

**South Dural**

**SUBMISSION TO HORNSBY SHIRE COUNCIL  
For**

**LAND CAPABILITY PLANNING  
CONTEXT REPORT – SEEKING  
CONSIDERATION OF THE RELEASE  
OF LAND AT SOUTH DURAL FOR  
URBAN PURPOSES**

**Prepared for**

**South Dural Land Owners Group**

**Prepared by**



**March 2007**

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## **Section A – Executive Summary**

### Purpose of Report

This land capability planning report has been prepared to advance the release of land located at South Dural for urban purposes.

### Land Holding and Context

The land holding includes approximately 240ha and is generally bounded by Old Northern Road, New Line Road and Hastings Road. It represents a precinct surrounded principally by recent urban development at Glenhaven and Cherrybrook.

Comprising a largely cleared landscape and the headwaters of Georges Creek, the land is generally devoted to rural/residential pursuits, with isolated instances of commercial development and community facilities.

### Zoning

The land is currently zoned rural (small holdings – agricultural landscape), environmental protection (river catchment) and special uses (community use).

### Regional and Sub-regional Planning Context

The Metropolitan Strategy establishes a template for the future development of Greater Sydney. Sub-regional planning strategies are in the course of preparation to deliver the Metropolitan Strategy objectives.

The subject land has significant potential to contribute to local/sub-regional housing supply and to capitalise upon and contribute to local and sub-regional/regional infrastructure.

### Environmental Capacity

The land, with the exception of the creek system and its associated buffers and some isolated remnant vegetation, exhibits few physical constraints to its urban development.

Previous concerns with the environmental health of Berowra Creek have been substantially redressed by recent works in respect of the local sewer systems and coupled with the pursuit of water sensitive urban design principles and appropriate sewer amplification; do not present water quality as a mitigating circumstance.

### Rural Future

The subject land has become increasingly marginalised as an agricultural precinct over recent decades. There being little likelihood of it being ‘rejuvenated’ as a precinct focussed on sustainable agriculture.

There are no substantial commercial agricultural ventures being undertaken. The economic rents are high as are the prospects of rural/urban conflict potentially associated with more capital intensive operations. The land is surrounded by urban development. At the days end there is little prospect of the locality being 'rejuvenated' as a precinct focussed on sustainable agriculture.

### Servicing

Engineering service infrastructure, transport infrastructure and human service infrastructure is available in the locality and capable of ready augmentation/expansion to service the subject precinct. Such process would, however, involve significant owner funded commitments to local and regional service and infrastructure contributions/levies.

### A Sustainable Development Proposal

A mixed-use development scheme, as promoted in the Structure Plan, modelled on the principles of water sensitive urban design and permeable and diverse movement systems provides a unique opportunity to expand upon existing centres and capitalise upon existing and proposed infrastructure and realise the housing and broader sustainability objectives enunciated in respect of Council's Housing Strategy and the Metropolitan Strategy.

### Addressing Immediate Housing Supply

The site as "hole in the donut" cries out to capitalise on infrastructure, integrate with surrounding lands and contribute immediately to redressing the housing supply shortage.

### Socio/Economic Overview

The proposed development will provide an economic stimulus to the area. Job opportunities and investment will be created by the development itself; whilst new residents will increase the demand for facilities and services, thereby enhancing local business prospects.

Additional local expenditure will support a small local centre and assist in building a sense of community. The sub-regional and regional centres of Castle Hill and Rouse Hill respectively will benefit from additional local expenditure. On-site local employment opportunities and nearby at Norwest, Dural and the sub-regional and regional centres will provide for a more sustainable community.

The development will occasion improvements in local and sub-regional/regional physical and social infrastructure provision.

### Government Implications

Infrastructure impacts will be fully met by developers – there will be no cost to government. Significant GST revenue will be generated by the development. Further, a revenue stream from land tax, stamp duty etc will also be generated.

### Timing/Staging

The first land is likely to be available in 2010 should Council and Government commit to the rezoning of the land shortly. The release is likely to be staged over approximately a 10-year period.

### Feasibility Observation

The project is likely to realise a return of 22 or 25% and an Internal Rate of Return of approximately 15% based on current projections. This margin is considered to be in line with general industry expectations. The Internal Rate of Return (IRR) is rather modest. Should the development proceed in stages the IRR for each stage would deliver a higher result as a project as a whole.

### Urban Release

The release of the subject land should represent a priority for Council and the Department of Planning and is generally consistent with their respective strategies. It is accordingly recommended that Council together with the Department of Planning recognise the potential of the land and commit to a program for its expedient release for urban purposes.

## **Section B – Introduction**

### **1.0 General**

Michael Brown Planning Strategies has been engaged by the South Dural Land Holders Group to prepare a town planning report to support and facilitate the expeditious release of land known as Old Northern Road, South Dural for urban purposes.

### **1.1 Nature of the Land**

The land and its ownership is described more fully in Section C; whilst its prevailing zoning is detailed in Section D. Briefly, however, the land (some 240ha) is used largely for rural residential pursuits and exhibits generally an open landscape with isolated pockets of remnant vegetation and the heavily vegetated headwaters of a creek system, comprising some steeper lands. Further, isolated commercial facilities servicing the locality are dotted across the landscape.

### **1.2 Previous Rezoning Submissions**

A number of rezoning submissions have been submitted in respect of the subject land over recent years. These proposals have sought to respond to the prevailing Metropolitan Planning context, Council's policy position and the platform established by authorities and instrumentalities in respect of locality based environmental issues.

Previous grounds for rejection of urbanisation proposals included:

- Inconsistency with State Government's "Compact City" strategy and the concentrated housing model underpinning Council's Housing Strategy.
- Densities inconsistent with Metropolitan Planning.
- Adequate supply of housing in high priced sub-market.
- Prevailing environmental constraints.
- Likely exacerbate poor water quality of Berowra Creek.
- Negative impacts on prevailing scenic quality.
- Inadequate infrastructure.
- Lack of public transport and over reliance on private motor vehicles (and attendant poor air quality impacts).
- Loss of existing and potential agriculture.
- Likely significant cost impact on Government.

### **1.3 Future Urban Potential**

The land is considered to have inherent urban potential, as has been demonstrated in the past. With the release of the Metropolitan Strategy and North West Growth Centre proposal and infrastructure provisions and lack of supply in the immediate sub-market, it is timely to reinvestigate the future of the subject land.

With the preceding planning context having been established it is no longer sufficient to 'retire' and suggest that the land's future remains largely one of agriculture and rural landscape imagery.

The surrounding development and the regional planning and infrastructure strategies before Council and the Department to seriously investigate and action the urban release of this "hole in the donut" holding.

This report seeks to more fully articulate the land's inherent urban potential and moreover its ability to be serviced and developed as a sustainable new community and in so doing contribute to Council and the Department's housing, infrastructure and natural systems objectives, in a timely manner.

#### **1.4 Urban Release Context**

This report has been prepared having regard to Council's advice as communicated in correspondence on 20 December 2006 and the interpretation thereof in the context of the Department of Planning's Circular and in respect of facilitating the use of land for urban purposes.

The report relies on the conclusions of the detailed studies undertaken in respect of the following areas and a 'desktop' review thereof (through the accessing of new data and preliminary consultation with Statutory Authorities and Service Instrumentalities):

- **Physical Infrastructure**

*Services* (water, sewer, electricity, gas, telecommunications)

*Accessibility* (roads, public transport, cycle/pedestrian)

- **Natural Environment**

*Geotechnical* (topography, soil, landscapes and hazards, drainage)

*Ecology* (flora and fauna)

*Mineral Resources* (mineral resources and extractive materials)

- **Cultural Environment**

*European Heritage*

*Indigenous Heritage*

- **Rural Environment**

*Agricultural Capability*



*Landscape Imagery*

- **Human Services**

*Hospitals* (private and public)

*Higher Education* (universities, TAFE)

*Schools* (public and private)

*Children and Family Services* (children and aged)

*Emergency Services* (ambulance, police, fire brigade)

*Retail and Commercial Facilities* (regional, sub-regional and local facilities)

## **1.5 Structure of the Report**

The preceding introduction establishes the context of this report. The report proceeds in Section C to document the characteristics of the land holding (i.e. the subject land).

Section D details the Planning Background/Context. A detailed commentary of the natural, cultural, human, rural environments is documented and the implications for urban development noted in Section E. A summary of constraints and opportunities is presented in Section F.

An outline of the Development Proposal is provided in Section G.

Section H provides an overview of the merits of the proposed urban development. Section I provides a brief outline of the possible rezoning process path; whilst Section J details a conclusion and provides an overview of the case for releasing the subject land for urban purposes.

Finally recommendations are outlined in Section K.

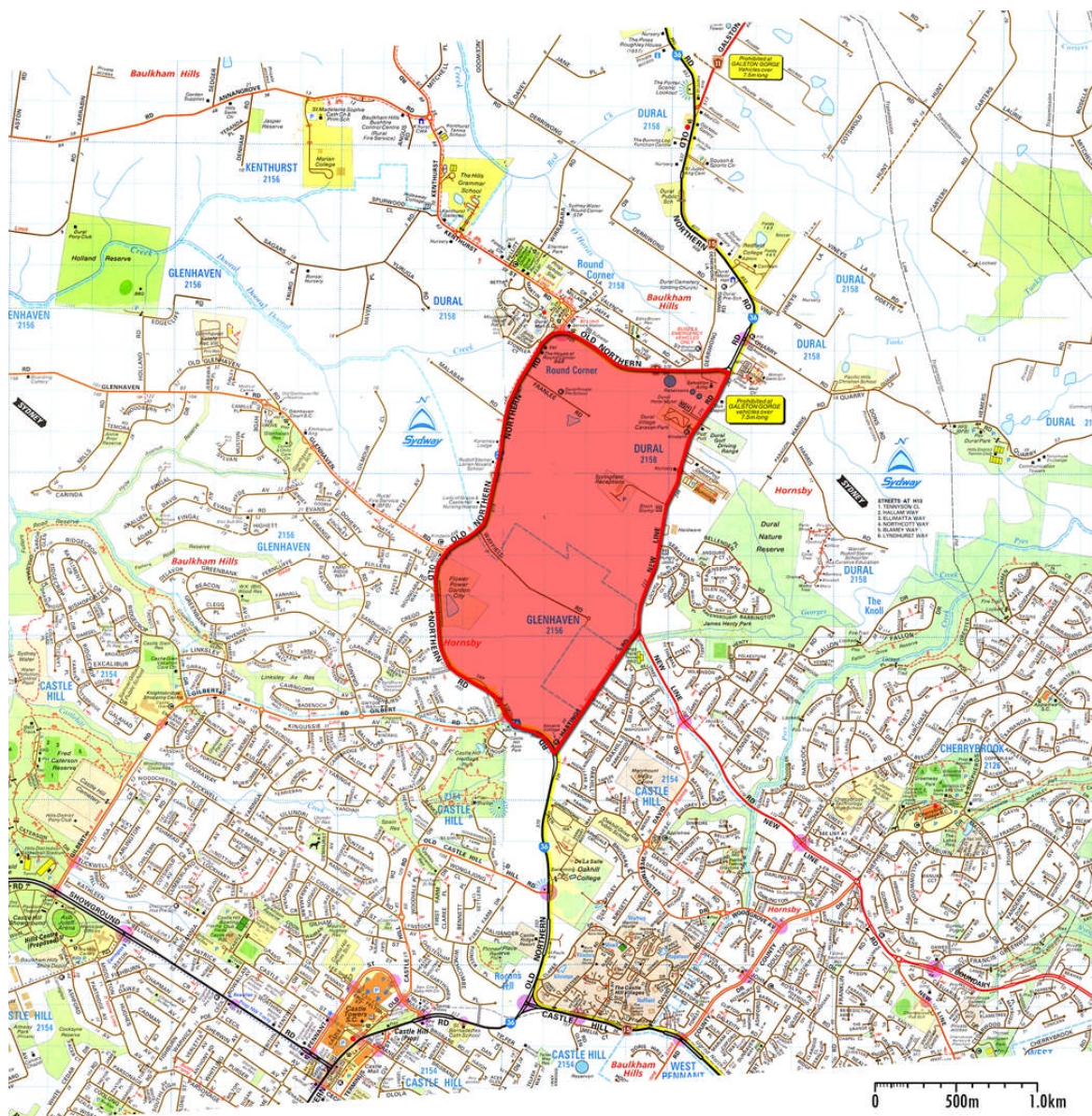
## Section C - Land Holding

### 2.0 Parcel and Context

The subject land holding comprises approximately 240ha, bounded by Old Northern Road, New Line Road and Hastings Road and situated in a locality known generally as South Dural (between Round Corner/Dural and Castle Hill).

