

A large, stylized graphic of several overlapping leaves in shades of light green and yellow, positioned in the upper left quadrant of the cover.

Warriewood Valley Planning Framework 2010

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PITTWATER COUNCIL

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1. EXECUTIVE SUMMARY

Following the decision by the State Government to progress the urban development program within Warriewood Valley, Pittwater Council embarked on the process to implement a planning strategy which will see urban development in those sections of the Valley assessed as suitable for development.

Development of the Valley must achieve the objectives of environmental and economic sustainability, and provide an amenable neighbourhood for its occupants. In addition, the development must be compatible with surrounding land uses and be supported by the appropriate levels of community infrastructure and facilities.

In order to ensure appropriate and coordinated development of the Valley, a planning framework is required. The principal objectives of the planning framework for Warriewood Valley are:

- *To provide for development of the Warriewood Valley as a whole which is environmentally and economically sustainable in the short, medium and long term, with minimum financial impact on Council;*
- *To ensure that the future residents and occupiers of the Valley are provided with an appropriate level of community facilities and services and an amenable and safe neighbourhood;*
- *To ensure that development in the Valley is compatible with and does not detract from the amenity of surrounding landuses particularly residential properties.*

The original *Draft Warriewood Valley Urban Land Release Planning Framework 1997*:

- Provided a suite of action plans which specify the tasks to be carried out during the detailed planning of the development and post development phases of the land release by Council, developers and State Government authorities. These action plans ensure that the planning framework objectives will be achieved.
- Allocated the landuse for each sector to be developed. This allocation is made on the basis of the environmental characteristics of the land and its ability to sustain development.
- Prescribed development densities and population projections for each of the sectors of land to be developed.

The framework prescribes that development shall be on a sector-by-sector basis and that each sector shall develop a detailed design concurrent with the rezoning process. In this way, Council can be assured that fragmented land ownership does not impact adversely on the eventual outcome and that the development community is given the opportunity to directly provide community facilities and services in a planned and coordinated way.

The planning framework provides a forward path for the implementation of the detailed planning process, the rezoning of land and its development.

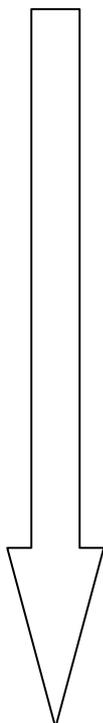
The *Warriewood Valley Planning Framework 2010* consolidates the *Draft Warriewood Valley Urban Land Release Planning Framework 1997* and the *STP Buffer Sector Draft Planning Framework 2001* into a single document. The 2010 Planning Framework aims to ensure planned orderly development of the Valley continues, responding to changing legislative and economic conditions by developing a planning strategy that facilitates completion of the Warriewood Valley Urban Land Release.

A total of 2012 dwellings are now anticipated in Warriewood Valley as well as 33 hectares of land for industrial/commercial development. It is envisaged that the remaining 927 dwellings and industrial/commercial development on 4.8 hectares of land will be completed in forthcoming decade (up to 2020).

The 2010 Planning Framework continues the strategy for the provision of community facilities and infrastructure. This strategy places an emphasis on direct provision by developers where possible, and provides a basis for a Section 94 Development Contributions Plan. A principle element of this strategy continues, and involves, the principle that at no time should the community (through its Council) be required to fund, or borrow monies to fund, works to support the development beyond its current liabilities in regard to initial development in Warriewood Valley. The Section 94 Development Contributions Plan forms the statutory procedure by which Council can levy development to provide facilities and infrastructure where direct provision is impractical.

2. BACKGROUND

1991



In late 1991, the then Minister for Planning made a decision to include land at Ingleside and Warriewood within the State Government's Urban Development Program. With the advent of Pittwater Council, the Minister advised that Council was to be the authority responsible for the feasibility investigation and planning for an urban land release within the area.

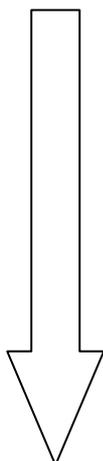
In order to achieve a coordinated approach to the investigation and planning of the release by Council and relevant State Government authorities, Council formed a Land Release Advisory Committee to discuss issues related to the investigation, planning and eventual implementation of any land release process.

This committee comprised representatives of Council, State Government departments and authorities including the Department of Urban Affairs and Planning, Sydney Water, National Parks and Wildlife Service, Soil Conservation Service, Sydney Electricity, Roads & Traffic Authority, Telecom, Landcom, Environment Protection Authority and Department of Community Services.

To facilitate public participation in the process, Council formed a Resident's Consultative Committee which provided the forum for representatives of landowner and residents groups to participate in the investigation and planning process.

