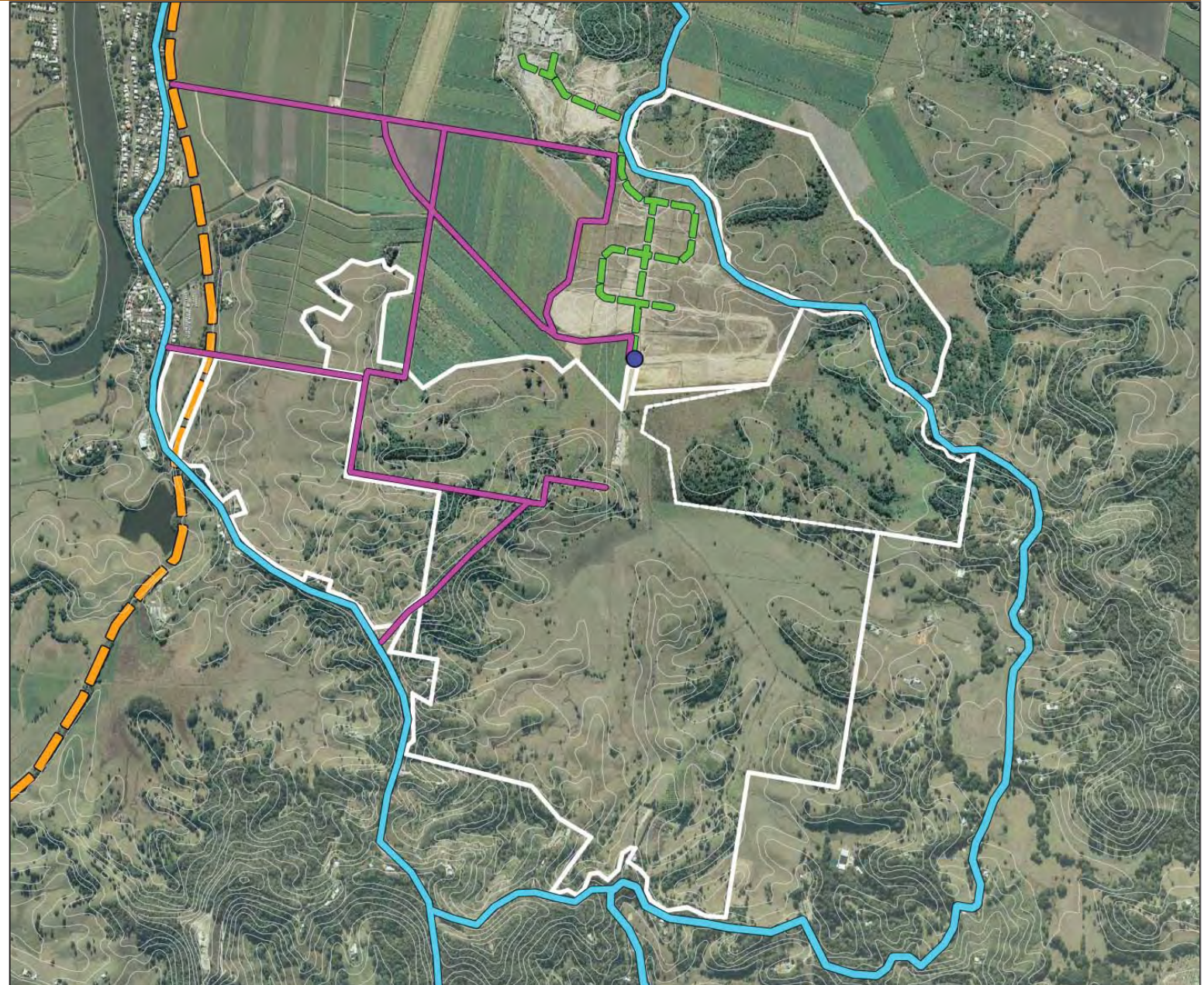
- 5.3.1 Constructed major roads 
- 5.3.2 Existing easements, road reserves and service reserves 
- 5.3.3 Existing rail corridor 
- 5.3.4 Existing pump station 
- 5.3.5 Constructed minor roads 

The site is currently serviced by town water, sewerage and electricity. The sewer infrastructure to the site has some spare capacity (4ha) which we believe was established to service council's adjoining land. There is an extensive level of spare capacity within the existing easements to the site, sufficient for additional upgrades. Within the existing industry central there is also an excessive level of spare easement capacity.

Existing road connections exist back through Wardrop Valley Road to the Tweed Valley Way and on to the National Highway. We have identified the opportunity for road upgrade connections to the Tweed Valley Way north which can incorporate extensions to Keilvale and improve the currently constrained access to the employment lands and surrounding development and also provide access to the already approved golf course accommodation component. Other opportunities exist on the unconstructed road reserves to the northern boundary of the Anthony Family's site.

The existing rail corridor adjoining the west boundary provides an opportunity for public transport and pedestrian linkages back to Murwillumbah.

The site has a high level of existing opportunities which can be capitalised on to create a highly economic and socially efficient infrastructure solution for the site.



5.4 Opportunities.

This plan graphically depicts and summarises the major opportunities across the site, these include:

1.1 Flood credit area



This area to the north - west has been identified as a flood credit area.

1.2 Conservation areas



Key areas with existing significant vegetation have been expanded to retain and build on the genius loci of the greater valley area. These identified conservation areas provide significant linkages for connectivity in terms of future natural network.

1.3 Important topographical features



Natural topographical features, including significant ridges and gullies have been identified and retained. The master plan seeks to reinforce these as key place-making features within the development framework.

1.4 Multi Use flood corridor



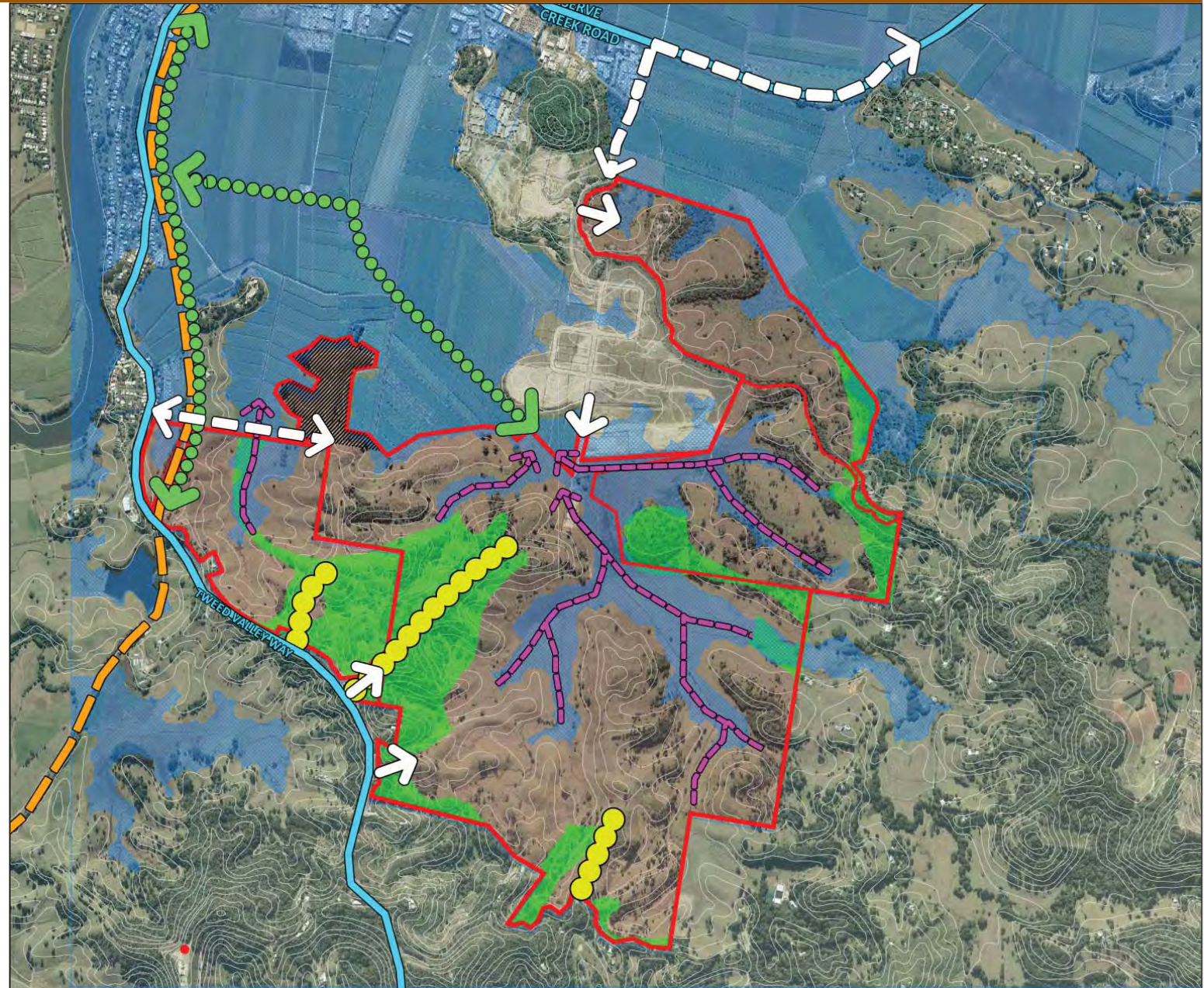
The land identified as part of the Q100 flood prone area has been identified as an opportunity for increasing the multi use nature of the area, conceptually integrating wetlands, detention basins and a range of public and private sporting and recreational activities, cycle and pedestrian networks etc.

1.5 Increased access and linkage opportunities



A series of integrative linkages have been identified as key opportunities, these include:

- Connections to Tweed Valley Way to the west (south of Murwillumbah), improving east - west connectivity through the site.
- Alternate access opportunities to Tweed Valley Way to the north (near Condong), improving north - south connectivity to and from the site.
- Potential pedestrian and cycle linkage along the rail easement to the west and along the sewer easement through the agricultural land to the north.
- Existing rail corridor as a potential north - south pedestrian / green linkage corridor
- Potential integration of the road network with existing industrial estate to the north east.



A Masterplan Proposal.

This initial master plan across the site and surrounding areas articulates a vision for a self-contained, employment-focussed community. The master plan is informed by a preliminary constraints analysis and builds on the opportunities identified earlier in this report.