It is located east of the North West Growth Centre and Development Areas and adjacent to the suburbs of Cherrybrook and Glehaven. To the south the land adjoins the suburban areas of Castle Hill and to the north it abuts the mixed use area of Round Corner. The site location is shown on **Figure I** below.

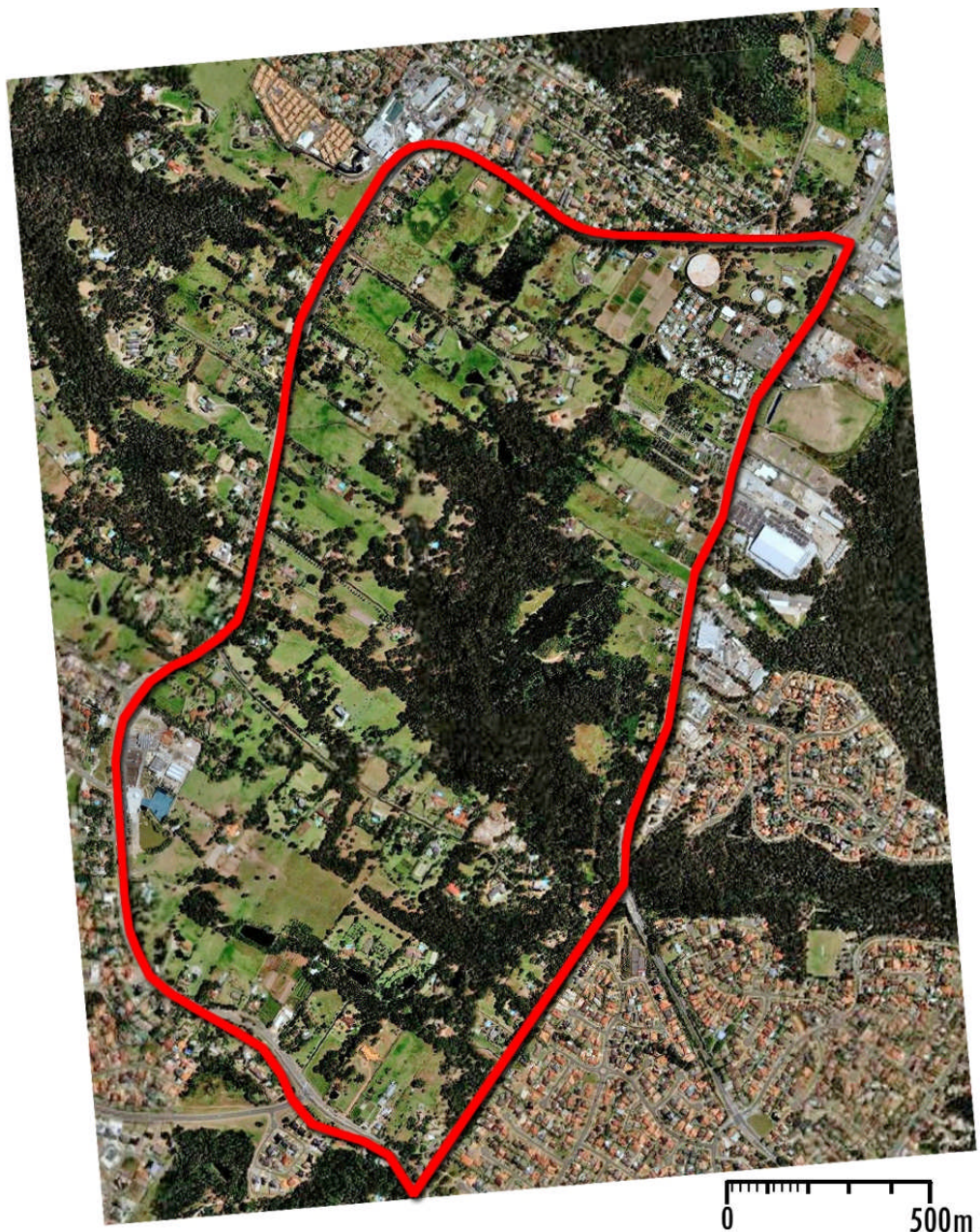
**Figure I**



## 2.1 Ownership Pattern

The subject land has a diverse ownership pattern involving private landowners, companies and institutions agencies and approximately 130 separate titles (some of which are held in combined ownership). The average size holding is about 1.8ha, covering a range from 1000m<sup>2</sup> to in excess of 7ha. The ownership pattern is shown in **Figure 2** below.

**Figure 2**



The land to the north east along New Line Road adjoins the Dural “Business E (Service Centre) zone and comprises a number of business enterprises and larger generally vacant holdings. Land along the eastern portion of the site off Hastings Road adjoins the Cherrybrook area and comprises mainly 2ha private residential land holdings.

The southern and south western portion of the site off Old Northern Road adjoins the Glenhaven area. This area includes the nursery and a number of rural residential and vacant land holdings generally ranging between 2500m<sup>2</sup> and 2.5ha. The northern portion of the site off Old Northern Road adjoins Round Corner and comprises smaller residential allotments of about 1000m<sup>2</sup> to larger rural lots up to about 3ha in area.

Further south along Old Northern Road near the central area of the site there is a mix of rural holdings. The land within this area also comprises a mix of vacant and rural residential holdings ranging in size from about 5000m<sup>2</sup> to about 3.5ha.

## **2.2 Land Characteristics**

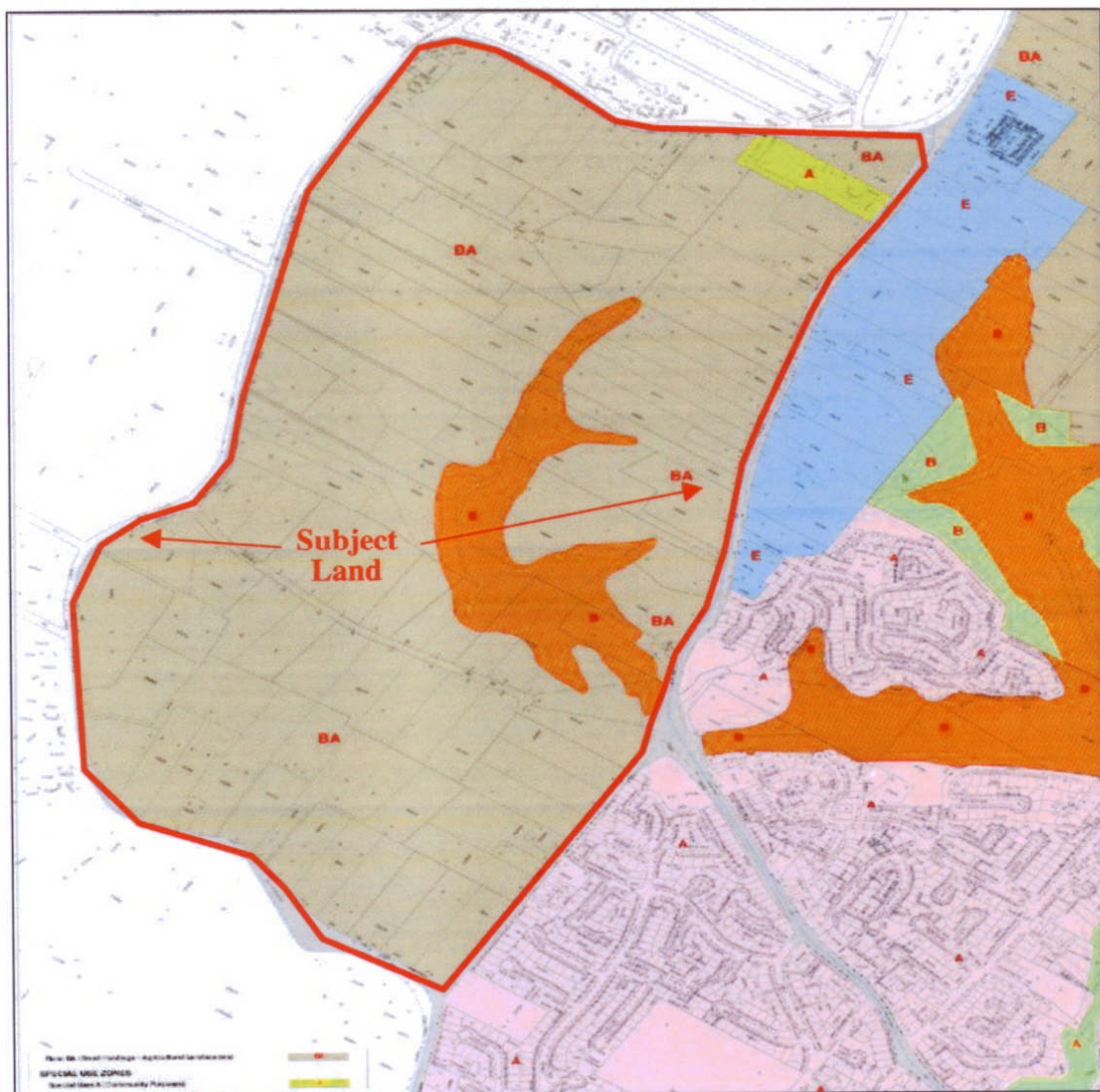
The land has been briefly described in the Introduction (Section 1.1) and is more fully described in Section E – The Environmental Characteristics.

## Section D – Planning Background/Context

### 3.1 Prevailing Zoning

The subject land is currently zoned Rural BA (Small Holdings – Agricultural Landscapes), Environmental Protection B (River Catchment) and Special Uses A (Community Uses) under the provisions of Hornsby Local Environmental Plan 1994 (HLEP 1994). The distribution of the subject zonings as they relate to the South Dural holding is shown in **Figure 3** below.

**Figure 3**



Further, the distribution of landuse zones across the 240ha site are also summarised in **Table I** below:

**Table I**

<b>Rural BA</b>	<b>Environmental Protection B</b>	<b>Special Uses A</b>	<b>Total (ha)</b>
218.15	19.1	2.75	240.00

Hornsby Local Environmental Plan 1994 (HELP 1994) is the principal planning instrument governing landuse control in the Shire. Simply expressed, it seeks to protect and enhance the environmental qualities of the Shire whilst facilitating orderly and economic sustainable development.