An *Ingleside/Warriewood Urban Land Release Draft Planning Strategy* was the outcome of the investigation and broadscale planning process, drawing from the outcomes of a range of environmental and demographic studies to provide a possible scenario for future development in the land release area including population projections and land use allocation.

**MAY
1995**



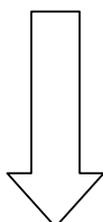
Pittwater Council accepted the *Ingleside/Warriewood Urban Land Release Draft Planning Strategy* for the purpose of public consultation and referral to the State Government in May 1995.

The outcomes of the *Ingleside/Warriewood Urban Land Release Draft Planning Strategy* and public consultation which followed from its exhibition indicated the environmental and infrastructure difficulties associated with the urban land release, particularly in the more environmentally diverse areas of the escarpment, Bayview Heights and Ingleside areas.

Consultation with State Government Authorities as an outcome of the *Ingleside/Warriewood Urban Land Release Draft Planning Strategy* highlighted the infrastructure difficulties associated with the land release area and the potential regional environmental impacts, particularly wastewater disposal and air quality.

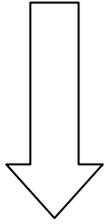
The *Ingleside/Warriewood Urban Land Release Draft Planning Strategy* and consultation outcomes were referred to the Department of Urban Affairs and Planning for consideration.

**MAY
1997**



In May 1997, the Minister for Urban Affairs and Planning, Hon Craig Knowles, announced a restricted release of land for urban development within the Warriewood Valley. The land identified for urban release by the Minister related to approximately 110 hectares of land within Warriewood Valley with a preliminary projection of 1510 new dwellings, five hectares of industrial/commercial land and associated community facilities and infrastructure.

At the time, the Minister specifically deferred consideration of land within 400 metres of the Warriewood Sewage Treatment Plant. The land release area does not extend west of Warriewood Valley into the escarpment or beyond to the Ingleside or Bayview Heights area.



Following the Minister's announcement in May 1997, Pittwater Council commenced the process of detailed investigation and planning to facilitate the orderly and environmentally sustainable release of land for urban development within the nominated area.

**SEPT
2001**

In September 2001, Council adopted a planning framework (*STP Buffer Sector Draft Planning Framework 2001*) for the area within 400m of the Warriewood Sewerage Treatment Plant (STP) following Sydney Water's decision to cap the STP. This enabled three areas within 400m of the STP (known as Buffer Areas 1, 2 and 3) to be rezoned for residential purposes.

3. PURPOSE OF A PLANNING FRAMEWORK FOR WARRIEWOOD VALLEY

A planning framework is required to identify land within the release area which is suitable for urban development or other land uses, indicate what forms of development should occur and ensure that the eventual development takes into account the environmental attributes of the land.

The 2010 Planning Framework retains and continues the approach and recommendations originally presented in the 1997 and 2001 Planning Framework documents namely:

- The outcomes of a range of environmental, demographic and infrastructure studies which identify the capability of the land to sustain different forms of land use and assess the likely requirements of future development;
- The ability for community facility and infrastructure service providers, including Council and State Government authorities, to ascertain what impact development of the area will have at a local, regional and state level and therefore require the appropriate facilities;
- The detailed planning for development on a sector-by-sector basis and the infrastructure requirements as a result of development are assessed so that a coordinated process of implementation can be achieved;
- The identification of particular issues which are relevant to individual sectors of the release area and determines the focus for further detailed planning to facilitate development in those areas in accordance with its stated objectives.

Note: The 1997 Planning Framework included 1986 Warriewood Valley Stage One development into the planning process for the wider release area.

4. LAND TO WHICH THE PLANNING FRAMEWORK APPLIES

The 2010 Planning Framework applies to land generally comprising the floor of Warriewood Valley between the Warriewood Wetlands and Mona Vale Road with an isolated area of land in West Mona Vale between existing residential development and the foot of the escarpment. Originally, the 1997 Planning Framework included the 1986 Warriewood Valley Stage One Release to ensure integration between the two development forms.

The areas designated for land release within Warriewood Valley are shown on the following map.