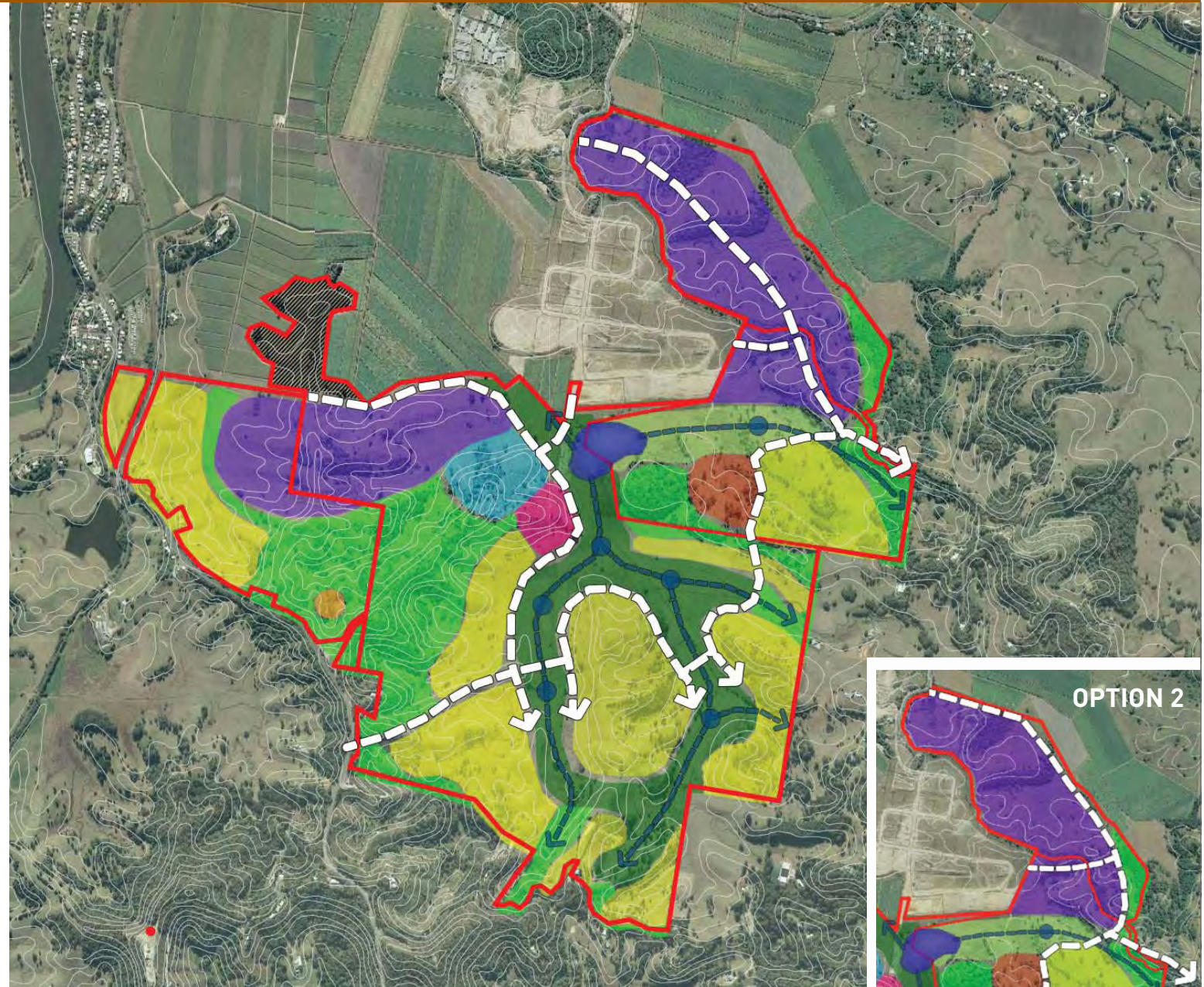
The plan has been developed as a framework to inform Tweed Shire Council about the opportunity to address the Tweed's strong need for job creation as part of a self-contained, sustainable development.

This masterplan provides high-level guidance as to the location and form of uses and related infrastructure, whilst at the same time, allows for a certain degree of flexibility to accommodate changing market dynamics.

The central focus of the plan is to ensure a positive environmental outcome that builds on the inherent character of the natural landscape, whilst facilitating the development of an integrated and self-sustaining community over time.

LEGEND (indicative areas only)

	Employment Opportunity	106.1 ha
	Total Residential Area	148.92 ha
	Education Precinct	6.504 ha
	Tourism / Recreation Node	4.55 ha
	Research and Development	9.6 ha
	Golf Course	69 ha
	Environmental Green Space	91.4 ha
	Major Public Sporting Facilities	17.32 ha
	Eco-Tourism	1.2 ha
	Wetland / Stormwater Mgmt	4.7 ha
	Flood Credit Area	12 ha
	TOTAL	475 ha



6.1 Land Use and Possible Design Outcomes.

A range of land uses have been identified as part of the master plan approach, these include:

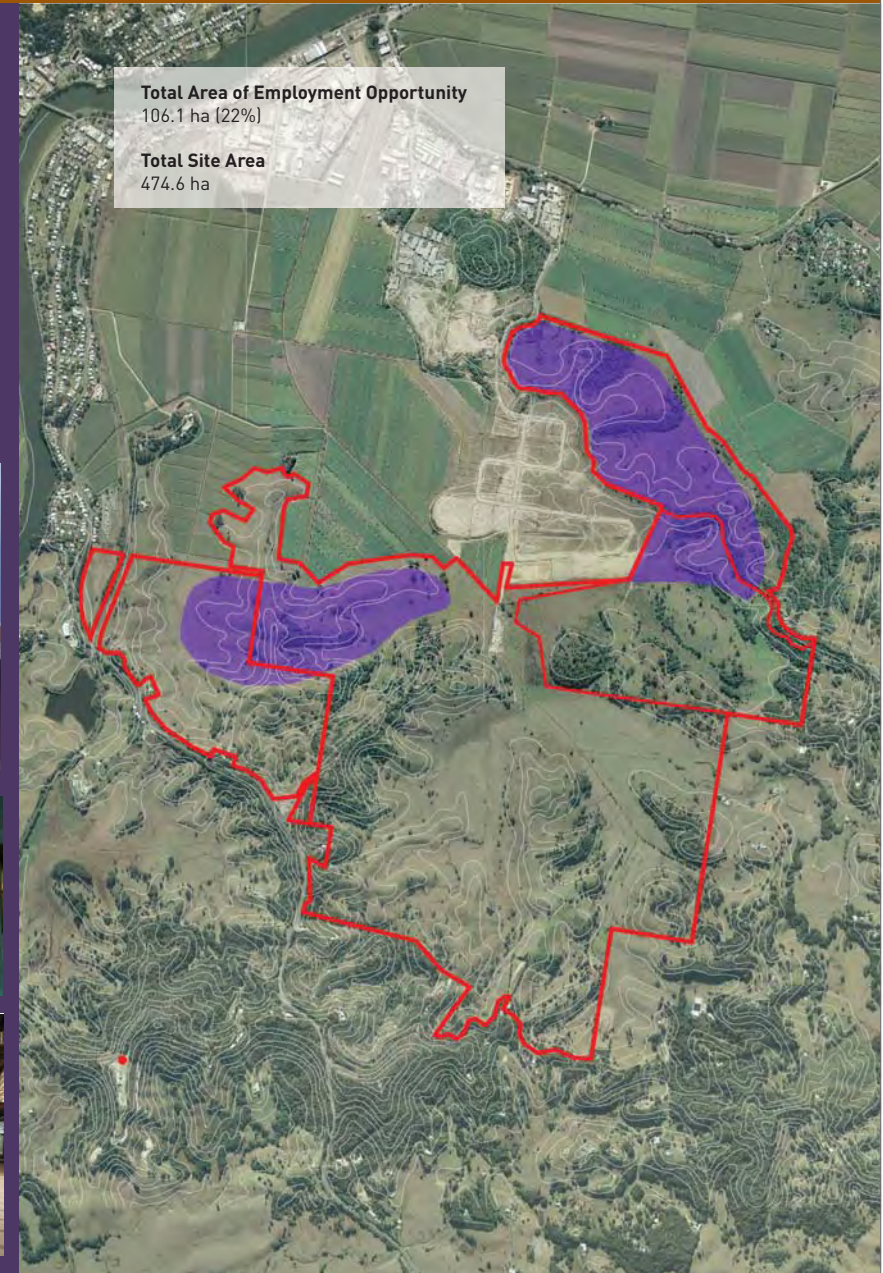
6.1.1 Employment Opportunity

The masterplan identifies two key areas that are suitable for the creation of employment opportunities as part of the integrated community. These same areas are identified as key future employment lands - Wardrop Valley East and Wardrop Valley West - in the Tweed Employment Lands Strategy, which was adopted by Tweed Shire Council in March 2009.

These areas provide logical spatial connectivity with Industry Central, and existing industrial development and the Murwillumbah Airstrip precinct to the north. Key existing and planned road infrastructure will link these employment precincts with the Murwillumbah central business district and surrounding communities to the west.

These zones present the opportunity to co-locate corporate offices with productive operations; appealing to national and international companies, who wish to operate in a high quality, lifestyle-orientated and ecologically-sustainable development configuration. This opportunity will be attractive to a variety of sectors including environmental industries, agricultural technologies, and the advanced design and manufacturing sector. Businesses in these zones will focus on value-adding activities, rather than warehousing and transport activities, which generally do not create as many employment opportunities. The businesses located in these employment lands will require a diverse range of skills, and therefore employ a range of people with professional qualifications, technical trades and varying experiences and backgrounds. Lot size flexibility will prove highly attractive to potential occupiers.

As part of the detailed design of the precincts, a range of built form controls will be developed to ensure minimum environmental and visual impacts, as well as positive interface with major streets and the interrelated public open space systems. The existing surrounding topography and strategic peripheral planting will ensure that the overall genius loci of the larger valley area will not be negatively impacted upon by the location of these employment generators.



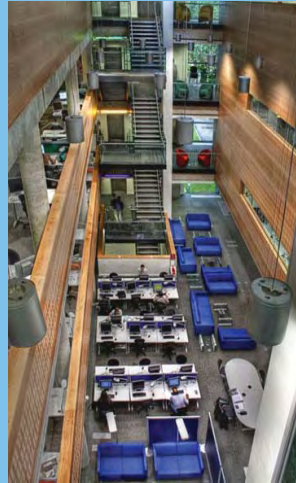
6.1.2 Research and Development Node

This niche research and development hub is located centrally within the Master Plan area and can potentially lead key initiatives to support the product development and service offering of existing and future major tenants of the employment precincts to the west and north east.

A high quality, environmentally-sustainable 'think tank' hub is envisaged, which spatially facilitates a range of publicly and privately funded research and technology development operations, potentially including a university-based research unit. This precinct has the potential to integrate tertiary level education facilities, including a TAFE or University, with this R & D capability.

This central node will create highly-skilled job prospects in the education, research and development sector, and will facilitate direct linkages and benefits between industry and research and education to promote innovation. High level education and training facilities in this precinct will allow local young people additional opportunities to remain in the Shire for their further studies and future employment.

Spatially, this hub creates a positive interface and buffer between the employment precinct to the west and the adjoining tourist node to the east.



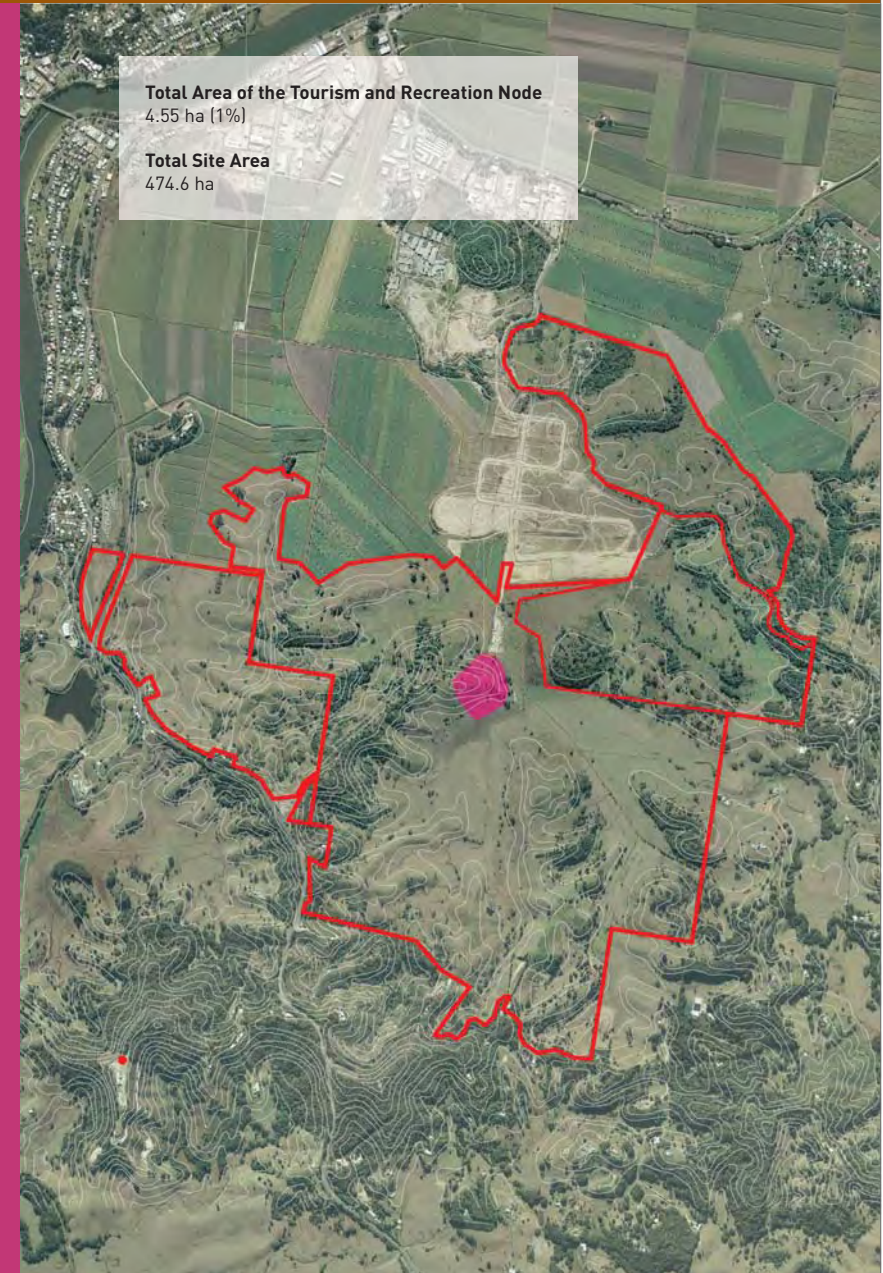
6.1.3 Recreation and Entertainment Node

Building upon an existing approval, a tourism recreation node is envisaged as an anchor to the overall development, comprising the following interrelated elements:

- A hotel resort with related spa and conference facilities.
- A high quality golf club / sports facility and related social and recreational elements.