The Rural BA (Agricultural Landscape) zoning seeks to restrain population growth, promote rural character and ensure environmental sustainability. It is largely a rural landscape zone. The Environmental Protection B (River Catchment) zoning seeks to protect the environmentally sensitive catchment of Hawkesbury River and its tributaries, whilst permitting limited environmentally sensitive development.

The Special Uses (Community Purposes) zone seeks to provide for the provision of community facilities and services in a manner which is compatible with prevailing environmental amenity.

The relevance of the latter two zones is well understood and remains relevant and capable of integration into an urban development scheme for the subject land. The Agricultural Landscape zone has as its primary focus rural landscape qualities. The relevance of the lands purported rural capability is indeed questionable over a decade past the LEP's adoption and similarly over a decade since the Rural Lands Study. The LEP also includes a series of provisions to guide development in a manner consistent with its overarching objectives.

Despite a host of generally minor amendments since its adoption the LEP is no longer considered relevant in terms of the primary rural focus attached to the subject land. It exhibits many "hole in the donut" type qualities and should be further investigated for inherent highest and best sustainable use, which in the subject context is urban development.

### **3.2 Development Control Plans**

The land is subject to a raft of Development Control Plans, many of which where still relevant in the context of an urban development scenario, potentially need to be customised to reflect the outcomes contained in the draft Structure Plan prepared for the site.

### **3.3 Rural Lands Study**

As alluded to the subject study was finalised in 1995. It sought to review the planning provisions which applied to the rural lands of the Shire and provide a policy framework to guide future growth in the area. The Study sought to reinforce the prevailing philosophy of seeking to foster sustainable agriculture in the Sydney Basin in a manner consistent with a compact metropolitan city. The relevance of the Study's conclusions is discussed more fully in Section E.

In brief, however, the Rural Lands Study concluded that South Dural is capable of sustaining rural pursuits and may be capable of urban development. At the time Council adopted a precautionary approach to rezoning South Dural for urban purposes. The efflux of time and reality of sustainable agriculture have been brought into sharp focus, particularly in a unit which has been largely designated rural because of its landscape qualities, as opposed to its prime production status. (Refer to Section 4.3 – Rural Environment for further comment).

### **3.4 Council Housing Strategy**

Council's Housing Strategy charts a strategic direction for housing provision in the Shire. Further, it incorporates a concentrated housing model, where multi-unit housing is provided within the existing urban areas of the Shire, in identified pre-planned precincts, which are serviced by adequate infrastructure.

In accordance with the Metropolitan Strategy and Council's Housing Strategy, Council is seeking to provide housing choice and affordability. As such it is critical the development scheme provide for the development of a range of housing products, notwithstanding what is likely to be a dominant higher income demographic. The Structure Plan accompanying this report typifies the housing diversity aspirations in pursuit of Council and State Government housing objectives.

Finally, the South Dural area provides an opportunity of sustainability addressing Council's Housing Strategy's quest for a 35% provision of new detached houses, in a market context of almost negligible supply.

### **3.5 State Planning Legislation/Policy**

Various State Government Acts are relevant to the subject property. The requirements of each of these Acts are summarised below.

#### **3.5.1 SEPP 11 – Traffic Generating Development**

Provides rationalised requirements in respect of traffic generating developments. There are a range of threshold criteria, which require referral to different levels of traffic committee. The envisaged scale of the proposed development is such that it would be referred to the Regional Traffic Committee. Prior liaison in respect of traffic impacts would, however, likely occur during the Local Environmental Study/Structure Plan process accompanying preparation of a draft Local Environmental Plan.

#### **3.5.2 SEPP 55 – Remediation of Land**

SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Contamination investigations would need to be commissioned as part of an LES/Structure Planning process. No major sources of contamination are likely. Any localised contamination will need to be remediated in accordance with the provisions of SEPP 55.

### 3.5.3 Metropolitan Strategy

The Metropolitan Strategy (2005) revises previous framework metropolitan planning and provides an outline for promoting and managing growth. It documents a vision for Greater Sydney over the next 25 years. Further, it proceeds to detail a series of strategies and actions to achieve such vision. It sets and identifies; inter alia; the parameters for future residential development in new release and existing urban areas, including:

- Strategic transport corridors and major centres best places to focus commercial and residential growth.
- Supporting land stocks for industrial and employment development.
- How all aspects of the future metropolitan region will be linked and supported with other infrastructure.
- A philosophy for provision of additional and embellished parks and public places.
- A need to limit Sydney's environmental footprint and protect its natural and resource lands.

Economic, social and environmental sustainability are the guiding principles for the Metropolitan Strategy.

In respect of housing, the Strategy seeks to provide a balanced approach to growth, with more housing in both new land release areas as well as within existing areas. The provision of sites within new release areas is aimed at ensuring a continuing supply of new detached housing with some medium density housing while preserving agricultural and resource lands and land for urban development after 2031 if needed. South Dural is situated on the fringe of both the North and North West sub-regions, which target an additional 20,000 and 70,000 dwellings respectively.

Improvements in transport are integral to pursuit of a more sustainable City and are extensively documented in the Metropolitan Strategy. The proposed North West rail link and enhanced bus corridor development including Castle Hill to Hornsby in particular significantly benefit future access to South Dural. The Metropolitan Strategy also targets employment growth in the quest for sustainability, with a clear focus upon strategic centres that can capitalise upon targeted infrastructure and transport planning. Hornsby and Castle Hill are identified as major centres and Norwest a specialised centre in this regard.

Apart from provision of local and regional parks the Metropolitan Strategy places a significant emphasis on improving access and facilities for existing parks and recreation areas. The national and region park system focussed on Berowra Creek and the broader hinterland is central to such a strategy. Limitations to Sydney's environmental footprint are clearly focussed upon dual strategies of targeted growth centre and existing centre development previously referenced.

### 3.5.4 Metropolitan Development Program

The recent release of the 2007 update of the Metropolitan Development Program does not identify any Greenfield Releases in the subject sub-region. This is considered to be a significant deficiency which can be redressed by the release of the land at South Dural.



### **3.6 Commonwealth Legislation**

The Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Act provides a mechanism for assessing the environmental impact of activities and requiring approval of the Commonwealth Minister for the Environment where an action is likely to have a significant effect on a matter of National Environmental Significance (NES matter).

The Act identifies six NES matters:

- World Heritage Properties;
- Ramsar wetlands of International importance;
- Nationally listed threatened species and ecological communities;
- Commonwealth marine areas;
- National Heritage; and
- Nuclear actions.

There are no matters of Commonwealth significance in respect of the subject land.

## Section E – Environmental Characteristics

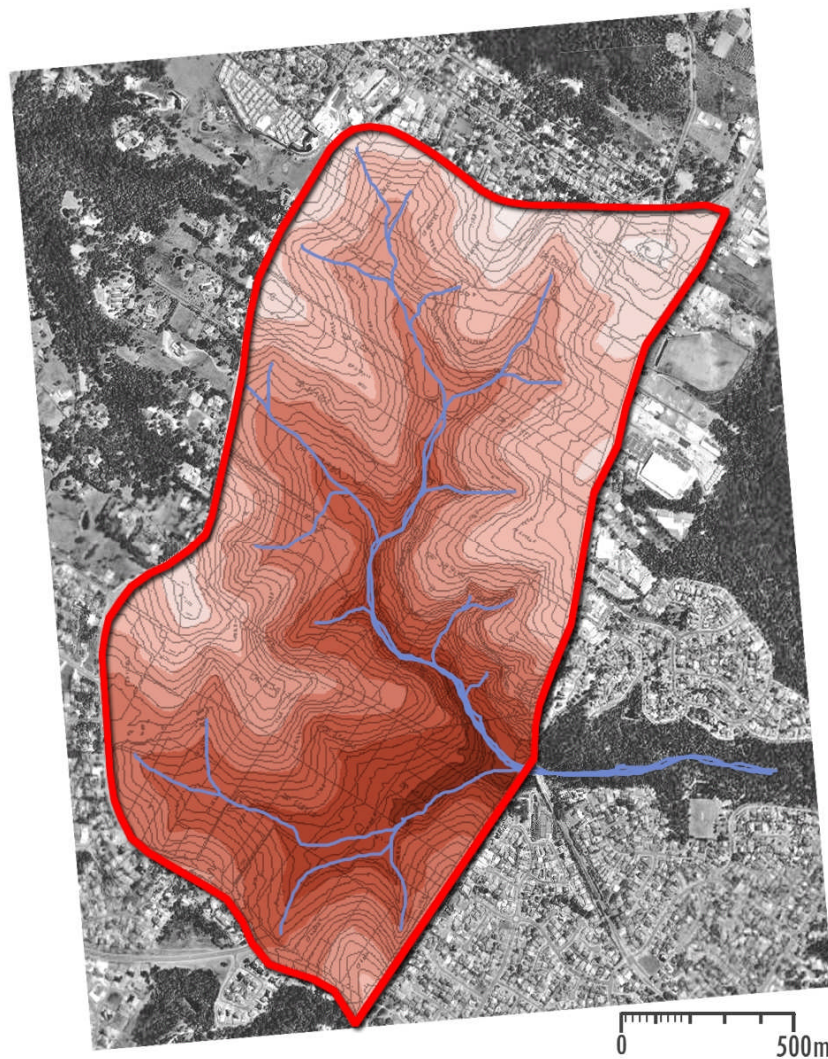
### 4.1 Natural Environment

#### 4.1.1 Topography

The subject land comprises a landscape of variable topography characterised by a dominant valley (focussed on the headwaters of Georges Creek) and dissected lands sloping from the ridge aligned perimeter road network to the densely vegetated gully at the base of the valley.

The topographical relief of the site although varying from 212m (intersection of Old Northern Road/New Line Road) to 146m (Georges Creek exit under Hastings Road) belies the general nature of the landform and its inherent urban potential. The site comprises two principal landscape units; namely the larger undulating plateau and extensively cleared upper slopes of Georges Creek and the densely vegetated and steeper central valley Georges Creek unit. **Figure 4** below shows the topography and drainage patterns.

**Figure 4**



### 4.1.2 Geotechnical and Soil Landscapes

The land comprises some three landscape units; these being the Glenmore, Lucas Heights and Gynea soil landscapes. These landscapes coupled with the prevailing topography and drainage regime generally pose few challenges for urban development; the exception being the lands comprising steeper valley sides of the incised creek system and isolated areas of steeper relief. Avoidance of the steeper valley areas for urban purposes and the adoption of appropriate construction and soil/water management techniques for the balance of the lands should ensure sustainable land development outcomes.

### 4.1.3 Drainage

The general catchment is defined by some nine generally modestly sloping sub-catchments. These catchments have been disturbed from the past rural residential landuses. The main valley aligned with Georges Creek remains largely undisturbed, although not pristine.

Future urban development, Georges Creek aside, is unlikely to be constrained by hydraulic factors as the general catchment is largely capable of being managed in a sustainable manner in a future urban context through the application of the principles of Water Sensitive Urban Design (WSUD). Refer to **Figure 4** above for details.