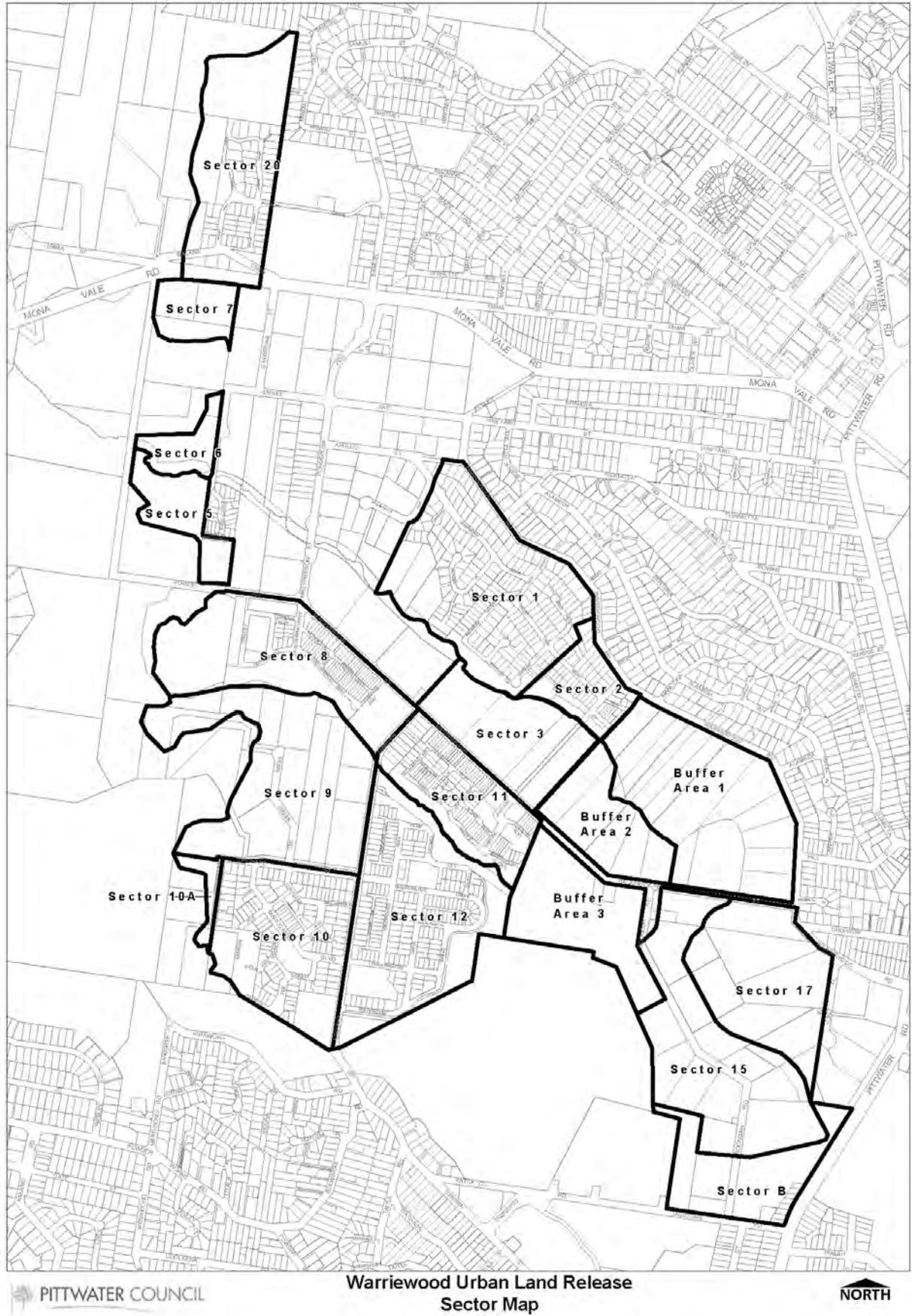
The majority of the area has been cleared and developed for agricultural purposes with remnant areas of vegetation and regrowth along its watercourses and areas subject to flooding, particularly those adjacent to the Warriewood Wetlands.

The 2010 Planning Framework will, by necessity, need to take into account surrounding development and land uses to ensure final development achieves the highest level of compatibility in terms of its objectives.

In particular, the 2010 Planning Framework will need to take into account the following:

- Warriewood Valley Stage 1 (1986) residential and industrial/commercial release at the northern end of the Valley which is particularly interrelated to the release area in terms of drainage issues and transport and traffic networks;
- The Warriewood Wetlands, a publicly owned environmental asset adjoining the Warriewood Valley;
- Watercourses which pass through the land release area and subsequent receiving waters of Narrabeen Lagoon, Pittwater and the Ocean;
- Existing open space and recreational areas in the Boondah/Jacksons Road area as well as creek line corridors between the land release area and the Warriewood Wetlands;
- Existing retail commercial centres, particularly Warriewood Square and the Mona Vale Centre;
- Road and transport links with Mona Vale Road, Pittwater Road and the existing local road network;
- Existing residential development surrounding and adjoining the land release area.

Figure 1 – Warriewood Valley Urban Land Release sector map*



* Map as of November 2009 (prior to the review)

5. REGIONAL CONTEXT OF THE WARRIEWOOD VALLEY URBAN LAND RELEASE

The Warriewood Valley Urban Land Release is the most significant single urban planning initiative within the Warringah /Pittwater Local Government Areas since the Forestville/Belrose land releases of the 1970's.