These facilities are envisaged as an important service component to the surrounding employment, research, sporting and residential precincts and a 'lifestyle catalyst' to attract developmental investment throughout the master planned area. This precinct is considered a key attractant for major businesses looking to set up bases in the employment zones, offering a range of facilities for corporate entertaining, training and events.

This precinct is anticipated to contribute significantly to the growth of the Shire's business tourism sector, supporting development of opportunities relating to attracting regional, interstate and national meetings, conferences and events. It will also play an important role for residents in the area; hosting important community events and personal functions and occasions. This standalone recreation and tourism precinct has the potential to generate a substantial number of hospitality and related jobs.



6.1.4 The Educational Precinct

A possible location for a school is identified to the south of the existing industrial estate, Industry Central, and to the north east of the proposed conservation area. This portion of Tweed Shire Council owned land is centrally located, in close proximity to existing and future employment zones and residential areas. This facilitates the opportunity for an enviable quality of life for families that are able to walk their children from home to school on the way to work.

This site could potentially attract a private education facility specialising in areas of technology related to the research and development node with direct pathways to industry within the employment zones.

The location of the school precinct provides a positive interface transition with the identified conservation area to the west.

This node will accommodate the built form associated with the proposed local education facilities; with complementary recreation areas provided in the adjacent public recreation precinct.



6.1.5 Major Public Recreation Facilities

Sporting ovals and related public facilities / amenities will be located north of the proposed school site, adding a level of value and functionality to low-lying land that will play a key role in flood mitigation strategies for the overall development.

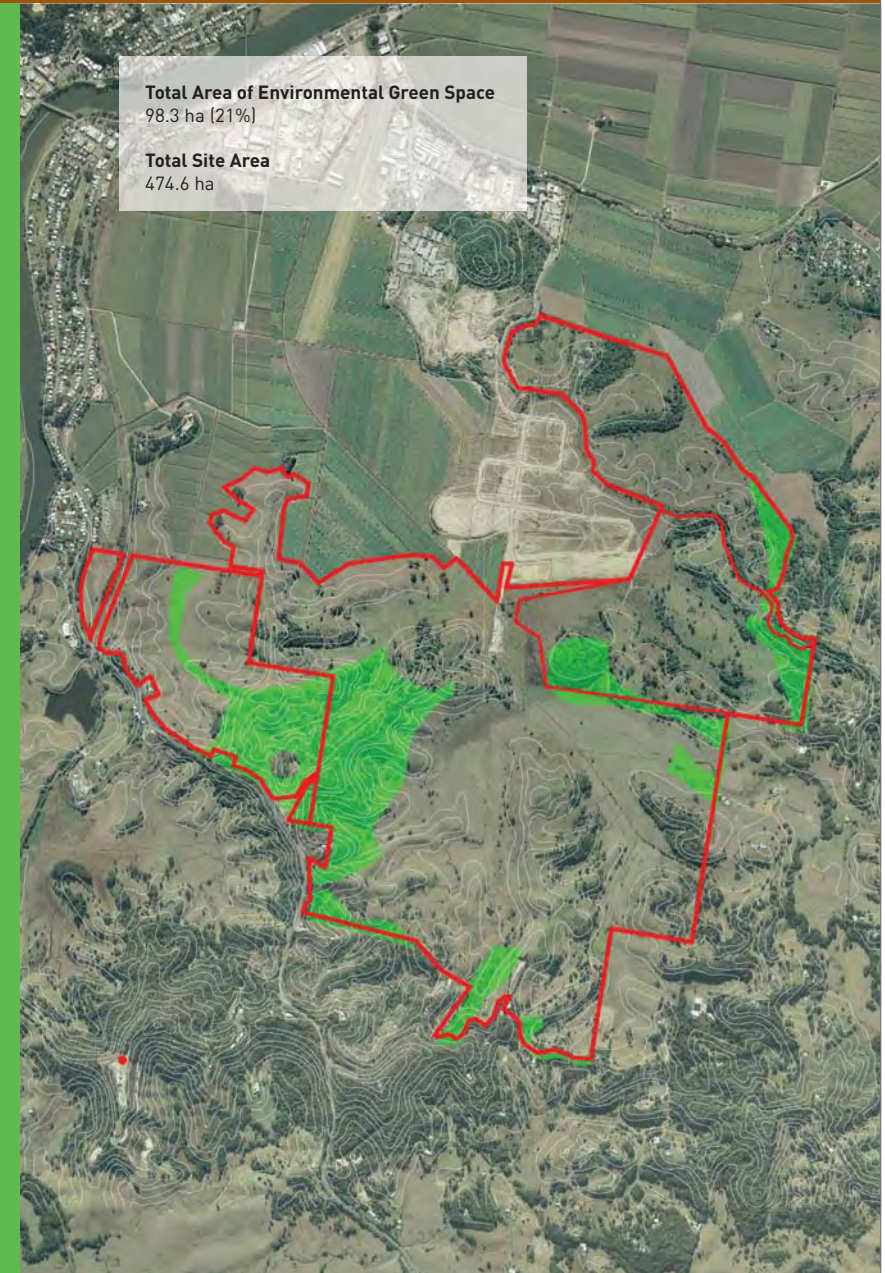
This land use element is viewed as a positive buffer to the employment zone to the north and an improved utilisation of the existing open space network whilst facilitating potential sharing of large scale sports and recreational facilities between the school and other community and sporting groups. This precinct provides important community infrastructure and a neighbourhood meeting place.



6.1.6 Environmental Green Space

Two significant environmental green space areas have been identified as part of the place-making strategy. Located to the west and east of the site, connectivity between these two zones will be facilitated through the central low lying open space network. These green areas protect well-established flora, and fauna habitat, and will contribute significantly to the scenic amenity of the future community.

Of the 98.3 hectares allocated as environmental green space areas, only 60 percent contains existing significant vegetation. The remaining 35 hectares, predominantly previous grazing country, will be revegetated; considerably enhancing the open, green character of the community.



6.1.7 Eco-Tourism

An eco-tourism / wellbeing facility is proposed within the western conservation zone, building upon the proposed Tweed River Art Gallery to the west of Tweed Valley Way.

While capitalising on the high quality, natural surroundings, this facility would tread on the ground lightly, having only a small footprint and hence impact on the local environment. Potentially including boutique- style bungalows, this facility would complement the accommodation offering of the resort in the tourism & recreation precinct.



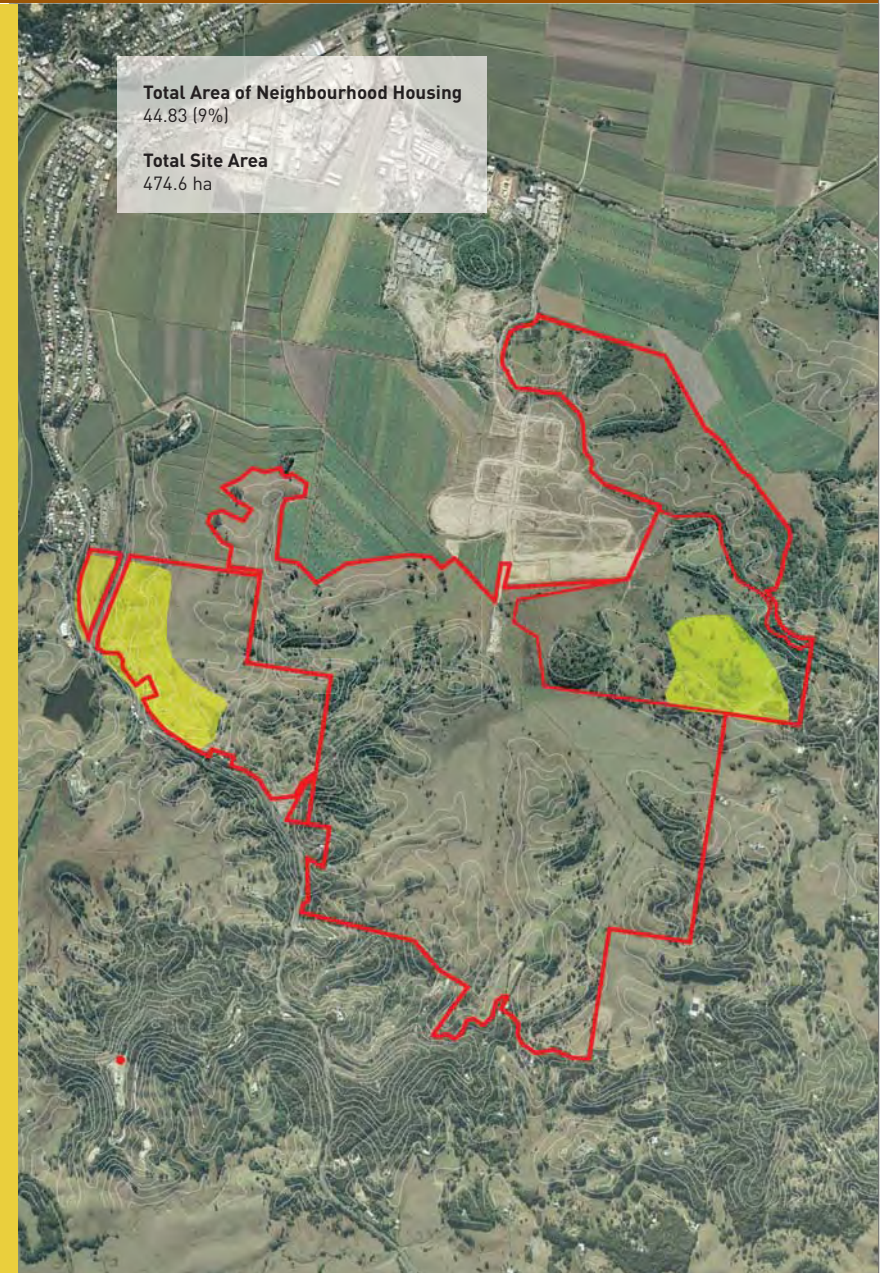
6.1.8 Neighbourhood Housing

Two neighbourhood housing precincts, separated by the rail reserve, are envisaged to be created on the western edge of the community. These precincts provide a logical extension of existing residential development surrounding Murwillumbah and will offer a range of housing outcomes that will offer improved accessibility for a broader demographic to support a diverse workforce and community at Innovation at Wardrop. These residences will set within a pattern of high quality public streets and squares.