### 4.1.4 Ecology

#### 4.1.4.1 Flora

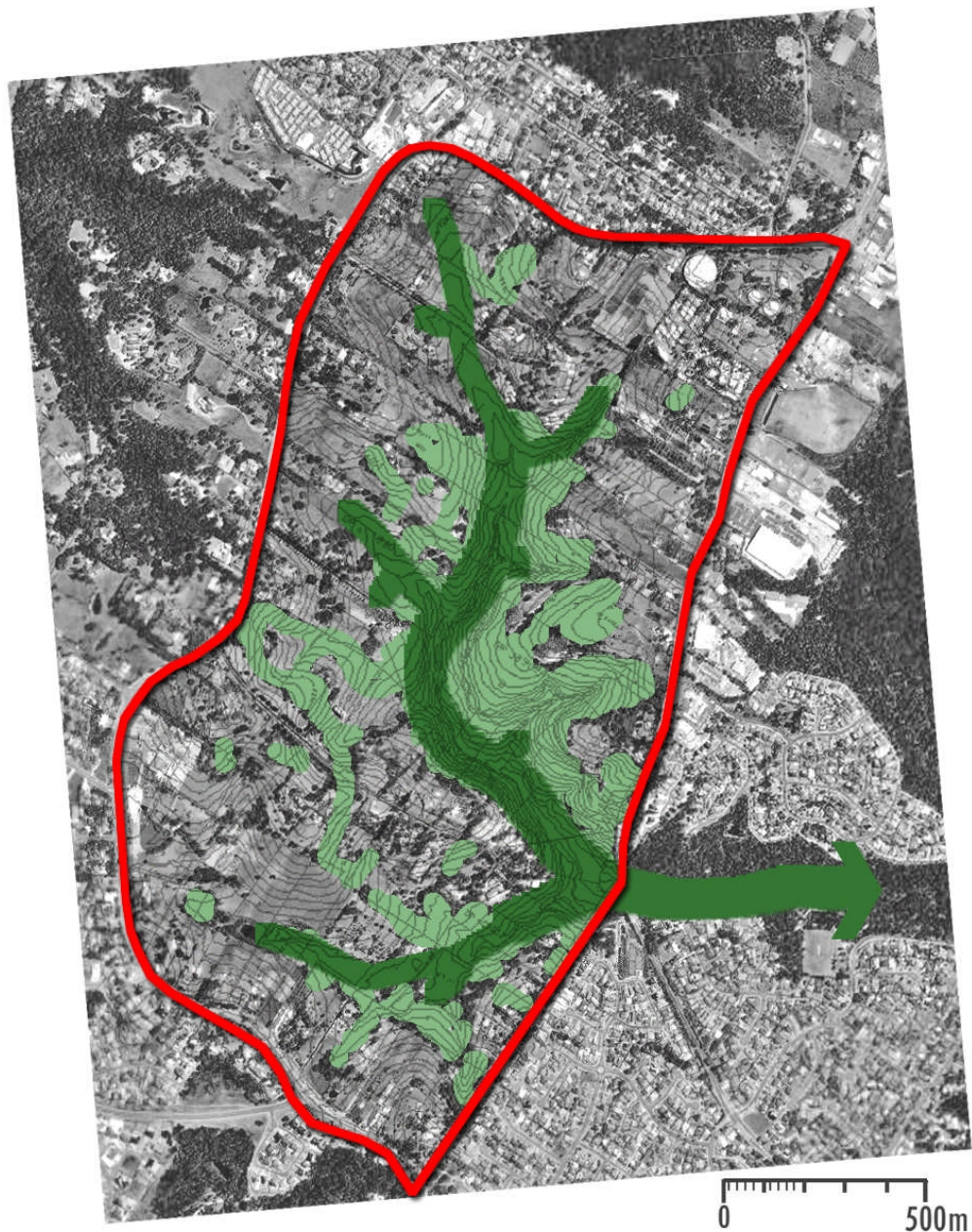
The site has been extensively cleared over time, principally for past agricultural activities and the erection of dwelling houses in an expansive context. These disturbed lands represent approximately 70% (or 169ha) of the site and focus upon the upper elevations, boundary areas and mid-slopes. Isolated remnant semi-mature or mature canopy trees are dispersed through these disturbed areas.

Patches of Shale/Sandstone Transitional Forest, Blue Gum High Forest and Sydney Turpentine Ironbark are categorised as endangered ecological communities and are evidenced on site, as is the threatened plant *Epacris purpuroscas* var. The larger, more intact more floristically diverse stands of vegetation generally have higher relative conservation significance. They are largely represented in Georges Creek and its 'tributaries' and should form the natural systems backbone of any urban development scheme. **Figure 5** below shows the extent of flora on the subject land.

#### 4.1.4.2 Fauna

Few threatened fauna species have been identified on the site during previous surveys, although the locality is known to provide habitat for some threatened species. Notwithstanding the general potential for foraging habitat on site for such species, their probability of occurrence is low due to lack of roosting resources and lack of recent records (NPWS Wildlife Atlas). No migratory waterbird species have been recorded on the site in the past or within 10km (NPWS Wildlife Atlas).

Figure 5



The general aquatic and riparian habitats of the main Georges Creek drainage line (as well as several of the main tributaries and isolated farm dams) supported freshwater habitats and should, in a manner similar to important flora species be conserved and embellished as part of the natural corridor framework of any urban development scheme.

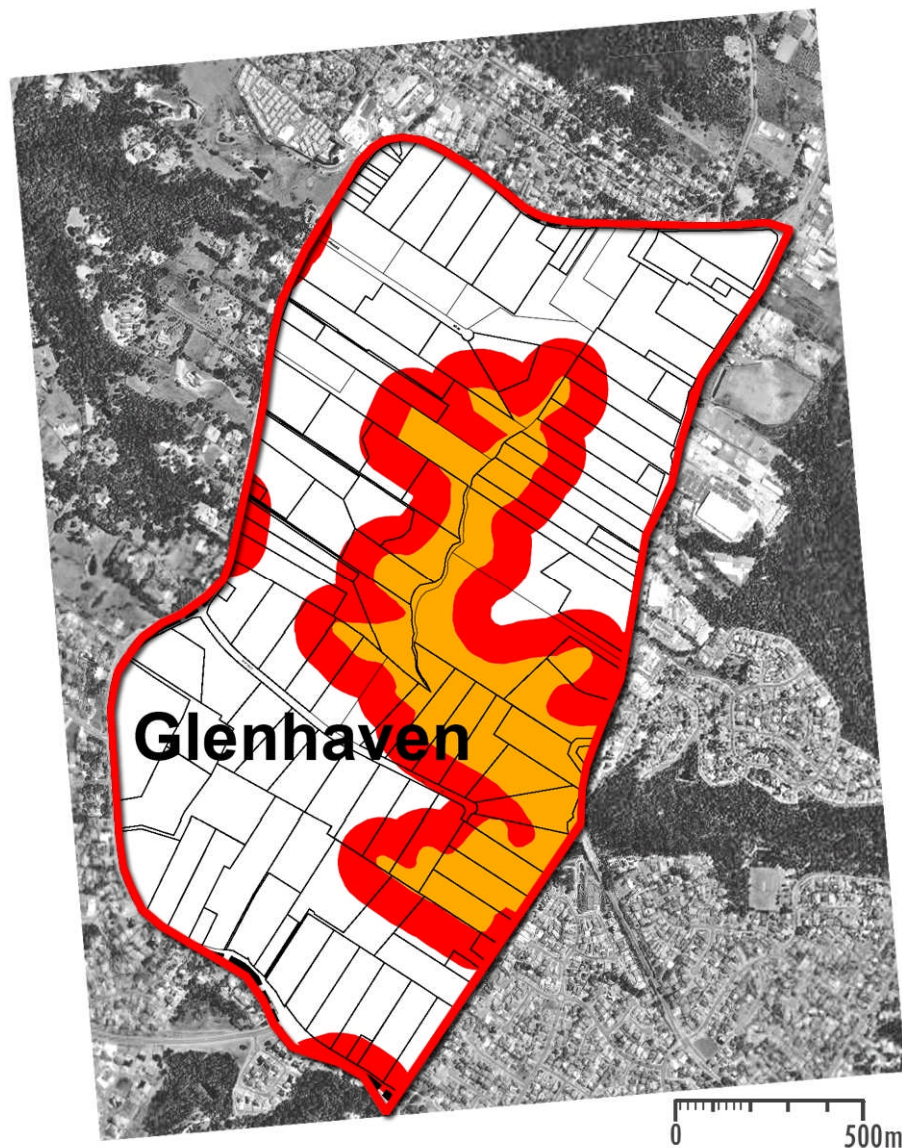
#### 4.1.5 Mineral Resources

No known economically winnable mineral or extractive resources, which could significantly impact on urban development, are known to have been identified on the site.

#### 4.1.6 Bushfire Risk

The subject land has not been identified under Council's Bushfire Prone Land Maps as potential bushfire prone land. However, the creek system and pockets of remnant vegetation where retained will require appropriate setbacks as part of a broader bushfire management strategy. **Figure 6** shows Council's Bushfire Map.

**Figure 6**



## 4.2 Cultural Environment

### 4.2.1 European Heritage

The area despite its lengthy settlement history has few heritage constraints which cannot be addressed through sensitive urban design and standard best practice conservation initiatives.

## **4.2.2 Indigenous Heritage**

Past archaeological investigations revealed no evidence of Aboriginal occupation of the subject land. No shelter and or occupation sites, no engravings, no grinding grooves and no open camp sites have been evidenced. Further, the landforms of the site are considered unsuitable for the occurrence of shelters of occupiable proportions.

There is the possibility that grinding grooves may be found in the Creek and shelter sites, depending on suitable rock formations. Preservation of the creek system and an appropriate conservation strategy are capable of enhancement.

## **4.3 Rural Environment**

Rural lands in the Sydney Basin are an increasingly rare and valuable commodity. Indeed, there are properties used for substantial commercial agricultural production. The real challenge is fostering sustainable agriculture in many of the less productive non-flood plain locations which are contiguous with urban development. This indeed is the challenge in South Dural.

Over time agriculture has declined in the locality. This has occurred as a result of intergenerational change in vocation, increasingly sensitive neighbours and disputes (non family background), escalation in land values and attraction for rural residential purposes and increased land fragmentation.

Despite the land, including some Class 2 and 3 (NSW Agricultural Lands Classification), the prospects of realising the peak inherent agricultural potential of the land classified accordingly is most remote given the preceding “irreversible” factors of contemporary settlement. Further, the high land values and capital investment requirements for higher returning production invariably cannot be justified in terms of return on investment.

## **4.4 Physical Infrastructure**

### **4.4.1 Potable Water Supply**

The subject area is part of the “Dural Water Supply System”, which is fed from the Prospect North and East Ryde Delivery Systems. Water is pumped to the three Dural South Reservoirs located on the site and reticulated to areas south of the reservoirs. The trunk water main system surrounds the site and generally varies from 100mm to 600mm.

This system is understood to be at design capacity and amplifications would be required to supply the site including the upgrading of local and/or trunk mains, elevated storages and new pumping stations. The site would subsequently also require an internal reticulation system to service a new urban community.

Should comprehensive urban development of the site occur the developer would need to enter into an agreement with Sydney Water to fund and construct the required infrastructure amplification and on-site reticulation. The proponents accept their inherent responsibility in providing for the reasonable servicing of their land with reticulated water.