The Warringah Peninsula currently has a population in excess of 230,000 persons¹ and is serviced by three major arterial roads. The public transport network is limited, comprising of bus services to the North Shore regional centres, Sydney CBD together with a ferry service from Manly to the Sydney CBD.

The release area, as well as significant areas of the Peninsula including Pittwater and the northern section of Warringah Shire, is serviced by Warriewood Sewerage Treatment Plant (STP) which currently has a cliff face outfall and has been a source of beach contamination in the past.

The effect of the STP together with the effect of stormwater generated within the study area on downstream receiving waters (Narrabeen Lakes, Pittwater and ocean) have been of significant concern in the process leading to the release of land for development. These need to be borne in mind in the management of the release process.

Notwithstanding Pittwater Council's clear objective to provide for environmentally sustainable development, issues associated with regional transport planning and treatment and disposal of wastewater remain the clear responsibility of the relevant State Government authorities. This specifically includes issues associated with the ocean outfall from the Warriewood STP and the undetermined land uses immediately south of the STP.

¹ Based on 2006 Census. Pittwater LGA has an estimated population of **56,920** people, (as at 30 June 2007, estimated between census periods) Source: Pittwater Community Profile

6. OBJECTIVES OF THE PLANNING FRAMEWORK

The principal objective together with a suite of specific objectives relating to environment issues, community facilities and infrastructure, heritage, urban design and financial sustainability, form the fundamental basis for planning and implementation of development.

PRINCIPAL OBJECTIVES

- To provide for development of Warriewood Valley as a whole which is environmentally and economically sustainable in the short, medium and long term, with minimal financial impact on Council;
- To ensure that future residents and occupiers of the valley are provided with an appropriate level of community facilities and services and an amenable and safe neighbourhood;
- To ensure that development in the valley is compatible with and does not detract from the amenity of surrounding land uses particularly residential properties.

ENVIRONMENTAL OBJECTIVES

- To ensure that significant vegetation within and adjoining the release area is conserved and protected during the development process and in the long term;
- To ensure the maintenance and protection of known or expected native fauna populations within or adjoining the release area in the development phase and in the long term and to provide protection and enhancement of fauna corridor links between habitat parks including protection of habitat adjacent to drainage lines and retention of areas of particular habitat;
- To ensure urban development and associated works are sensitive to the limitations and capabilities of the site in terms of slope, soil, structure, geotechnical stability and flooding and that a stable land surface is maintained within the release area and adjoining areas during the development stage and into the future;
- To ensure that water management procedures are utilized during the development process and into the future so as not to increase, and where possible, reduce the impact of the development on the surrounding community and the natural and urban environment;
- To provide the protection and enhancement of visual elements within the landscape that characterize the nature of the area and contribute to the visual amenity of the immediate vicinity of the local area and region as a whole;
- To ensure that following development, the risks to individuals or the general public as a result of previous land uses which might have caused contamination by agriculture and industrial chemicals or other toxic waste products is minimized;
- To ensure that development is as safe as possible from bushfire hazard and flood hazard;
- To ensure the development is environmentally sustainable.

COMMUNITY FACILITIES AND INFRASTRUCTURE OBJECTIVES

- To ensure that the existing community and the community to be accommodated with the release is provided with suitable transport and traffic facilities, retail and service facilities, community facilities and recreation and open space facilities.

HERITAGE OBJECTIVES

- To ensure that the environmental and built heritage of the area is identified and protected during the development process and into the future;
- To ensure that any items of Aboriginal heritage are identified within the planning and investigation processes leading to development and where identified are protected as warranted.

URBAN DESIGN OBJECTIVES

- To ensure that future development achieves an overall standard of urban design and amenity which is commensurate with surrounding development and provides a vibrant, pleasant and attractive neighbourhood;
- To provide a sense of community and identity to the future population of the development.

FINANCIAL OBJECTIVES

- To ensure that in the interests of stakeholders, including Pittwater Council and relevant Government Agencies, the project is economically as well as environmentally sustainable.

7. ACTION PLANS TO ACHIEVE PLANNING FRAMEWORK OBJECTIVES

In order to ensure that each of the 2010 Planning Framework objectives is taken into account in the planning and implementation of development within the land release area, the suite of action plans, originally developed, are retained.

The action plans were derived from various studies carried out as part of the investigation and planning process and actions. The action plans ensure that the outcomes of the studies and 2010 Planning Framework objectives will be referred to in detail as part of the planning of any individual sector of land for development and set out the tasks which must be undertaken by Council, State Government authorities and developer/landowners.