A further traditional –style residential precinct offering affordable neighbourhood living options is proposed to the east, which would benefit from a positive northern outlook and proximity to the proposed school, public sporting facilities and employment opportunities.

The availability of these precincts ensures a range of dwelling types, lot sizes and settings to support a diverse population and workforce; and provides the opportunity to reduce private-vehicle based trips and improve the lifestyle of workers by offering the potential to live within a short-distance of their jobs. Urban growth of this kind within the broader community will assist with the potential residential and employment lands imbalance in the Murwillumbah catchment in the short and medium term.

These residential neighbourhood precincts would offer predominantly detached housing at traditional densities and could potentially accommodate an estimated 535 dwellings and 1,230 people.



6.1.9 The Golf Course

A high quality, environmentally-sustainable golf course is proposed as a key point of focus within the master planned community. It is envisaged that the course, which currently holds part of an existing approval, combined with the unique natural qualities of the surrounding conservation areas, will act as catalyst for the full range of investment and lifestyle opportunities envisaged as part of this self-sustaining community.

This facility will also ensure the maximisation and enhancement of land that is currently largely underutilised. It is envisaged that the course design will provide a high quality, multi - purpose solution that addresses issues relating to water storage, flood, conservation, eco corridors, cycle and pedestrian networks as well as general visual enhancement of the larger area.

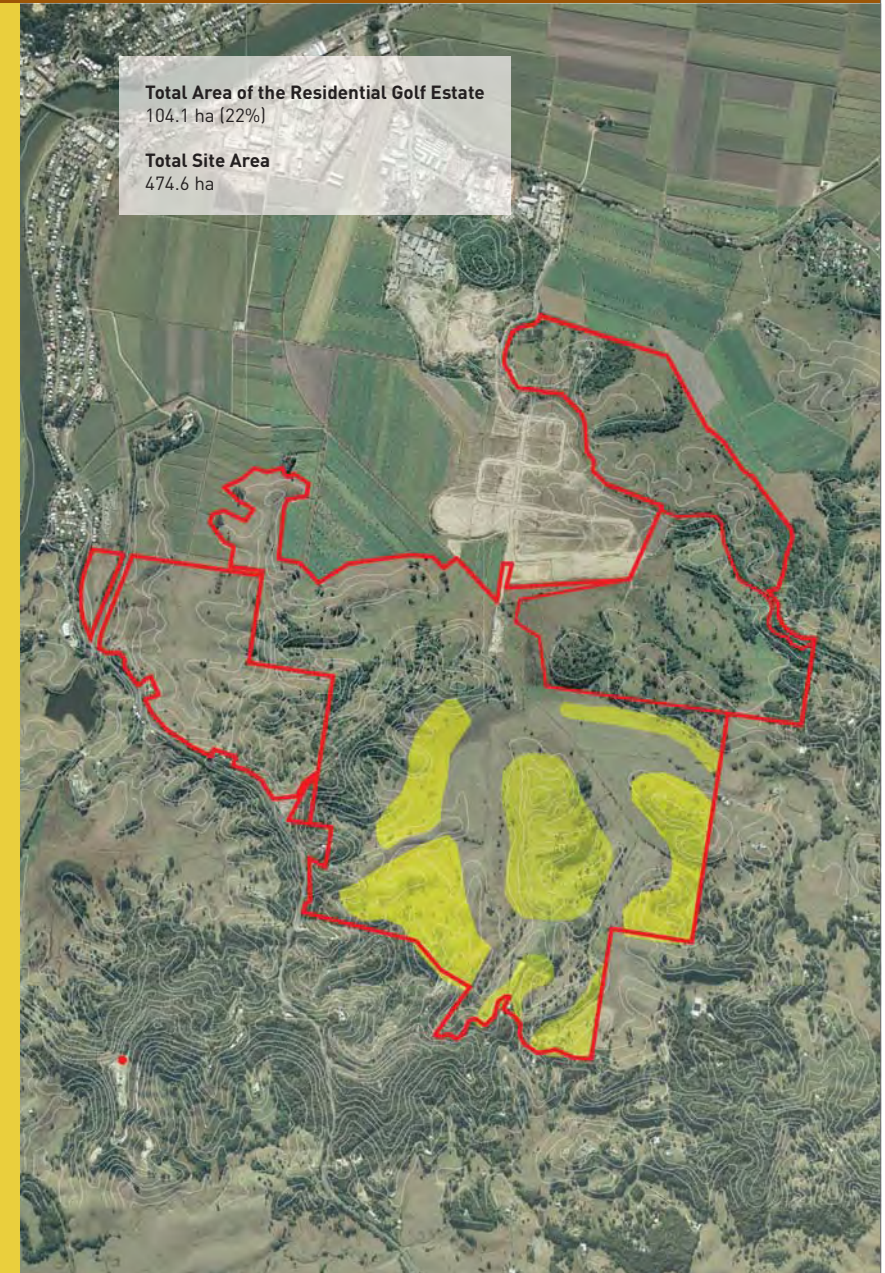
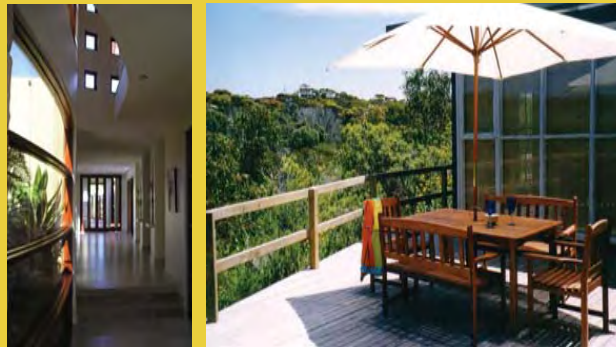


6.1.10 The Residential Golf Estate

A range of housing options and affordability levels will be integrated as part of this estate. Architectural design controls will be developed for each of the precincts within the estate, ensuring appropriate design outcomes. A network of pedestrian and cycle paths will be integrated with the design of the precincts ensuring high levels of connectivity between precincts

A system of 'green linkages' will also be developed as part of the detail design process, ensuring improved connectivity for flora and fauna and a platform for a unique 'nature orientated' lifestyle outcome.

This golf course-focussed residential precinct could potentially accommodate an estimated 1,560 dwellings and 3,600 people.










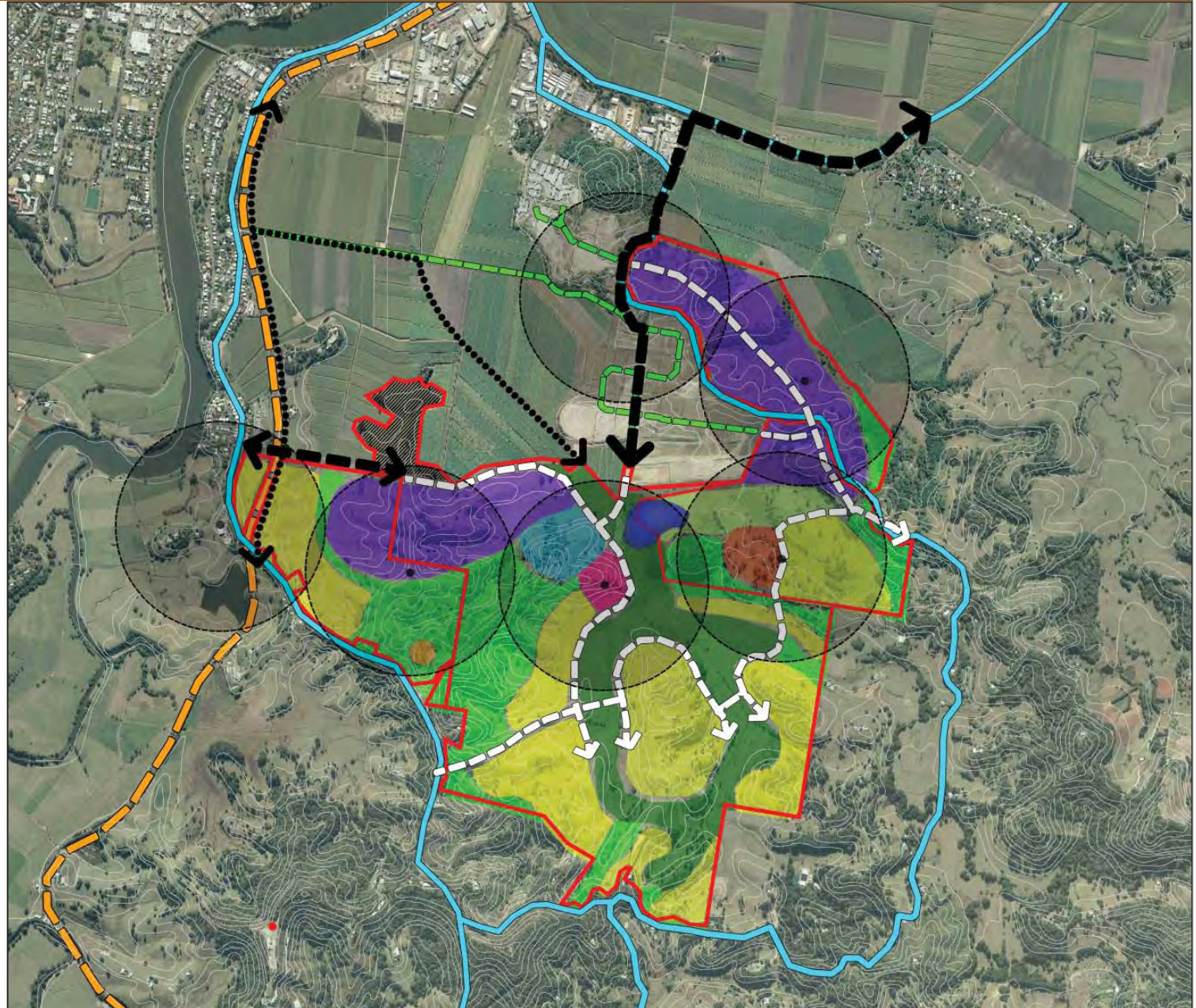
6.2 Access, Movement & Linkages.

The master plan seeks to increase levels of vehicular, pedestrian and cycle connectivity to, from and through the site. The following proposals inherent in the master plan are viewed as key to this strategy:

- 6.2.1 Improved North – South linkage to Reserve Creek Road
- 6.2.2 Greater levels of connectivity to Tweed Valley Way
- 6.2.3 Higher levels of east –west and north – south connectivity between the existing and future employment opportunity, research and development and tourism nodes.
- 6.2.4 Improved linkage between the proposed residential, school, public facilities and employment opportunities to the east of the site.
- 6.2.5 Improved east – west connectivity from the eastern edge of the site and the greater Kielvale area.

KEY

-  Internal Vehicular Network
-  Major Access Routes
-  Potential Pedestrian / Cycle Routes
-  Constructed Roads
-  Unconstructed Roads
-  Rail Corridor
-  400m Radius Pedestrian Movement



6.3 The Green Network.

Preservation of the natural surroundings is viewed as key to attracting the full range of work play and living options to Wardrop Valley and the larger Murwillumbah area.

The following environmental and place-making elements have been configured as part of the master plan to facilitate a truly sustainable community based outcome:

6.3.1 Environmental Green Space

- These areas are configured to incorporate and expand on existing significant vegetation areas identified as part of the analytical overlay process. The 'place-making' qualities of these elements will ensure the continuity of the positive environmental aspects of the area and surrounds.