#### 4.4.2 Sewer

The site is not located within any current Sydney Water Sewerage System. It is located at the boundary between the West Hornsby Sewerage System and the Castle Hill Sewerage System, but naturally gravitates to the West Hornsby System.

There are no internal reticulation sewers within the site. The nearest sewers are generally located on the opposite side of the main roads, which bound the site. The Georges Creek corridor is the nearest existing sewer that could service the site. Such sewer main is 450mm in diameter and drains to the east from the intersection of Hastings and New Line Roads.

The two sewerage treatment plants at West Hornsby and Castle Hill have no spare capacity and augmentation would be required, including upgrade to pumping stations and local and/or trunk mains. These works would be additional to the local reticulation system that needs to be constructed on-site to service the development. It should be noted that upgrade works over recent years to the West Hornsby sewerage treatment plant in particular have had a pronounced positive impact on high nitrogen discharges which were adversely impacting upon the environmental health of Berowra Creek.

#### 4.4.3 Electricity

The site is located on the boundary between the supply areas for Integral Energy and Energy Australia (Integral Energy – West of New Line Road, and Energy Australia to the east of New Line Road). Integral Energy currently supplies the site from the Parklea substation under franchise agreement. This substation has been recently upgraded and has the capacity to supply the development. However, a new feeder main would be required as the current transmission lines are not adequate to cater for the additional loading;

It is understood that Integral Energy are proposing to build a new substation in Glenhaven area, which would involve upgrading the transmission lines from Parklea. However, these works are scheduled for construction in 2012 approximately.

Energy Australia has previously expressed an interest in servicing the site. Their current system is however, at capacity and cannot service the site in its current status. A new substation planned for Galston by Energy Australia in 2009, could potentially service the proposed development. The proposed development would incur the construction of a new feeder main from the new Integral Energy Glenhaven substation approximately 1.5kms away, with costs borne by the Developer;

Alternatively the proposed development will have to be fed with a new underground feeder main from the proposed Energy Australia Galston substation approximately 5kms away, with costs borne by the Developer.

An electricity network including several kiosk type substations (one for every 100 to 200 lots) would also be required within the site to supply the proposed development, regardless of who the service provider is. Costs would also be borne by the Developer.

#### 4.4.4 Telecommunications

The locality is serviced by both Optus and Telstra facilities, with conduits in the major perimeter roads; namely New Line Road, Old Northern Road, Hastings Road and Wayfield and Franlee Roads. The proposed development will likely require additional fibre optic cables from the existing exchange to provide both internet/telephone and Pay TV services.

These lines would feed several exchange kiosks located within the site, which in turn would feed the domestic network. All amplification and reticulation costs would be borne by the developer.

#### 4.4.5 Gas

Gas mains varying in size from 160mm to 110mm are located in the principal road reserves adjacent to the site; namely New Line Road and Old Northern Road (north of Wayfield Road). Further, the Old Northern Road forms the boundary between three supply areas.

Despite some limited spare capacity additional mains would need to be provided to service the proposed development. It is likely that the site would be serviced from the New Line Road main. Infrastructure upgrade and reticulation costs would need to be borne by the developer.

### 4.5 Traffic/Transport/Accessibility

#### 4.5.1 Roads

Access to the South Dural area is currently highly road dependent and focussed upon Old Northern Road and New Line Road. Access to the area will remain focussed on these roads into the future, albeit that improved bus services linking with enhanced rail services and other targeted initiatives will reduce the reliance on motor vehicles. The road system is shown on **Figure 7** below.

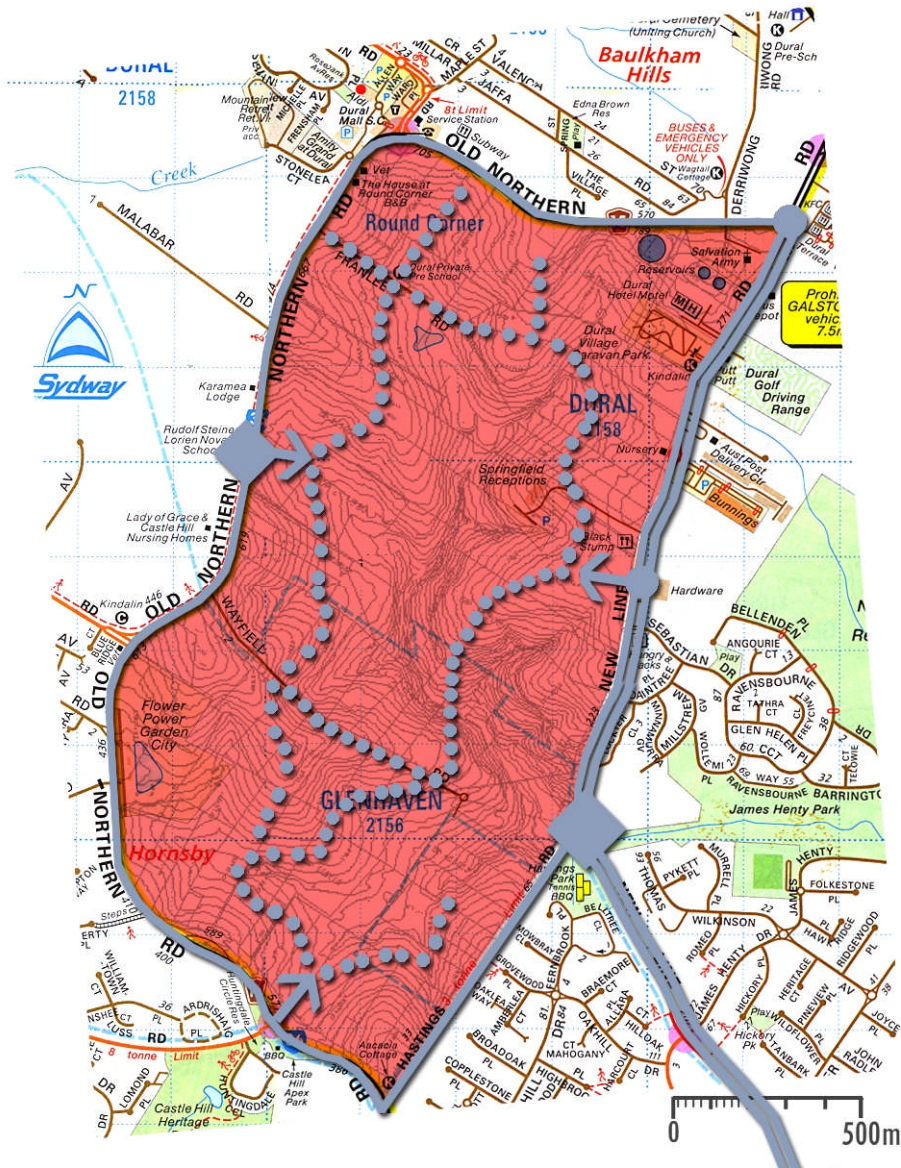
Preliminary traffic analysis of the proposed development of the site and cumulative impacts suggests that the following road improvements and traffic management facilities should be undertaken in response to the development and regional growth (and apportioned having regard to nexus):

- Upgrade Old Northern Road pavement and widen by one additional lane between Hastings Road junction and the New Line Road roundabout.
- Widen New Line Road to two lanes in each direction for its entire length between Purchase Road junction and the roundabout with Old Northern Road, including duplication of the bridge over Pyes Creek.
- Signalise and widen Old Northern Road/Hastings Road intersection.
- Access 1 (midpoint on New Line Road between Old Northern Road and Hastings Road) should function as seagull junction or roundabout.
- Access 2 (midpoint on Old Northern Road between Kenthurst Road and Glenhaven Road) should potentially be signalised.



- Access 3 (on Old Northern Road between Glenhaven Road and Hastings Road, possibly connecting Gilbert Road intersection) should have separate control or involve connection to and signalisation of the Gilbert Road junction.

Figure 7



In such manner the proposed development can address its attendant impacts and contribute to an enhanced road network in the locality addressing under performing road infrastructure and have a positive impact on regional network capacity.

#### 4.5.2 Bus and Rail

The potential vehicle impacts associated with development can be further addressed by:

- Extending the existing bus service to cater for the development.

- Provision of special peak hour shuttle bus service between the development and the Pennant Hills railway station, including a central pickup/set down facility. Further, such a service could cater for local transport needs during off-peak periods.
- Linking and contributing to the expansion of the Western Sydney T-way program and in particular the North West T-way.
- Provision of a community transport system linking with major centres and railway stations.

#### **4.5.3 Local Landuse and Alternative Movement Systems**

The development is not designed to be a dormitory residential estate. Rather it is designed and promoted as having a degree of “self sufficiency”. Opportunities for local employment are provided together with opportunities to address shopping and recreational demands locally. An extensive pedestrian and cycle network are central to the Structure Plan developed for the site. They will permit and, through their level of embellishment, foster alternative trip specific and recreational movements.

#### **4.5.4 General Accessibility Strategy**

The accessibility strategy associated with the development proposal is clearly predicated upon facilitating efficient and sustainable travel between homes, jobs, services and recreation facilities. The subject objective is to be realised by a series of strategies which include:

- Minimising the need to travel beyond the development precinct and optimising on-site landuse mix and the level of landuse “self containment”.
- Ensuring legibility and connectivity in subdivision design and provision for a bus network.
- Fostering alternative movement systems on-site.
- Providing clear connections to the external road network and higher order bus services.
- Contributing to the upgrade of the immediate local road network and bus network infrastructure.
- Paying reasonable regional transport infrastructure levies.
- Facilitating access to higher order transport infrastructure in the form of buses and trains.

#### **4.6 Human Services**

The human services environment is critical to ensuring sustainable new urban communities. The immediate locality has access to a diverse range of human services, provided by both the public and private sectors.

They contribute to the rich tapestry of the local community and provide a foundation to be augmented by the proposed South Dural community, both on and off site. The immediate South Dural “catchment” importantly includes facilities and services located at Castle Hill, Oak Hill, Cherrybrook, Dural, Round Corner and Kenthurst.

### **4.6.1 Hospitals**

The area is serviced by the Sydney Adventist Hospital and Hornsby District Hospital both of which have 24 hour emergency service. These hospitals are about 10km and 13km respectively from the site. The area is also served by other hospitals in the nearby area including the Baulkham Hills Private Hospital (about 7km) and Westmead Hospital (about 14km). Both these hospitals also have 24hr emergency services.

### **4.6.2 Higher Education**

The site is approximately 13km from Macquarie University. TAFE colleges are located at Hornsby (about 13km) and Baulkham Hills (about 5.5km) from the South Dural area.

### **4.6.3 Schools**

There are a number of local primary and high schools both public and private located in reasonably close proximity to the South Dural area. Glenhaven, Dural and Oakhill Drive public primary schools are located within about 1km from the site. Public secondary schools include Cherrybrook Technology High, Galston and Castle Hill High Schools all located within about a 3km radius of the site.

There are also a number of primary and secondary private schools in the near vicinity of the site. The Department of Education and Training have guidelines for the establishment of new schools, which establish the following thresholds:

- One primary school for every 1,500 to 2,000 new homes;
- One high school for every 4,500 to 6,000 new homes.

This would suggest the need for one primary school and about half a high school. However, given the proximity of the site to a wide range of existing urban services and proximity to a large number of existing public and private primary and high schools in the area, it is assumed that provision within the site would need to be made for one primary school and the increased demand for high school accommodation will be addressed through existing school expansions.