The studies carried out by Council (pre 1997) form the basis of the action plans are as follows:

- *Ingleside/Warriewood Vegetation Conservation Study*
- *Ingleside/Warriewood Fauna Conservation Study*
- *Ingleside/Warriewood Land Capability Study*
- *Ingleside/Warriewood Contaminated Land Study*
- *Ingleside/Warriewood Visual Impact Study*
- *Ingleside/Warriewood Aboriginal Archaeological Study*
- *Ingleside/Warriewood Heritage Study*
- *Ingleside/Warriewood Water Cycle Management Study*
- *Ingleside/Warriewood Bushfire Hazard Study*
- *Ingleside/Warriewood Combined Demographic Study*
- *Demographic Analysis and Modeling*
- *Traffic and Transport*
- *Retail and Service Facilities*
- *Community Facilities*
- *Open Space and Recreation*
- *Warriewood Valley Integrated Water Management Strategy*
- *Warriewood Valley Urban Land Release Traffic and Transportation Study*

Note: The inclusion of the outcomes of these studies does not infer that Council has at this time accepted the recommended action or outcomes of any study. However, those outcomes have been included so that an overall assessment of the land release and its implications can be made.

The source documents upon which the respective action plans were derived are listed overleaf to provide a clear link between the investigation process for the land release and eventual implementation and development:

ENVIRONMENTAL OBJECTIVES

Action Plan	Source Documents
Vegetation Conservation	<i>Ingleside/Warriewood Vegetation Conservation Study</i>
Fauna Conservation	<i>Ingleside/Warriewood Fauna Conservation Study</i>
Land Capability	<i>Ingleside/Warriewood Land Capability Study</i>
Stormwater Management	<i>Ingleside/Warriewood Water Cycle Management Study and the Integrated Water Management Strategy – Warriewood Valley</i>
Visual Impact	<i>Ingleside/Warriewood Visual Impact Study</i>
Contaminated Land	<i>Ingleside/Warriewood Contaminated Land Study</i>
Bushfire Hazard	<i>Ingleside/Warriewood Bushfire Hazard Study</i>

COMMUNITY FACILITIES AND INFRASTRUCTURE OBJECTIVES

Action Plan	Source Documents
Demographic Monitoring	<i>Ingleside/Warriewood Combined Demographic Study</i>
Traffic and Transport	<i>Ingleside/Warriewood Combined Demographic Study and the Warriewood Valley Traffic and Transport Study</i>
Retail and Services	<i>Ingleside/Warriewood Combined Demographic Study</i>
Community Facilities	<i>Ingleside/Warriewood Combined Demographic Study</i>
Open Space and Recreation	<i>Ingleside/Warriewood Combined Demographic Study</i>

HERITAGE OBJECTIVES

Action Plan	Source Documents
Heritage	<i>Ingleside/Warriewood Heritage Study</i>
Aboriginal Heritage	<i>Ingleside/Warriewood Aboriginal Archaeological Study</i>

URBAN DESIGN OBJECTIVES

Action Plan	Source Documents
Urban Design	Elements of all Ingleside/Warriewood investigative studies Relevant Council policies (pre 1997) Council's urban design statement for Sector 1 (pre 1997) Council's Environmental Values Statement (pre 1997)

FINANCIAL OBJECTIVES

Action Plan	Source Documents
Financial Implications	<i>Draft Warriewood Valley Urban Land Release Planning Framework 1997*</i> <i>Warriewood Section 94 Contributions Plan No. 15 (Amendment No. 16)*</i> <i>Draft Warriewood Valley Planning Framework 2010</i>

* Background reference documents attributed to the review process in preparation of 2010 Planning Framework

7.1 VEGETATION CONSERVATION

The study brief for the Ingleside/Warriewood Vegetation Conservation Study, on which this action plan is based, identified its fundamental goals as follows:

To investigate, define and provide, planning guidelines and management strategies to ensure that significant vegetation as warranted, within and adjoining the study area is conserved and protected, during the development phases of the land release, and in the long term.

In determining the significance of vegetation, regard should be had to its botanical, ecological and cultural significance, and consideration shall be given to the criteria in SEPP No. 19 - Bushland in Urban Areas and Urban Bushland Management Guidelines published by the Department of Planning, 1991.

In accordance with the study brief, the report provides an assessment of the vegetation communities contained within the study area.