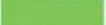



6.3.2 Enhancement of natural features such as ridge lines and gullies

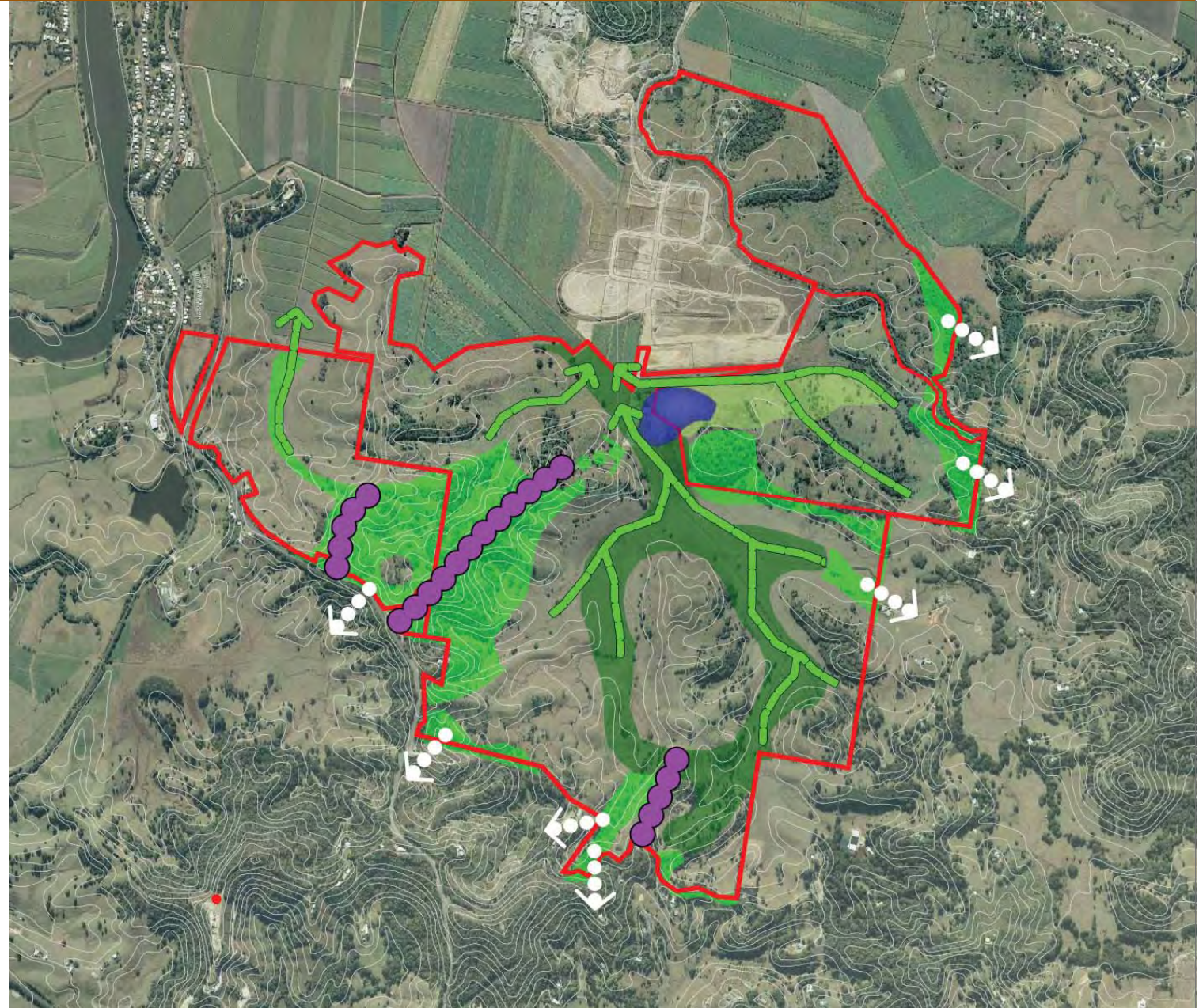
- The plan facilitates the retention and enhancement of the sites natural assets.

Future detail design of each precinct will ensure a highly integrated and sustainable 'green space network' that reinforces and protects the genius loci of the site as well as the greater Wardrop Valley area.

6.3.3 Linkages between various natural elements will facilitate the creation of a series of ecological corridors through the various parts of the master planned community.

Key

-  Environmental Green Space
-  Ridge Lines
-  Gullies
-  Linkages Between Natural Elements



6.4 Indicative Developmental Outcome

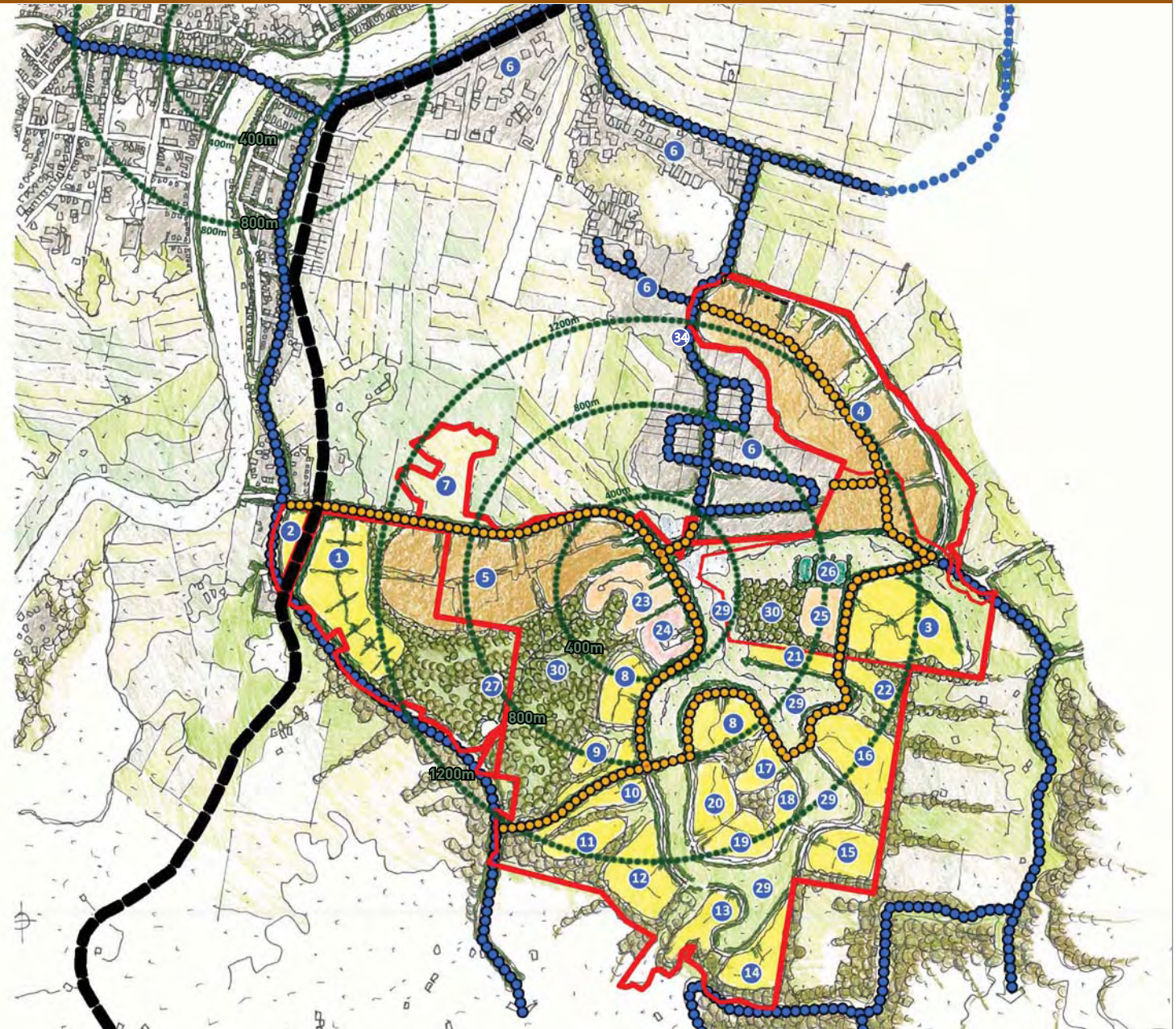
This drawing provides an indicative developmental scenario demonstrating how the green network and transport linkages could facilitate an environmentally-sustainable and highly liveable community outcome in a local Murwillumbah context.

LEGEND

- 1 - 3 Neighbourhood Housing
- 4 - 5 Employment Opportunities
- 6 Existing Employment Opportunities
- 7 Flood Storage
- 8 - 22 Residential Estate
- 23 Research Node
- 24 Tourism Node
- 25 School
- 26 Public Ovals / Facilities
- 27 Eco-tourism
- 28 Golf Tourism
- 29 Golf Course
- 30 Environmental Green Space
- 33 Tweed River Art Gallery
- 34 Convenience / Service Precinct

KEY

- Indicative Masterplan Area
- Existing Roads
- Proposed Major Roads
- Existing Rail Corridor



6.4 Indicative Developmental Outcome

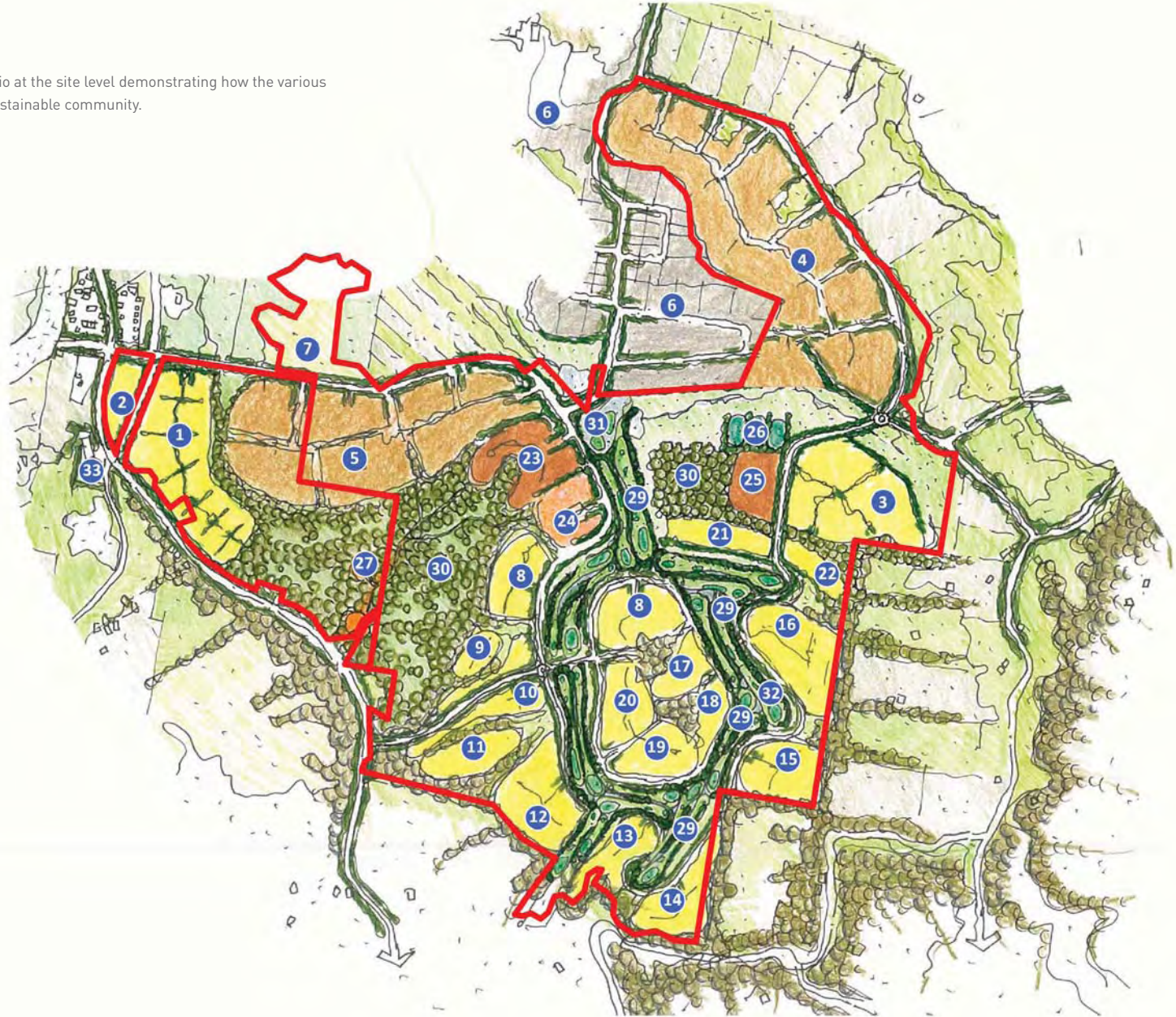
This drawing provides an indicative developmental scenario at the site level demonstrating how the various precincts will integrate and interact to create a vibrant, sustainable community.