### **4.6.4 Children and Family**

A raft of children and family services are provided in the general locality as is evidenced by reference to Council's Children and Family Service Directory. Notwithstanding the quest for diversity in the profile of the new population there will remain a significant proportion of younger families and accordingly demand for children's services including in particular child care facilities.

The demand is likely to equate to a single multi-purpose facility, which also provides for before and after school care, occasional care, day care and playgroup services. Such a facility should preferably comprise part of an on-site neighbourhood centre.

#### **4.6.5 Emergency Services**

There are a number of local emergency services in the nearby area and these are generally adequately provided for within the existing urban infrastructure although some additional services may be needed to support the developing release areas.

The nearest ambulance service is located at Castle Hill about 4km from the site. SES services are located at both Hornsby Shire and Baulkham Hills Shire. Fire brigades are located at Glenhaven, Round Corner and Castle Hill. The nearest Police services are located at Pennant Hills and Castle Hill.

#### **4.6.6 Local Developer Contributions and Regional Infrastructure Levies**

The proposed development of South Dural will produce impacts on human services which extend beyond the ability to provide them on-site as a developer. In such circumstances the proponents accept that they need to pay reasonable local contributions to augment local facilities and services and similarly reasonable contributions for “higher order” human service infrastructure.

### **4.7 Retail and Commercial Facilities**

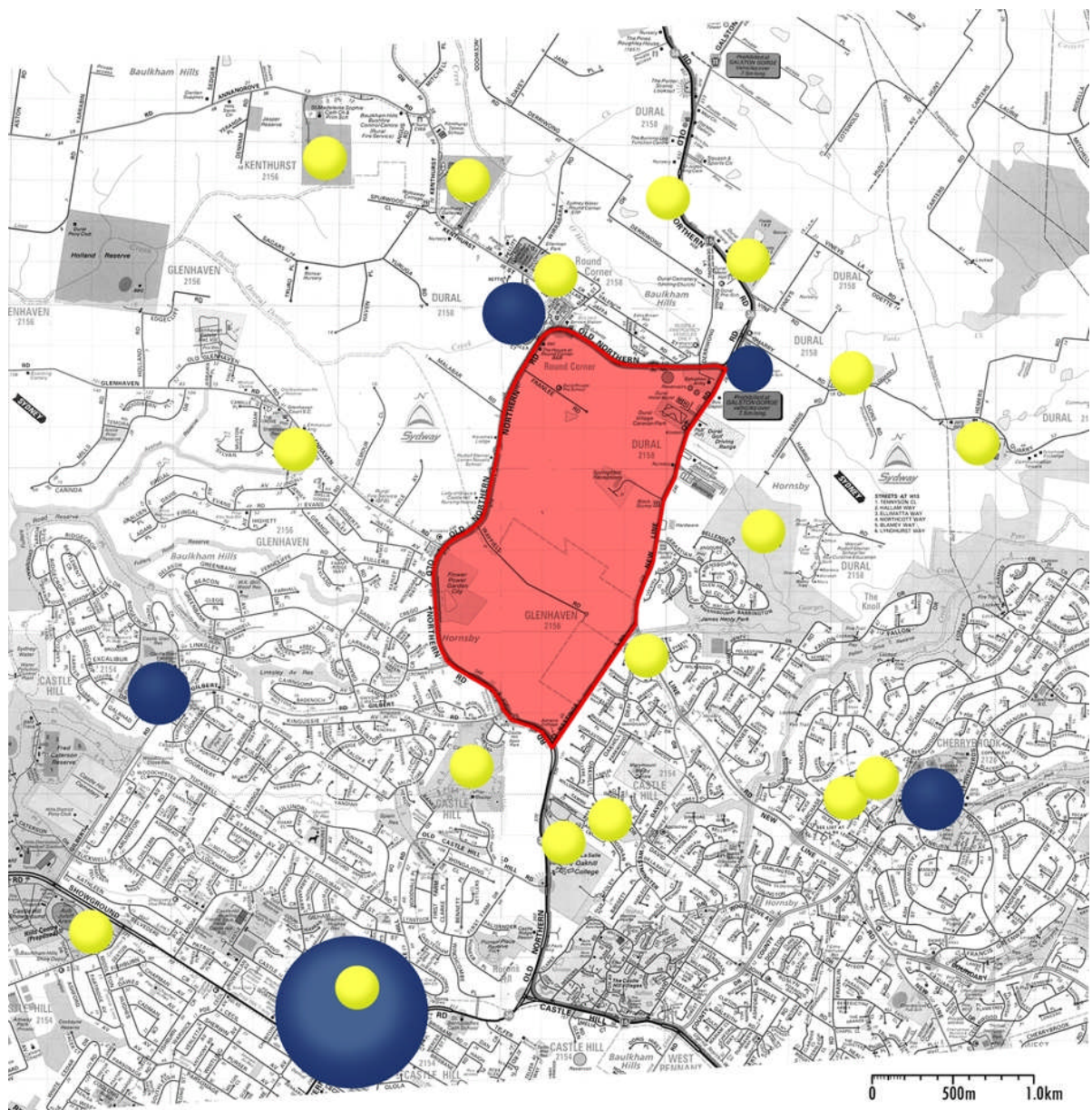
#### **4.7.1 Existing Facilities**

Retail and commercial facilities currently focus on Round Corner, Dural, Castle Hill and Cherrybrook. They cover a spectrum from individual premises and local neighbourhood centres to sub-regional centres. The future South Dural population is likely to display high household expenditure levels.

A conservative estimate suggests approximately 20% of such expenditure (some \$15 – \$20M) is likely to occur locally. The generally accessible Castle Hill and Round Corner centres are likely to exert a strong influence of attraction on the new population. In addition, the range of retail/commercial facilities along the major roads around South Dural and within the Dural employment zone, add significantly to the variety of businesses which will be immediately accessible to the south Dural residents.

**Figure 8** below shows the location of retail and community facilities within the general location of the subject land.

Figure 8



#### 4.7.2 Rouse Hill Regional Centre

The Rouse Hill Town Centre is currently under construction and geared at creating a regional commercial anchor for Sydney's North West. The current Stage I of the development (65,000m<sup>2</sup> of retail floorspace) is programmed for completion late 2007, with the remainder of the project to open in 2008.

The initial retail base will be expanded to include diverse government and community services over time and will be highly accessible by bus and rail from Castle Hill. Being some 13km from South Dural it will be highly attractive in particular for "higher order" shopping and business visits for residents of the proposed development site. Castle Hill will however; also remain an attractive centre given its expansion over time.

### 4.7.3 The Development Scheme

There exists an inherent desire in the planning for South Dural to create a diverse and vibrant community with a degree of “self-sufficiency”. In pursuit of such objective and allowing for some “escape expenditure” it is considered that South Dural may support up to approximately 1750m<sup>2</sup> of local-serving convenience retail floor space and limited local-serving commercial floor space in a well located centre.

Consideration in such a scheme should be given to locating additional community facilities including the like of:

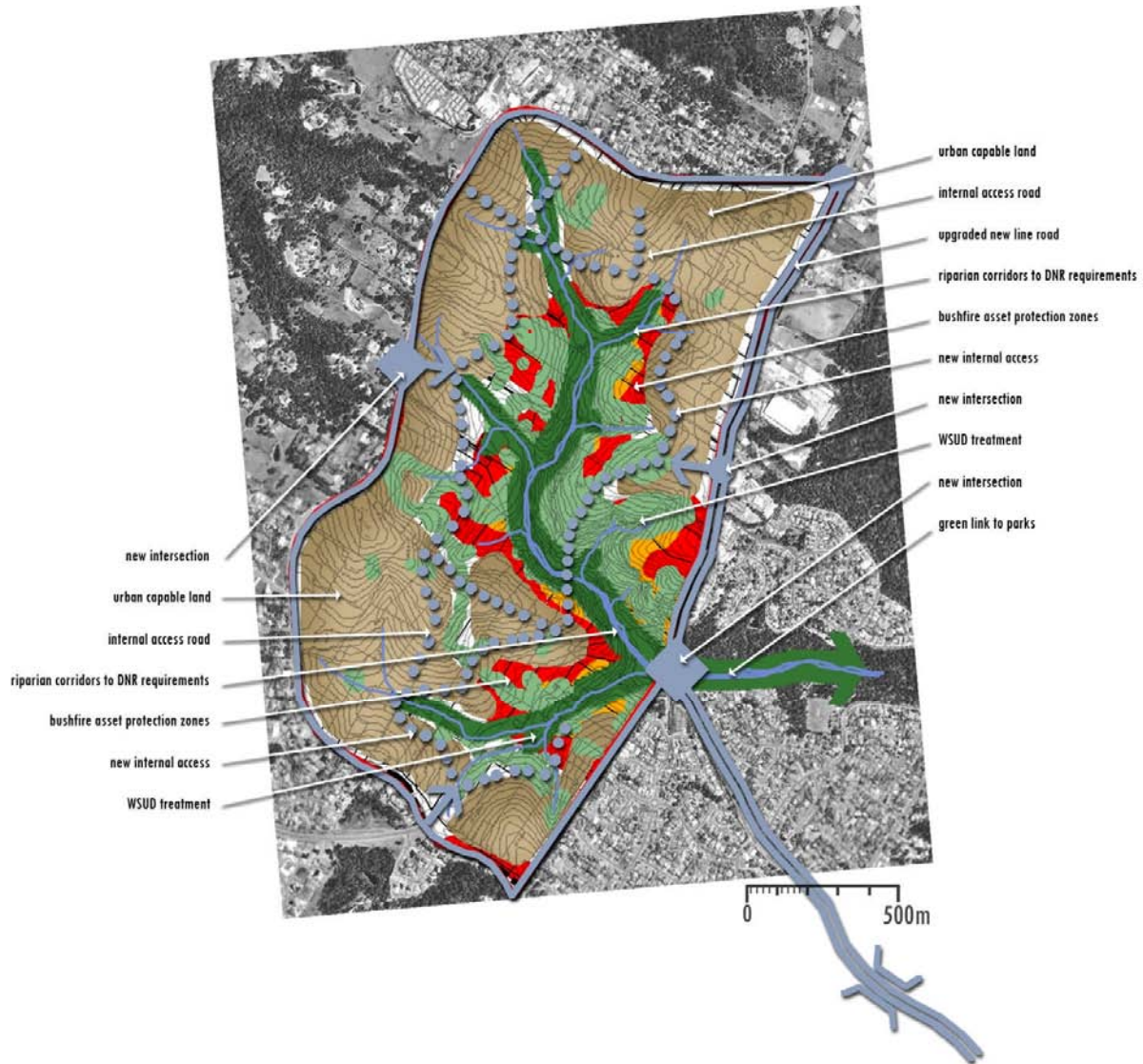
- Community meeting space;
- Local transport hub;
- Parking; and
- Private educational uses.

The centre would need to be well located having passing “external” exposure and access and be integrated with the development scheme.

## Section F – Constraints and Opportunities Overview

The constraints and opportunities to development have been alluded to in the existing environment overview provided in Section E and are summarised below in the annotated diagram shown as **Figure 9** below.