The study report provides a classification of land within the release study area as to its vegetation significance in the form of a map which can be utilised in developing the planning for the land release and the prescription of management strategies to be used to preserve, and where appropriate enhance, the vegetation communities of particular areas. This map identifies four classes of land as follows:

- Class 1 Areas suitable for residential or associated development without further study, subject to the application of appropriate planning guidelines and management strategies.*
- Class 3 Areas which are considered suitable for residential, or associated development, subject to a satisfactory study of their vegetation characteristics at development application stage in accordance with the requirements of the Environmental Planning & Assessment Act 1979, or other pertinent legislation, and application of appropriate planning guidelines and management strategies.*
- Class 4 Areas which have significant vegetation characteristics, and are required to be conserved unless a detailed study carried out at development application stage, in accordance with the requirements of the Environmental Planning & Assessment Act 1979, or other pertinent legislation indicates that limited development, with a high level of ameliorative measures designed to retain or improve those significant vegetation elements, can be applied to ensure their continued viability.*
- Class 5 Areas that are considered essential for retention to conserve their significant vegetation characteristics and should be conserved through the application of appropriate planning guidelines and management strategies.*

The study report provides a series of planning guidelines and management strategies. The planning guidelines to be applied during the various stages of development include the preparation of local environmental plans, development control plans and down to the design of individual development sites. The management strategies outline tasks which will be carried out throughout the planning and development process to ensure preservation of the various vegetation types significant to the area.

The application of the study outputs have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

The action plan designates the required action, its timing in the release process, and the appropriate authority or body responsible for specific tasks.

Table 1 – Vegetation conservation action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Allocating land uses for sectors designated for release</p>	<ol style="list-style-type: none"> 1. Give preference to relatively more intensive forms of land use on land designated Classes 1 and 3 by the study. 2. Give preference to low density strategically located forms of land use on land designated Class 4 by the study. 3. Give preference to conservation and related land uses on land designated Class 5 by the study. 	<p>Council</p>
<p>Preparation of detailed planning for individual sectors</p>	<ol style="list-style-type: none"> 1. Further investigate and assess the appropriateness of land for certain land uses based on the study outputs. 2. Detailed area assessment to verify study classification (as necessary). 	<p>Developer/ landowner</p>
<p>Preparation of LEP/DCPs</p>	<ol style="list-style-type: none"> 1. Zone land as appropriate. Carry out further studies/investigation as necessary. 2. Prescribe planning controls and management strategies to be applied during preparation and assessment of development applications, approval and construction stages. 	<p>Council/ developer</p> <p>Council</p>
<p>Implementation Phase</p>	<ol style="list-style-type: none"> 1. Provide planning guidelines and management strategies to developers/landowners. 2. Apply planning guidelines and management strategies in the investigation and planning for future development. 3. Evaluate proposal including the information submitted by developer taking into consideration planning guidelines and management strategies 4. Apply conditions of approval/reasons for refusal on basis of the planning guidelines and management strategies. 5. Comply with conditions of approval. 6. Ensure that development proceeds in accordance with conditions of approval. 	<p>Council</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p> <p>Developer/ landowner</p> <p>Council/ developer</p>
<p>Ongoing</p>	<ol style="list-style-type: none"> 1. Review planning guidelines and management strategies as land release proceeds and apply to applications for future development. 2. Monitor Performances 	<p>Council</p> <p>Council</p>

7.2 **FAUNA CONSERVATION**

The study brief for the Ingleside/Warriewood Fauna Conservation Study on which this action plan is based identified as its fundamental goals the following:

To investigate, define and provide planning guidelines and management strategies for the maintenance and protection of known, or expected, native fauna populations, within and adjoining the study area, during the development phases of the urban land release, and in the long term.

To investigate, define and provide planning guidelines and management strategies for the protection of rare and endangered fauna species of local, regional, or global significance, known or expected to occur within and adjoining the study area, during the development phases of the urban land release, and in the long term

To investigate, define and provide planning guidelines and management strategies for the retention, and where necessary, restoration of fauna habitats in parcels of a size and configuration that will enable known or expected native fauna populations to survive within and adjoining the study area in the long term

To provide for the protection and enhancement of wildlife corridor links between habitat types, protection of habitat adjacent to drainage lines, and retention of other areas of particular habitat value, within and adjoining the study area.

In accordance with the study brief, the report provides an assessment of the range of fauna and its habitats likely to be found within the release area.

The study report provides a classification of land within the study area as to its fauna significance and known and expected habitats in the form of a map which can be utilised in developing the planning for the land release and the prescription of management strategies to be used to protect and preserve the fauna populations of particular areas. This map identifies three classes of land as follows:

- Class (a) Areas suitable for residential or associated development without further study, subject to the application of specified planning guidelines and management strategies.*
- Class (d) Areas which are significant in terms of fauna habitat but can accept low density, strategically located residential development subject to a detailed fauna study which indicates that such development, with a high level of ameliorative measures designed to retain or improve that habitat, can be applied to ensure the continued viability of fauna populations and should be preserved.*
- Class (e) Areas that are considered essential for retention for the conservation of significant fauna populations and should be conserved through the application of appropriate planning guidelines and management strategies.*

The report provides a series of planning guidelines and management strategies. The planning guidelines to be applied during the various planning stages of development include the preparation of local environmental plans, development control plans and down to the design of individual development sites. The management strategies outline tasks which will be carried out throughout the planning and development process to ensure preservation of the various fauna populations within the area.