LEGEND

- 1 - 3 Neighbourhood Housing
- 4 - 5 Employment Opportunities
- 6 Existing Employment Opportunities
- 7 Flood Storage
- 8 - 22 Residential Golf Estate
- 23 Research Node
- 24 Tourism Node
- 25 School
- 26 Public Ovals / Facilities
- 27 Eco-tourism
- 28 Golf Tourism
- 29 Golf Course
- 30 Environmental Green Areas
- 31 Wetland / Water Storage as multi-use element
- 32 18 Hole Indicative Golf Course and water sensitive design element
- 33 Tweed River Art Gallery

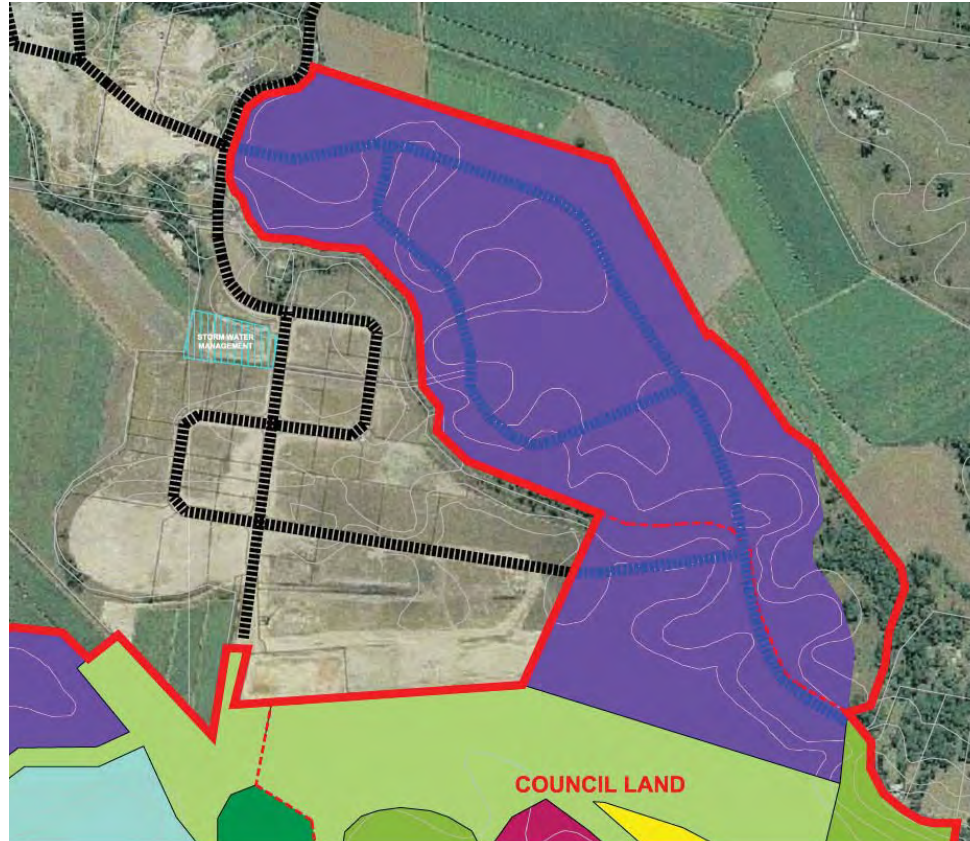
KEY

 Indicative Masterplan Area



6.4.1 Possible Structure of the North-Eastern Employment Precinct

The following drawings provide three possible outcomes for the Employment Opportunity Precinct in the north-eastern area of the site.



Innovation at Wardrop whilst within the broader South East Queensland / Northern New South Wales employment lands market will attract attention from potential occupiers from throughout the country and internationally. The unique ability for this site to offer a fully integrated work live and play solution in such an appealing natural environment means that it will be highly attractive to a broad cross section of potential uses.

As a result of the potential array of occupiers, it will be vitally important that this scheme offers a mixture of lot sizes and flexibility for potential occupiers to have sites which suit their unique requirements. It will also be important that the scheme offers a mix of different tenure types.

The table to the right illustrates indicative ranges of lot sizes for different occupier types. These sizes are only indicative and due to the flexibility which will be inherent in this project it is possible that lot sizes will vary from those in the table.

Tenant type	Indicative lot size range (m2)
National Industry	4,000 – 10,000
Service and Light Industrial	1,500 – 4,000
Business Park (Office Warehouse)	2000

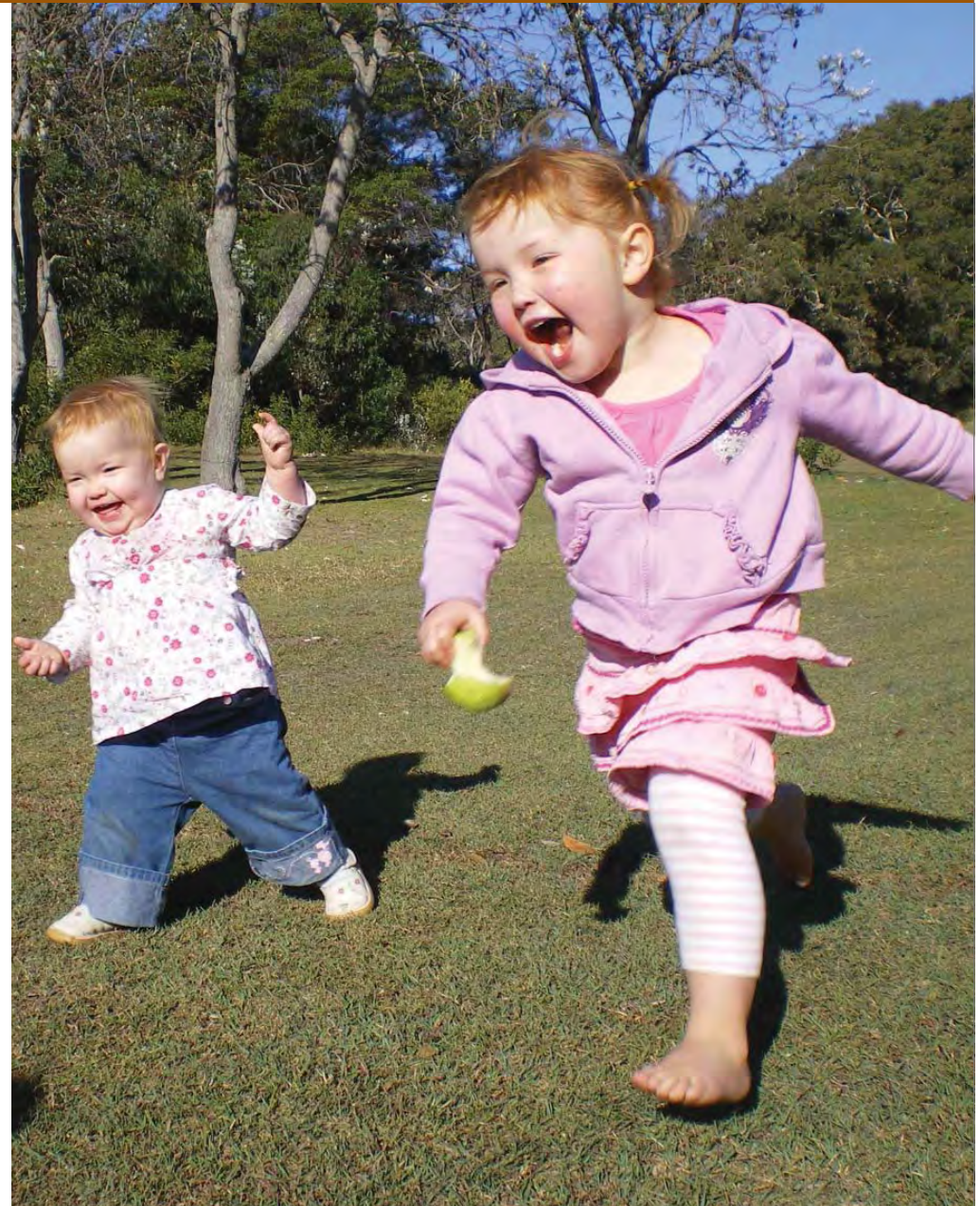
The scheme layout will acknowledge the benefit of lot dimensions being biased towards depth rather than width, allowing for efficiencies to be gained when servicing the lots and limiting frontage wastage.

The Tweed is a beautiful place. Located in the caldera of an ancient volcano and featuring world-heritage listed national parks, the Tweed River and extensive beaches and coastal areas, the Shire has been identified as a "National Landscape". However, because of this beauty, the region's laid back lifestyle, and proximity to the Gold Coast and South East Queensland, the Tweed is also an attractive place for people to want to live. It is critical in that planning for the future of the Shire, that a balanced view to growth is taken; that all the elements of triple-bottom-line sustainability are addressed and considered – social, economic and environmental.

Social Sustainability.

By focusing residential growth to the urban and coastal areas of the Shire, while facilitating employment growth near Murwillumbah, there is a risk that dormitory suburbs will be created. Innovation at wardrop offers the opportunity to create a largely self-contained community, incorporating not only a range of jobs and residential prospects, but also education and recreation facilities. This approach to development offers the opportunity to create a cohesive, vibrant community with a high quality of life that works, lives and plays together in the catchment.

The range of businesses that would be attracted to operate in the mixed-used business and technology precincts would create a need for a variety of skill bases at different skill levels. These employment opportunities will assist in attracting and retaining young families in the region, challenging projections for the ageing of the population of the Shire, creating a more sustainable future for the Shire.



Economic Sustainability.

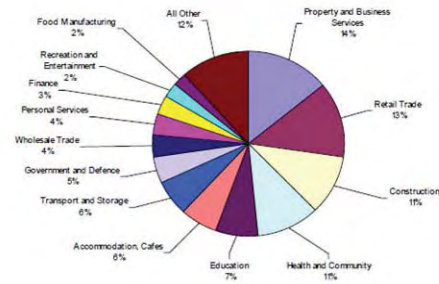
The Tweed's economy is currently centred predominantly on satisfying the needs of the Shire's growing residential population; heavily focused on construction and property, community services, retail, hospitality and generally the services sector. Innovation at Wardrop will assist in broadening the contributions of the more productive sectors of the economy – facilitating growth in the manufacturing, business services, and education industries.

Innovation at Wardrop has the potential to create in the order of 4,807 jobs for the Shire, of which over 96 percent would be export-driven. These 4,640 jobs alone, supported by mixed business and industry, research and technology, and business tourism, would contribute all of the required export-driven jobs targeted for the Tweed by the Far North Coast Regional Strategy. An additional 167 jobs will be created through hospitality and tourism, education and other services, which will also contribute to the FNC target for population-driven jobs for the Tweed.