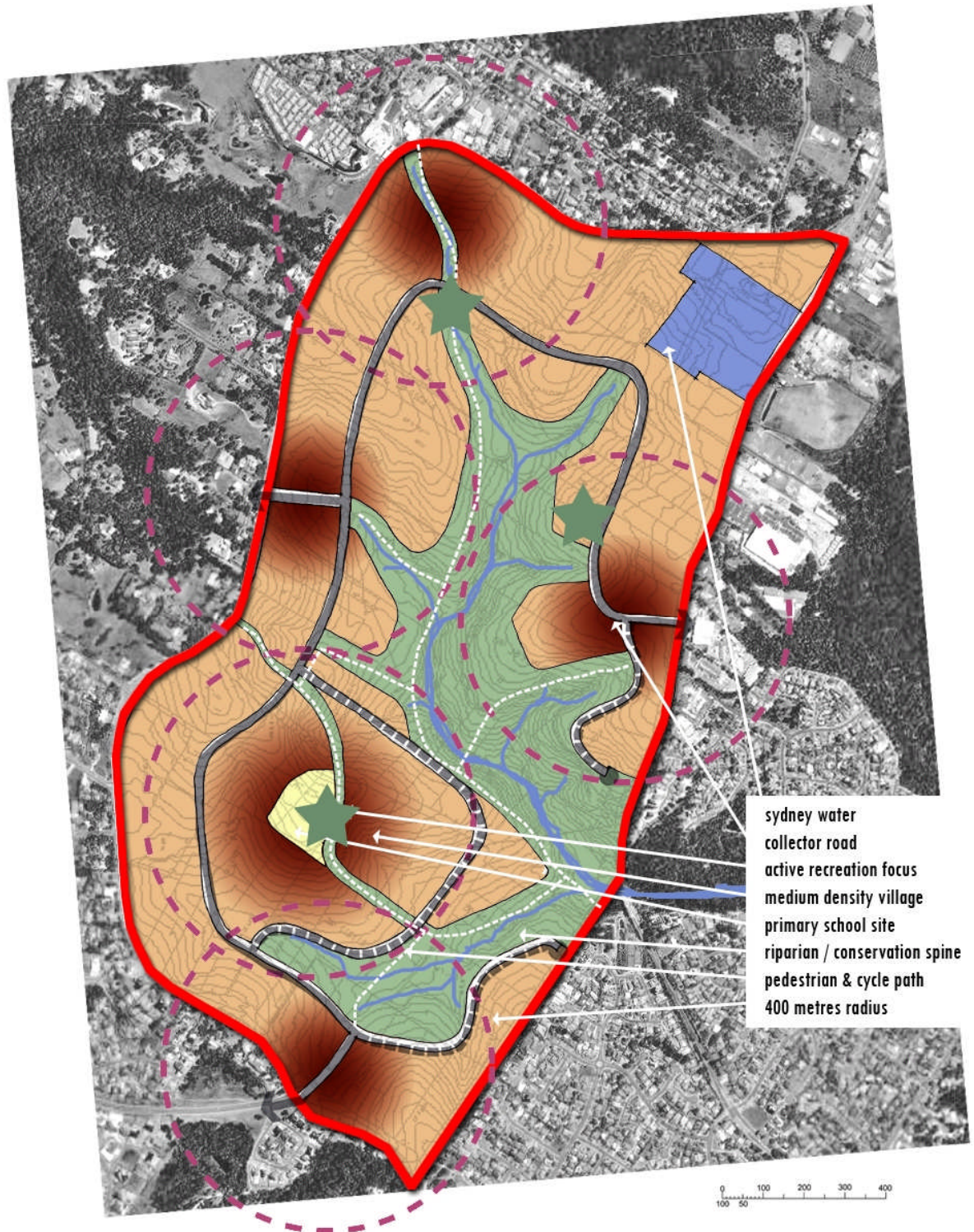
**Figure 9**



## Section G - The Development Proposal

The draft Structure Plan for the subject land is shown on **Figure 10** below.

**Figure 10**





## Section H – Socio/Economic Overview

### 7.1 Infrastructure Costs

The principal infrastructure costs associated with the proposed development relate to water, sewerage, roads, drainage, electricity and telecommunications infrastructure, both on-site and off-site. These costs would be borne by the developer, with no costs to be met by the NSW Government.

A preliminary assessment of the physical infrastructure costs; having regard to the context of current information in respect of the development scheme, topography, geotechnical and environmental conditions and known capacities and general service strategy philosophies was undertaken.

External physical infrastructure impacts (not addressed in the forgoing) were assumed to be addressed by reasonable regional (Growth Centre equivalent) and local infrastructure levies (local developer contributions).

Social infrastructure impacts were established having regard to a typical population profile attached to the development scheme. The limited capacity to provide for these impacts on-site was assumed. Further, it was assumed that the balance of impacts would be addressed by relevant contributions to both State and Local Government. In this latter regard the Growth Centres Infrastructure levies were adopted as a benchmark; whilst local levies for similar development identified in prevailing Developer Contribution Plans were adopted in respect of local infrastructure cost impacts, as a guide.

### 7.2 Development Costs

Infrastructure aside, preliminary cost estimates were made in respect of the notional development scheme. These costs focussed on land acquisition, professional fees, Council fees, construction costs and holding charges. Council Section 94 contributions were significantly discounted on the basis of a likely significant “works-in-kind” offset against the inherent Section 94 liability.

### 7.3 Total Development Costs/Project Costs

The following schedule summarises the project costs:

<u>Land Acquisition</u>	approximately \$450m
<u>Development Costs (including contributions)</u>	approximately \$250m
<u>Other Costs (holding charges)</u>	approximately \$6.7m
<b>Total Project Costs (pre GST)</b>	<b>approximately \$706.7m</b>

#### **7.4 Projected Market**

The lack of supply in the subject submarket is attested to by the current lot projection figures contained in the Metropolitan Development Program (MDP) update recently released (2007).

The lack of supply and the highly attractive nature of the locality lead market experts to predict a strong demand for a range of housing products in the subject submarket, notwithstanding the somewhat 'flat' nature of the real estate market generally.

Sale of serviced allotments is likely to range from \$300,000 to \$450,000 for the different products and setting of same, at an average of \$400,000.

#### **7.5 Timing/Staging**

The first land is likely to be available in 2010 should Council and Government commit to the releasing of the land shortly. The release is likely to be staged over approximately a 10-year period.

#### **7.6 Feasibility Observation**

The project is likely to realise a return of 22 or 25% and an Internal Rate of Return of approximately 15% based on current projections. This margin is considered to be in line with general industry expectations. The Internal Rate of Return (IRR) is rather modest. Should the development proceed in stages the IRR for each stage would deliver a higher result as a project as a whole.

#### **7.7 Socio-Economic Review**

The proposed urban development of the subject land will provide an economic stimulus to the area. Job opportunities and investment will be created by the development itself; whilst new residents will increase the demand for services and facilities, thereby enhancing local business prospects.

It is projected that expenditure generated by the new residents would amount to approximately \$75m per year, with a possible direct local expenditure of about \$15m per year.

The subregional and regional centres of Castle Hill and Rouse Hill respectively will benefit from such available expenditure and provide higher order local shopping/commerce opportunities.

The proposed small centre on the site will capture some of the projected local expenditure and contribute to the vitality and sustainability of the release area. In a similar way some on-site local employment opportunities will have a positive impact.

Norwest and the Dural centre will provide further local employment opportunities as will the subregional and regional facilities of Castle Hill and Rouse Hill.

Improvements in local physical infrastructure and services will benefit from the works and contributions occasioned by the proposed development. In a similar manner the range of human services and access to same will be enhanced as a result of developer funded improvements.

## **7.8 Government Implications**

The implications for government have been alluded to previously. To reiterate and expand it should be noted:

- That the physical and human infrastructure/service impacts occasioned by the development will be met by the developers – there will be no cost to Government.
- Urban development will deliver considerable GST revenue to the Government.
- Significant revenue will accrue from land tax, stamp duty, etc.

The proposed development, with developer funded commitments, enables the Government to produce a revenue stream to embellish infrastructure and pursue other objectives that would, but for development, not be available.

## Section I – Merit of the Proposed Urban Release

### 8.1 General

The merit of the proposed release of the subject land for urban and support purposes has been alluded to previously. Further, detailed assessments against the Metropolitan Strategy – Sustainability Criteria for New Land Releases is provided as **Annexure A** to this report.

### 8.2 Council Policy and Metropolitan Strategy

The subject land has been increasingly marginalised as an agricultural precinct over recent decades. It is largely surrounded by urban development, with no properties used for substantial commercial agricultural production and the ever present threat of rural/urban conflicts in the background.

Intergenerational change has seen an irreversible decline in families being ‘wedded’ to agriculture and a rural lifestyle. Any concerted effort to promote agriculture would require significant capital investments to ensure viability and compatibility and would be clearly at odds with the emergent inherent economic rent of the land. The land has been demonstrated to have urban capability, subject to conservation and management of environmentally sensitive Georges Creek and its tributaries and some isolated remnants of indigenous vegetation. The land is topographically and geotechnically suitable for urban development (the environmental zones aside).

Previous concerns with the environmental health of Berowra Creek have been substantially redressed by recent works in respect of the local sewer systems and coupled with the pursuit of water sensitive urban design principles do not present water quality as a mitigating circumstance.

A mixed-use development scheme, as promoted in the Structure Plan, modelled on the principles of water sensitive urban design and permeable and diverse movement systems provides a unique opportunity to expand upon existing centres and capitalise upon existing and proposed infrastructure and realise the housing and broader sustainability objectives previously enunciated in respect of Council’s Housing Strategy and the Metropolitan Strategy. This conclusion is further attested to in the Annexures attached to this report.

Impacts on local and regional infrastructure by the proposed development will necessitate the payment of reasonable local and regional contributions and levies; whilst augmentation and reticulation charges associated with the proposed servicing of the development will need to be met by the proponents. There is no net cost to Government, but rather an income source.

The proposed development is also importantly capable of sensitive integration with surrounding urban development. The site as “hole in the donut” cries out to capitalise on infrastructure, integrate with surrounding lands and contribute immediately to redressing the housing supply shortage, which is further attested to by the lack of ‘greenfield’ release areas identified in the 2007 Metropolitan Development Program (Review).

### **8.3 Community Benefit**

The proposed development will clearly provide opportunities for some of the existing community to access a diverse range of housing products in a general environment of diminishing housing opportunities. These opportunities for many will not necessitate the severing of social linkages and will reinforce the capacity to move about locally if the desire/needs arise.

Infrastructure upgrades will also be occasioned by the proposed development to the betterment of the broader community. This is likely to be reflected in road upgrades, enhanced bus services and a broader range of community and commercial facilities.

The Georges Creek catchment and associated riparian zones will be subject to advanced conservation, maintenance and access strategies, to the advantage of the local community.

The proposed development will also provide further economic stimulus to the area. Job opportunities and investment will be created. Further, new residents will increase the demand for services and facilities and as such local businesses are likely to experience enhanced trade performance.

## **Section J – The Urban Development Process**

A persuasive case has been established for the expeditious release of the subject land. Council and the Department of Planning should act to have the land listed on the Metropolitan Development Program and pursue relevant planning processes.

## **Section K – Conclusion**

### **10.1 Precinct Context**

The South Dural area comprises a precinct surrounded principally by recent urban development at Glenhaven and Cherrybrook. It is largely cleared in nature and comprises, in part, the headwaters of Georges Creek. Generally it is devoted to rural/residential pursuits, with isolated instances of commercial development and community facilities.