The application of the study outputs have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

The action plan designates the required action, its timing in the release process, and the appropriate authority or body responsible for specific tasks.

Table 2 – Fauna conservation action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Allocating land uses for sectors designated for release</p>	<ol style="list-style-type: none"> 1. Give preference to relatively more intensive forms of land use on land designated Class (a) by the study 2. Give preference to low density strategically located forms of land use on land designated Class (d) by the study. 3. Give preference to conservation and related land uses on land designated Class (e) by the study. 	<p>Council</p> <p>Council</p> <p>Council</p>
<p>Preparation of detailed planning for individual sectors</p>	<ol style="list-style-type: none"> 1. Further investigate and assess the appropriateness of land for certain land uses based on detailed examination based on these study outputs. 2. Detailed area assessment to verify study classification as necessary. 	<p>Council/ developer</p> <p>Council/ developer</p>
<p>Preparation of LEP/DCP</p>	<ol style="list-style-type: none"> 1. Further refine study outputs and zone land as appropriate based on above study output. Carry out further studies/investigations as necessary. 2. Prescribe planning controls and management strategies to be applied during assessment of development applications, approval and construction stages. 	<p>Council/ developer</p>
<p>Implementation Phase</p>	<ol style="list-style-type: none"> 1. Provide planning guidelines and management strategies to developers/landowners. 2. Apply planning guidelines and management strategies in the investigation and planning of future development. 3. Evaluate proposal including the information submitted by developer as required by the various Council prescriptions. 4. Apply conditions of approval/reasons for refusal on basis of the planning guidelines and management strategies. 5. Comply with conditions of approval. 6. Enforce that development proceeds in accordance with conditions of approval. 	<p>Council</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p> <p>Developer/ landowner Council/develop er</p>
<p>Ongoing</p>	<ol style="list-style-type: none"> 1. Review planning guidelines and management strategies as land release proceeds and apply to applications for future development. <p>Monitor performance.</p>	<p>Council</p>

7.3 LAND CAPABILITY

The study brief for the Ingleside/Warriewood Urban Land Capability Study on which this action plan is based identified as its fundamental goals the following.

The purpose of the Urban Land Capability Study is to identify the limitations to urban development and associated works created by slope, soil structure, geotechnical instability, flooding and other related constraints within the Study Area.

To define and provide a range of suitable planning guidelines and management strategies for the maintenance of a stable land surface with and adjoining the study area during the development stage and into the future.

In accordance with the study brief, the study report provides a map which classifies land as regards to its capability for urban development into five categories as follows:

- Class A Areas with little or no physical limitations to urban development.*
- Class B Areas with minor to moderate physical limitations to urban development. These limitations may influence design and impose certain management requirements on development to ensure a stable land service is maintained during and after development.*
- Class C Areas with moderate physical limitation to urban development. These limitations can be overcome by careful design and by adopting site management techniques to ensure the maintenance of a stable land surface.*
- Class D Areas with severe physical limitation to urban development which will be difficult to overcome requiring detailed site investigation and engineering design.*
- Class E Areas where no form of urban development is recommended because of very severe physical limitations which are very difficult to overcome.*

The study report also provided an explanation relating to the designation of the classifications of land within the study area together with specifications for a range of planning guidelines and management strategies to be applied to future development.

The application of the study outputs have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

The action plan designates the required action, its timing in the release process, and the appropriate authority or both responsible for specific tasks.

Table 3 – Land capability action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Allocated land uses for sectors designated for release</p>	<ol style="list-style-type: none"> 1. Give preference to relatively more intensive forms of land use on land designated Classes A, B and C by the study. 2. Give preference to low density strategically located forms of land use on land designated Class D by the study. 3. Give preference to conservation and low intensity land use on land designated Class E by the study. 	<p>Council</p> <p>Council</p> <p>Council</p>
<p>Preparation of detailed planning for individual sector</p>	<ol style="list-style-type: none"> 1. Further investigate and assess the appropriateness of land for certain land uses based on detailed examination of the study outputs. 2. Detailed area assessment to verify study classification. This may include soil testing and capability evaluation together with ensuring the compatibility between planning and construction of water/soil management facilities. 	<p>Council/ developer</p> <p>Developer</p>
<p>Preparation of LEP/DCP</p>	<ol style="list-style-type: none"> 1. Zone land as appropriate. Carry out further investigation/study as necessary. 2. Prescribe planning controls and management strategies to be applied during preparation and assessment of development applications, approval and construction stages. 	<p>Council</p> <p>Council</p>