Innovation at Wardrop Estimate of Direct Full-Time Equivalent Jobs to be Created Post Construction		
Precinct	Precinct Area (Hectares)	Estimated FTE Jobs
Employment Lands	106	4,240
Research & Development	10	400
Primarily Export-Driven Jobs	116	4,640
School	7	35
Tourism & Hospitality	6	132
Primarily Population-Driven Jobs	13	167
Total Estimate of Ongoing Jobs		4,807

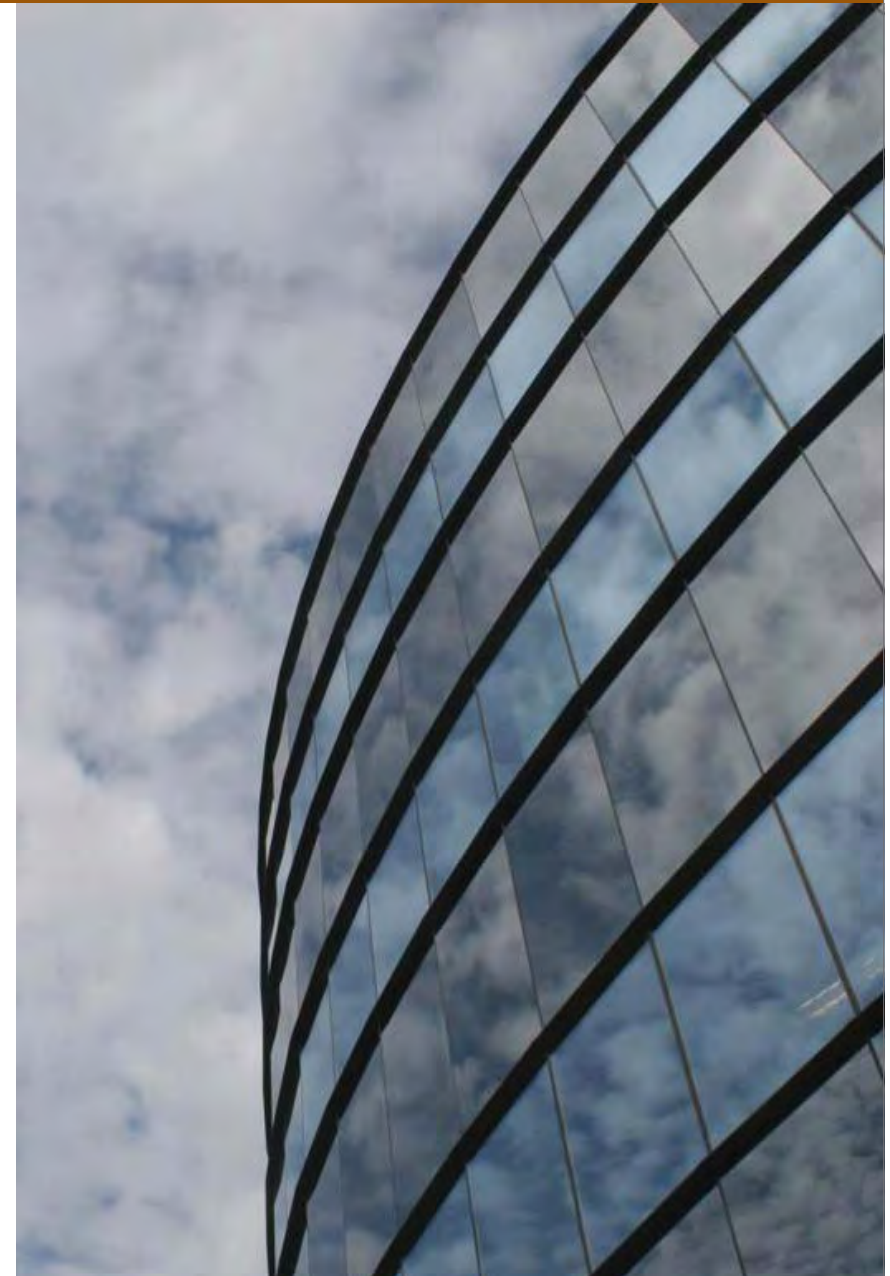
Estimated employment during the construction phase of this project is 8,300 jobs.

Industry Contribution to the Value Adding of the Tweed Shire, 2004/5



Source: Tweed Economic Development Corporation
www.tedc.com.au, 2009

	Innovation at Wardrop	FNC Strategy for Tweed 2031	Proportion of Tweed Target
Jobs – Population driven	167	12,410	1%
Jobs – Export driven	4,640	4,590	101%
Dwellings	2,095	19,100	11%
Population	4,830	35,730	14%



Economic Sustainability.

Historic rates for take up of employment land in the Tweed have been low, reflective of the lack of employment lands available. However, the Tweed is anticipated to experience strong demand for employment lands, for a number of reasons including:

- Proximity to South East Queensland;
- Limited supply of employment lands in South East Queensland (that are located in desirable lifestyle areas);
- Availability of land in the Tweed to facilitate larger-lot land parcels and facilities; and
- Relatively low land cost.

In addition to this, the range of associated business, recreation, research and education facilities, and the opportunity to live in close proximity to work, offered through Innovation at Wardrop, are anticipated to drive even higher take up rates for the Tweed over the coming years. It is therefore estimated that, following a recovery of the economy in 2011, take up rates in the Tweed for employment lands will increase to 15 hectares per annum. This represents a critical opportunity to proactively facilitate business growth, investment attraction and job creation for the Tweed.

The table to the right shows very preliminary projections, indicative of how take up of employment lands may occur over the period to 2022, demonstrating a capacity of the major existing and proposed precincts to create an anticipated total of 8,550 jobs for the Tweed Shire.

This table relies upon the following assumptions:

- Initially lower take up rate of 10 hectares per annum, given the current economic climate; then increased to the anticipated 15 ha per annum as at 2011;
- Industry Central, which has 10 hectares already sold/leased; should benefit from a concept being available for Innovation at Wardrop next door and the level of facilities associated with the Masterplan; and should be sold out by the end of 2013
- Heritage Pacific development at Pottsville to come online in 2011 with 20 hectares of highway-adjacent employment lands, focused on the attraction of transport, logistics and warehousing businesses. Heritage Pacific's second proposed precinct of 20 hectares is considered for very long-term rezoning and development, given the current focus of the Far North Coast Strategy away from the eastern side of the Pacific Highway. It is suggested that businesses will require larger footprint sites, but take up will be slower given the higher cost of land.
- Innovation at Wardrop East to come online in 2013.

- "Other" employment lands consist of the Border Race Track precinct (9 hectares) and the Airport Precinct 2 (23 hectares) identified for short- and medium-term development respectively in the Tweed Employment Lands Strategy.
- An employment creation rate of 45 jobs per hectare.
- The "associated residential dwelling take up" column aims to provide a preliminary estimate as to the number of residential dwellings required to achieve an 80 percent employment self-containment rate. These dwellings should be built in close proximity to employment opportunities to improve work-life balance for individuals and families, reduce the impact on infrastructure provision and maintenance, and minimise emissions to the environment resulting from private-based vehicle trips. This residential dwelling estimate only accounts for direct demand driven by job creation in the Shire, and does not take into account other population growth and hence dwelling demand in the Shire that occurs based on lifestyle decisions.

Both key employment precincts at Innovation at Wardrop will play a key role in short- to medium-term availability of large-lot land for stimulating job creation in the Shire.

Year	Industry Central	Pottsville Logistics Hub	Innovation at Wardrop East	Innovation at Wardrop West	Other	Annual Take Up Rate	Cumulative Take Up Rate	Anticipated Cumulative Job Creation	Assoc. Residential Dwelling Demand
2009	10					10	10	450	360
2010	10					10	20	900	720
2011	10	5				15	35	1,575	1,260
2012	10	5				15	50	2,250	1,800
2013		10	5			15	65	2,925	2,340
2014			10		5	15	80	3,600	2,880
2015			10		5	15	95	4,275	3,420
2016			10		5	15	110	4,950	3,960
2017			5	5	5	15	125	5,625	4,500
2018			5	5	5	15	140	6,300	5,040
2019				10	5	15	155	6,975	5,580
2020				15		15	170	7,650	6,120
2021				15		15	185	8,325	6,660
2022				5		5	190	8,550	6,840

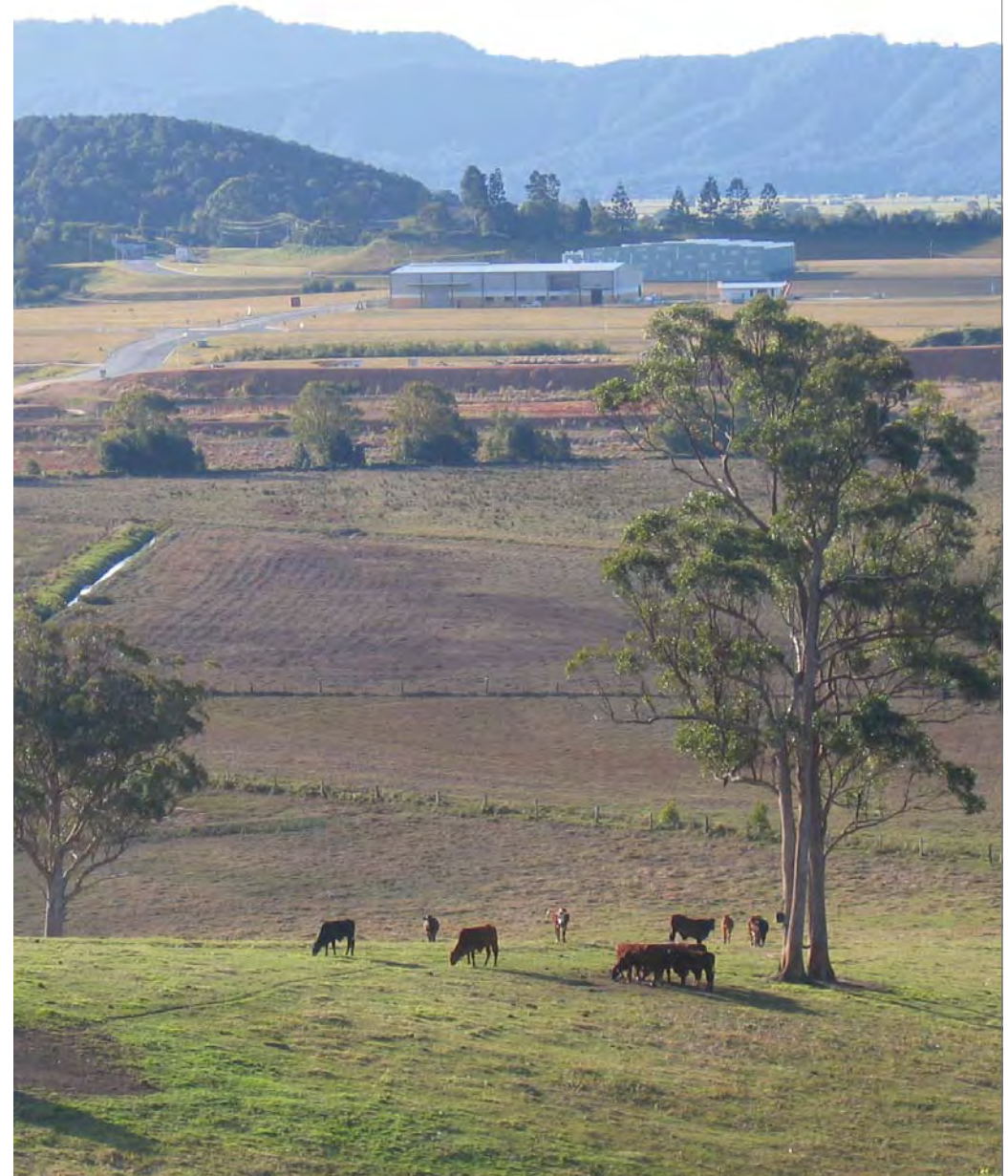
Environmental Sustainability.

The Tweed Shire has an array of natural attributes and features that deserve conservation for future generations. The Far North Coast Regional Strategy aims to limit future growth to the east of the Pacific Highway as one way of protecting these environmental values. Innovation at Wardrop supports this goal by focussing growth away from the Shire's environmental-sensitive coastal areas.

While the Wardrop Valley site has only limited areas of environmental and ecological significance; a preliminary assessment of constraints has ensured that the site's natural features have been maximised in designing this future community. In conjunction with open space, recreation areas and detention areas, innovation at Wardrop will build on less than sixty percent of the total site area.