### **10.2 Land Holding and Physical Constraints**

The land holding is approximately 240ha in size and is zoned generally for rural (landscape) and environmental protection (river catchment) purposes. With the exception of the creek system and its associated buffers and some isolated remnant vegetation there are few physical constraints to its urban development.

These values have indeed become overtime largely one of an ‘open’ landscape and not one characterised by rural production.

### **10.3 Servicing**

Engineering service infrastructure, transport infrastructure and human service infrastructure is available in the locality and capable of ready augmentation/expansion to service the subject precinct. Such process would, however, involve significant owner funded commitments to local and regional service and infrastructure contributions/levies.

The proponents are committed to reasonable payments in this regard and the cost of servicing the development in general.

### **10.4 Rural Future**

The subject land has become increasingly marginalised as an agricultural precinct over recent decades; there being little likelihood of it being ‘rejuvenated’ as a precinct focussed on sustainable agriculture.

The inherent economic rents, required capital investments, intergenerational occupational change and landuse conflicts serve to reinforce the remoteness of an agricultural future. It is the rural landscape values which have been highly prized over the years as is reflected in the prevailing zoning.

### **10.5 Water Quality**

Previous concerns with the environmental health of Berowra Creek have been substantially redressed by recent works in respect of the local sewer systems and coupled with the pursuit of water sensitive urban design principles and further sewer augmentation; do not present water quality as a mitigating circumstance.

### **10.6 A Sustainable Development Proposal Delivering Local and State Housing/Community Objectives**

A mixed-use development scheme, as promoted in the Structure Plan, modelled on the principles of water sensitive urban design and permeable and diverse movement systems provides a unique opportunity to expand upon existing centres and capitalise upon existing and proposed infrastructure and realise the housing and broader sustainability objectives enunciated in respect of Council's Housing Strategy and the Metropolitan Strategy. This conclusion is further attested to in the Annexures attached to this report.

### **10.7 Addressing Immediate Housing Supply**

The site as a "hole in the donut" cries out to capitalise on infrastructure, integrate with surrounding lands and contribute immediately to redressing the housing supply shortage.

### **10.8 Urban Development**

The release of the subject land should represent a priority for Council and the Department of Planning and is generally consistent with the principles underpinning their respective strategies. It is accordingly recommended that Council advance the release of the subject precinct by supporting its listing on the Metropolitan Development Program and pursue relevant planning processes.

## **Section L – Recommendations**

Having regard to the preceeding information it is recommended that Council support the release of the South Dural precinct for urban and environmental protection purposes and advances the listing of the land on the Metropolitan Development Program and pursues the relevant planning processes in an expedient manner.

## Annexure A

### Compliance with Sustainability Criteria for New Land Releases (Metropolitan Strategy 2005)

#### I Infrastructure Provision

Mechanisms in place to ensure utilities, transport, open space and communication are provided in a timely and efficient manner.

A) *Development is consistent with any relevant residential development strategy, regional infrastructure plan and Metropolitan Strategy.*

The proposed development does not fully conform to Council's Housing Strategy and the Metropolitan Strategy. Both are largely silent on 'greenfields' releases in the Shire; a situation which is further perpetuated in the Metropolitan Development Program (2007).

Land of the subject nature is critical to retaining housing diversity in the Shire and sub-region. Development of the land has the capacity to capitalise on planned enhancement of sub-regional and regional infrastructure and indeed contribute to the cost of same.

B) *The provision of infrastructure (utilities, transport, open space and communications) is costed and economically feasible based on Government methodology for determining infrastructure contribution.*

Background infrastructure studies have been conducted and broad costings established. These costings have been included in the Project Development Costs at Section 7.3 of this report.

Coupled with other project costs, the project is calculated to likely return 22% to 25%, with an Internal Rate of Return of approximately 15%.

All infrastructure is to be fully funded by the developers, including relevant Regional Infrastructure Levies (similar to the Growth Centres) and local Developer Contributions.

C) *Preparedness to enter into development agreement.*

The owners are prepared to enter into development agreements to pay reasonable infrastructure contributions and the like.

#### 2 Access

Accessible transport options for efficient and sustainable travel between homes, jobs, services and recreation to be existing or provide.

A) *Accessibility of the area by public transport and appropriate road access.*



**a) Location/Landuse; to existing networks and related activity centres.**

The land is proximate to existing networks and activity centres. The Old Northern Road and New Line Road are major local distributor roads and bound the site. The site has reasonable access to the Castle Hill Centre and nearby employment areas including Norwest Business Park and also has access to Pennant Hills and its commercial/employment environs.

**b) Networks; the areas potential to be serviced by economically efficient public transport systems.**

Major bus routes operate on the perimeter of the site and link with major commercial areas, employment hubs and Pennant Hills station. Further, such routes will in term service the proposed Castle Hill station.

The Structure Plan for the site also provides for efficient bus routes linking with the previously mentioned perimeter routes. Enhanced bus stops on the Old Northern Road and New Line Road should also be facilitated by the proposed development.

**c) Catchment; the areas ability to contain or form part of the larger urban area which contains adequate transport services. Capacity for landuse/transport patterns to make a positive contribution to achievement of travel and vehicle use goals.**

The site quite clearly forms part of a larger urban area, being surrounded by urban development. This network of transport in the broader locality is subject to an enhancement program in respect of road improvements, greater access to rail and bus services. The proposed development could reasonably contribute to this enhancement program where a clear nexus is evident.

Of itself the site provides a landuse mix and juxtaposition of uses to reduce transport demands (refer to draft Structure Plan). Further, the draft Structure Plan provides for penetration and linkages to the 'higher order' services beyond the site.

*B) No net negative impact on performance of existing sub-regional road, bus rail, ferry and freight network.*

The proposed development will impact upon the immediate road network and 'higher order' transport services. As such it is proposed to contribute to road improvements in the immediate catchment and pay a relevant and reasonable contribution to 'higher order' bus and rail transport infrastructure.

### **3 Housing Diversity**

Provide a wide range of housing choices to ensure a broad population can be housed.

*A) Contributes to the geographic market spread of housing supply, including any government targets established for aged, disabled or affordable housing.*

The locality is typically characterised by large houses occupied by 2<sup>nd</sup> and 3<sup>rd</sup> home buyers. This is in large part a product of the high amenity of the area and its access to major environment based recreational opportunities and its relative proximity to Metropolitan Sydney.

The vision for the site and draft Structure Plan seeks to provide for diverse housing opportunities in catering for a broader resident population spectrum. A variety of housing products are proposed in an effort to provide in addition to the norm, opportunities for aged, disabled and those with lower disposable incomes.

## **4 Employment Lands**

Provide regional/local employment opportunities to support Sydney's role in the global economy.

*A) Maintain or improve the existing level of sub-regional employment self containment.*

Some minor loss of agricultural employment will occur. Such loss will be exceeded by additional employment opportunities on-site and in nearby employment precincts.

*B) Meets sub-regional employment category targets*

**a) Employment related land is provided in appropriately zoned areas.**

Sub-regional employment targets have not been released. The proposed neighbourhood centre and other mixed use employment opportunities will assist in facilitating an element of self containment.

## **5 Avoidance of Risk**

Landuse conflicts and risk to human health and life avoided.

*A) Available safe evacuation (Flood and Bushfire)*

Requirements incorporated in Structure Plan layout.

*B) No residential development within 1:100 floodplain.*

Requirements incorporated in Structure Plan layout.

*C) Avoidance of physically constrained land: high slope, highly erodable.*

Unstable areas proposed to be retained as environmental protection/open space areas. Appropriate construction techniques will be employed across the subject precinct.

*D) Avoidance of landuse conflicts with adjacent, existing or future landuse and rural activities as planned under regional strategy.*

The Structure Plan provides for appropriate interface treatments/relationship of landuses to manage potential conflicts.

Development will need to ensure appropriate setbacks from existing agricultural pursuits so as to not impact adversely on production in the short to medium term and to minimise complaints from future residents of adverse agricultural impacts.

## **6 Natural Resources**

Natural resource limits not exceeded/environmental footprint minimised.

*A) Demand for water does not place unacceptable pressure on infrastructure capacity to supply water and environmental flows.*

Infrastructure will need to be amplified in response to the development, with such cost being met by developers. A total water cycle management strategy will include an objective of facilitating environmental flows in Georges Creek.

*B) Demonstrates most effective/suitable use of land.*

### **a) Avoids significant agricultural land.**

The subject land is identified as being of significance and worthy of conservation by Council. The land does not, however, have a classification as prime agricultural land. Further, to achieve viability would require intensive operations and major capital investment. Such investment is not likely to be forthcoming given the inherent value of the land and typical rural/urban conflicts.

### **b) Avoids impacts on productive resource lands; extractive industries, coal, gas and other mining and quarrying.**

No impacts on such resources are occasioned by the proposed development.

### **c) Demand for energy does not place unacceptable pressure on infrastructure capacity to supply energy; requires demonstration of efficient and sustainable supply solution.**

Augmentation of local energy supply distribution network will be required. Developer funding will meet such costs and produce a sustainable supply solution.

## **7 Environmental Protection**

Protect and enhance biodiversity, air quality, heritage and waterway health.

A) *Consistent with Government approved Regional Conservation Plan (if available).*

Proposal will lead to a conservation strategy for the Georges Creek environmental corridor, which does not presently exist.

B) *Maintains or improves areas of regionally significant terrestrial and aquatic biodiversity (as mapped and agreed by DEC and DPI). This includes regionally significant vegetation communities; critical habitat; threatened species populations; ecological communities and their habitats.*

Areas of ecological significance will be retained and managed pursuant to a Conservation Management Plan prepared for the site and the subject of an implementation strategy.

C) *Maintain or improve existing environmental condition for air quality.*

No significant urban release could claim to have no adverse impact. Any impact associated with the proposed development is likely to be minimal.

Further, the proposed development is designed to optimise use of alternative less polluting means of movement. The development will contribute to provision of enhanced bus and rail services which will also provide an attractive means of alternative movement for some residents.

D) *Maintain or improve existing environmental condition for water quality and quantity.*

**a) Consistent with community water quality objectives for recreational water use and river health (DEC and CMA).**

Application of water sensitive urban design principles to proposed development will improve current situation in pursuit of the subject objectives. It may, however, not be able to address adverse impacts from elsewhere in the catchment and fully achieve the water quality objectives for the system.

**b) Consistent with catchment and stormwater management planning (CMA and local Council).**

Achievable through application of principles of water sensitive urban design.

A) *Protects areas of Aboriginal cultural heritage value (as agreed by DEC).*

Areas not imperilled by the development proposal. Any areas of sensitivity likely to be conserved in the Georges Creek conservation zone.

## **8 Quality and Equity in Services**

Quality health, education, legal, recreational, cultural and community development and other government services accessible.

A) *Available and accessible services.*

- a) **Do adequate services exist?**
- b) **Are they at capacity or is some available?**
- c) **Has Government planned and budgeted for service provision?**

Many existing services have reached capacity or are nearing capacity and in need of expansion/upgrade. Some Government/Council planning has occurred in this regard.

It is clear that the proposed development will impact upon social infrastructure provision beyond the site. Appropriate and reasonable developer contributions are critical to the required enhancement.

B) *Developer funding for required upgrade/access is available.*

Commitment to reasonable developer funding is central to the development proposal.