By creating a self-contained community, rather than just an employment precinct isolated from residential communities, innovation at Wardrop has the potential to significantly reduce private-vehicle based carbon emissions and instead promote walking and cycling. The creation of 4,800 jobs in the Tweed is especially critical to a reduction in environmental impact given that currently the Shire has a daily net out-migration of 7,000 workers to the south-east Queensland.

Land Area – Green/Open Space	Hectares	% of Total Site Area
Vegetation retained as environmental green space	91	19%
Land retained for open space e.g. golf course & ovals etc	83	17%
Total Green/Open Space Area	174	37%



Case Study 1: The University of Ballarat Technology Park.

The University of Ballarat Technology Park (UBTP) is a 29-hectare site located 10 (ten) kilometers from the regional city of Ballarat in Victoria. The site is adjacent to the University of Ballarat's Mt Helen Campus and accommodates a range of businesses from start-ups, small-to-medium enterprises, and large-scale internationals, including IBM.

UBTP employs approximately 1,350 persons and contributes an estimated \$106 million in annual household income and \$350 million in annual economic outputs to the regional economy (direct and flow on impacts).

UBTP offers business incubator services, flexible footprints and office spaces for lease or rent, a café, gym, short-to-medium term accommodation and conference facilities.



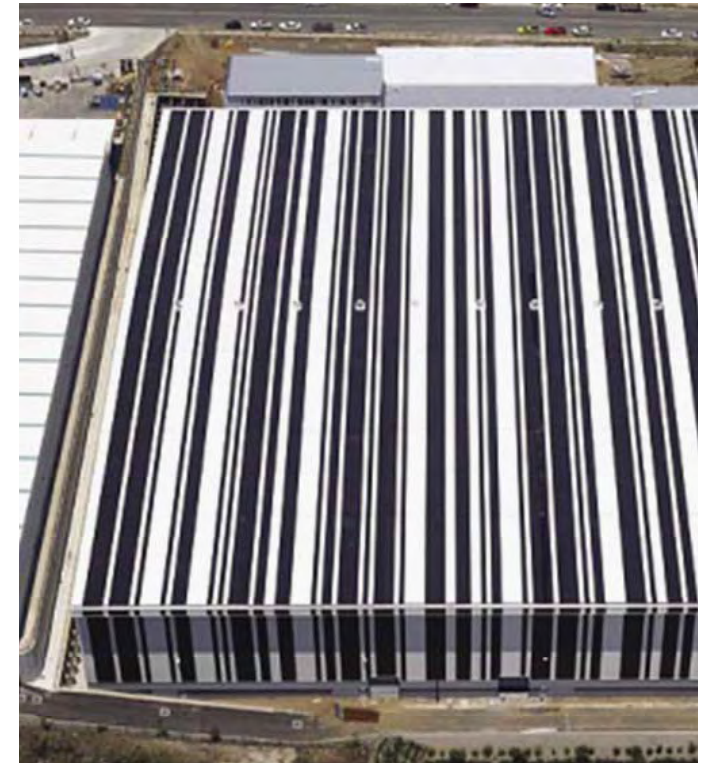
Case Study 2: Norwest Business Park.

The Norwest Business Park, launched in 1992, is a 377-hectare integrated masterplanned estate in Baulkham Hills near Sydney. In addition to accommodating 400 businesses, who employ 25,000 workers, Norwest Business Park will involve the creation of 2,000 residential lots. The estate also offers an impressive range of facilities including a hotel, shopping centre, and post office, as well as medical, banking and childcare services.



Case Study 3: Greystanes Estate, Sydney.

Greystanes Estate is a 330-hectare integrated masterplanned estate in Western Sydney that consists of two major employment precincts, totaling 140 hectares, a 104-hectare residential precinct, and significant areas of open space. The estate accommodates 1,500 dwellings, potentially 4,000 persons and over 8,500 jobs.





Innovation at Wardrop is an opportunity for the Tweed Shire to grow business, attract investment and generate jobs - working towards a sustainable future for the Tweed. With high population growth rates, an ageing population profile, and low labour force participation, it is critical that the Shire create employment opportunities to defy projected demographic trends. The economy's current dependence on the population-driven, service sector and a narrow job market means that of the Shire's available workforce, a significant proportion travel to the Gold Coast for work daily.

The Tweed offers a strategic business location, given the Shire's proximity to South East Queensland, which has a substantial and growing population base, but also a very limited supply of large-lot employment land in desirable lifestyle locations. The Shire has the opportunity to take advantage of this pent-up demand from over the border, as well as attract national and international interest, to outstrip historical land take up trends and compete in the South East Queensland employment land market.

The masterplan for Innovation at Wardrop has been developed based on leading design principles and the concept of sustainable, self-contained living. The primary impetus for this future community is the development of over 100 hectares of employment-generating land, which has previously been identified by the Tweed Employment Lands Strategy. In order to create an appealing business destination, Innovation at Wardrop will draw upon an existing approval for a golf course and recreation precinct, and then incorporate elements of research and technology, education, conservation, ecotourism and public open space and facilities. Innovation at Wardrop will also offer a range of residential accommodation options for the workforce employed at the employment zones, supporting a diverse and vibrant 'work, live and play' community. Very limited opportunities exist for suitable land holdings of this quantum, with only dual ownership, that will allow the creation of all these land uses together to support a sustainable, employment-focussed community.

While in the short-to-medium term, the Shire's urban residential growth is focused in the northern and coastal areas, Wardrop Valley is anticipated to generate a substantial proportion of not only the Tweed, but the region's, export-driven jobs. Creating a more sustainable outcome for the Tweed, by creating a 'live, work and play' community, Innovation at Wardrop offers the opportunity to balance the employment and residential development within the Shire's central Murwillumbah catchment. By allowing the workforce to live in close proximity to their employers, the number of daily, private-vehicle based journeys will decline reducing both car-based emissions and hence greenhouse effects and lessen impacts on public road infrastructure; encourage active living and healthy communities through the opportunity to walk or cycle to work; and improve employees work-life balance allowing them to spend more time each day with their friends and families.

Innovation at Wardrop has the potential to create in the order of 4,800 jobs for the Tweed; 97 percent of which are contributing to the Far North Coast Regional Strategy's export-driven jobs target for the Shire. These jobs will attract a range of employees with varying skills, qualifications and experience, supporting locals who currently are required to travel to the Gold Coast for employment, attracting young families to the Shire and sustaining local business and service expansion opportunities.

The Innovation at Wardrop concept is driven by creating a balanced outcome and uses only 63 percent of the total footprint. The remainder of the site, over 170 hectares, is to be retained as part of a network of public recreation spaces, environmental green space areas and golf course - contributing to a green character for the community. Not only does the masterplan focus on retaining significant vegetation, but enhancing and revegetating degraded areas in key locations.

Innovation at Wardrop is an exciting opportunity for the Tweed to generate employment to drive economic and demographic change in the Shire, while balancing social, economic and environmental considerations to build a sustainable, self-contained 'live, work and play' community.


The Far North Coast Regional Strategy states that “future growth will be managed by preventing the spread of coastal development and encouraging the development of non-coastal centres – ensuring adequate land is available and appropriately located to sustainably accommodate the projected housing, employment and environmental needs of the Region’s population over the next 25 years.” Innovation at Wardrop supports this regional growth management strategy by:

- Creating a master-planned, self-contained community;
- Focusing on job creation, investment attraction, and business expansion;
- Offering a sustainable work-life balance and lifestyle for residents; and
- Assisting in balancing growth pressures in the Murwillumbah catchment, supporting its role as an important non-coastal centre.

The subject site is partially considered for employment lands in the Far North Coast Regional Strategy; however the Strategy emphasises that it is “confident in the knowledge that innovative development proposals can still be considered even though they may be outside of the regional strategy process.” This consideration is facilitated through suitably addressing Threshold Sustainability Criteria.

As demonstrated in the table to the right, Innovation at Wardrop complies with all relevant sustainability criteria for consideration for inclusion of the site as a future urban release area. Therefore, rather than awaiting completion of the five-yearly review of the Far North Coast Regional Strategy (in 2011), Council is requested to:

1. Indicate its “in principle” support for “Innovation at Wardrop”;
2. Consider and support a Planning Proposal (to be prepared on behalf of the proponents) to prepare a Draft Local Environmental Plan to rezone the land and refer the Planning Proposal to the Department of Planning for consideration by the Local Environmental Plan Panel;
3. Subject to agreement by the Local Environmental Plan Panel, proceed with a Local Environment Plan amendment.

Threshold Sustainability Criteria	Assessment against Concept Masterplan for Innovation at Wardrop	
Infrastructure Provision – Mechanisms in place to ensure utilities, transport, open space and communication are provided in a timely and efficient way.		Substantial infrastructure is in place to the heart of the site and opportunities exist to expand these services through allocated infrastructure corridors. Provisions for expansion of utilities capacity over time to cater for growth, transport and open space have been considered in preparation of the concept Masterplan. Detailed planning, timing and funding considerations for infrastructure provision will be discussed with relevant stakeholders at the appropriate time.
Access – accessible transport options for efficient and sustainable travel between home, jobs, services and recreation to be existing or provided.		This proposal reflects the opportunity to create a more self-contained community in the Murwillumbah catchment – balancing planned employment growth with residential growth. By creating a masterplanned community integrating employment outcomes, living options and education & recreation facilities, Innovation at Wardrop will ensure a sustainable outcome for transport and access options with local residents able to reduce their private-vehicle trips and improve their lifestyle. Existing industrial road capacity to the site will cater for development to an initial threshold level.
Housing Diversity - provide a range of housing choices to ensure a broad population can be housed		Innovation at Wardrop proposes a community of nearly 5,000 people, in 2,100 dwellings. Integrated amongst environmental green space areas, recreation facilities and employment opportunities, a number of housing precincts will offer a range of living and lifestyle options from neighbourhood housing offering a range of affordable outcomes through traditional detached dwellings to a higher-end golf-course focussed residential precinct.
Employment Lands - Provide regional/local employment opportunities to support the Far North Coast’s expanding role in the wider regional and NSW economies		The primary impetus for this project is the supply of employment lands to address the Shire’s urgent requirement to create jobs. Innovation at Wardrop alone will create nearly 100 percent of the Far North Coast Regional Strategy’s jobs target for the Shire. This integrated masterplanned community is critical to the concept of not just accommodating local business growth over time, but instead creating a precinct that will act as a catalyst for attracting interstate, national and international companies, investment and jobs to the Tweed for sustainable long-term growth.
Avoidance of Risk- Land use conflicts, and risk to human health and life, avoided		Innovation at Wardrop has been masterplanned to create a range of integrated and complementary precincts offering a self-contained work, live & play opportunity. Precincts have been planned to limit land use conflict and incorporate suitable buffers between different land uses, including environmental green areas, open space networks, and sport and recreation facilities, which also add considerable value to the lifestyle offered to businesses and residents.
Natural Resources - Natural resource limits not exceeded! environmental footprint minimised		Innovation at Wardrop incorporates just under 100 hectares in environmental green space areas, which equates to nearly a quarter of its total 475 hectares! Other key areas of vegetation will be retained where possible based on detailed planning phases of the project.
Environmental Protection - protect and enhance biodiversity, air quality, heritage, and waterway health		The Tweed Shire has an array of natural attributes and features that deserve conservation for future generations. The Far North Coast Regional Strategy aims to limit future growth to the east of the Pacific Highway as one way of protecting these environmental values. Innovation at Wardrop supports this goal by focussing growth away from the Shire’s environmental-sensitive coastal areas.
Quality and Equity In Services - quality health, education, legal, recreational, cultural and community development and other government services are accessible		Innovation at Wardrop will host a range of quality education, recreation, entertainment, community and convenience facilities. Importantly though, the residential and employment growth in this masterplanned community will also assist in creating a critical mass of population within the broader Murwillumbah catchment to support the availability and viability of improved infrastructure, services and facilities in the administrative centre of the Tweed Shire.