Timing	Action	Responsibility
Implementation Phase	<ol style="list-style-type: none"> 1. Design/locate and construct water/soil management structures prior to commencement of any site works. 2. Provide planning guidelines and management strategies to developers/landowners. 3. Apply planning guidelines and management strategies in the investigation and planning of future development. 4. Evaluate proposal including the information submitted by developer as required by the various Council prescriptions. 5. Apply conditions of approval/reasons for refusal on basis of the planning guidelines and management strategies. 6. Comply with conditions of approval. 7. Ensure that development proceeds in accordance with conditions of approval. 	<p>Developer/ landowner</p> <p>Council</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p> <p>Developer</p> <p>Council/ developer</p>
Ongoing	<ol style="list-style-type: none"> 1. Review planning guidelines and management strategies as land release proceeds and apply to applications for future development. 2. Monitoring of structures. 	<p>Council</p> <p>Council</p>

7.4 STORMWATER MANAGEMENT

The study brief for the Ingleside/Warriewood Water Cycle Management Study identified as its fundamental goals the following:

Water management procedures are to be developed and implemented within a total water resource management framework.

Water management procedures are to be developed and implemented which do not increase and where possible reduce impact on the surrounding community and the natural and urban environment.

Water management procedures are to be developed and implemented taking into account the cumulative quantitative and qualitative impacts on receiving water from other present and proposed development in the catchment area.

Options for the control and mitigation of impacts from the development, need to consider:

- *Capital expenditure*
- *Staging of development*
- *Long term maintenance of facilities*
- *Need for licence compliance monitoring.*

The study needs to consider both the developing (construction) and long-term occupation phases of the area.

The three major parameters associated with water management for the land release are flood management, effluent management, and drainage systems design and management.

The study report examined the optimum means to integrate the provision of water, waste water and stormwater services while mitigating adverse environment impacts. The examination of water cycle management has involved a review of the interplay between demand and supply of water related services leading to the maximisation of opportunities for water reuse and minimisation of potable water usage.

The study report concluded the following elements:

- Urban development in the release area will require the provision of substantial infrastructure and allocation of significant areas of land for facilities to minimise impacts on downstream areas including receiving waters;
- The existing water supply system could cater for high density development in the Warriewood Valley area. New storage's, trunk pipelines and pumping stations would be required to service other areas;
- The Warriewood STP currently has excess capacity to service an additional 6,000 persons in the release area. Sydney Water has indicated that the Warriewood STP can be augmented at appropriate times to service any levels of development above 6,000 persons in the release area;
- Reuse of treated effluent for irrigation of domestic and open space areas is not recommended due to the inappropriate characteristics of the sub-soils in the area. Reuse of treated effluent only for toilet flushing would not significantly reduce potable water supply infrastructure costs but would require considerable expenditure to incorporate a dual water supply system. A dual water supply system was therefore not considered economically feasible;

- Runoff flow and quality from the developed area would be controlled in a series of channels, detention systems and water quality control ponds and devices as prescribed in the Integrated Water Management Strategy – Warriewood Valley Study;
- Drainage facilities can be incorporated within an integrated multiple use open space allocation, detention basins and water pollution control ponds could be combined where possible to reduce the land take associated with these drainage facilities;
- The proposed runoff control facilities would reduce pollutant loads to rural conditions resulting in minimal additional impacts on receiving waters. In fact, urban development with sewerage reticulation may lead to improvements in dry and wet weather pollutant concentrations in Mullet and Narrabeen Creeks.

The application of the study outputs together with the detailed outputs of the Integrated Water Management Strategy – Warriewood Valley has been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals. The action plan designates the required action, its timing in the release process and the appropriate body or authority responsible for specific tasks.

Table 4 – Stormwater management action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Allocate land uses for sectors designated for release</p>	<p>1. Give preference to land uses compatible with strategic outcomes of study (requirements for maintaining creek line corridors, water quality and quantity control purposes) combined with outputs from open space component of demographic, vegetation conservation and fauna conservation studies.</p>	<p>Council</p>
<p>Preparation of detailed planning</p>	<p>1. Establish an Integrated Water Management Strategy for Warriewood Valley and associated Section 94 Contribution Plans for stormwater management which address the following:</p> <ul style="list-style-type: none"> • Establish, with reference to overall planning strategy, studies of hydrology, hydraulics, ecology, biology, natural wetland, and conservation characteristics of creekline corridors. 	<p>Council Completed –</p>
	<ul style="list-style-type: none"> • Evaluate performance criteria for existing proposed stormwater management structures and devices. • Establish concept designs for natural channel restorations (where practicable), flood conveyances, artificial (on-line and off-line) wetland, gross pollutant traps, and multiple use stormwater management facilities including costing estimates. 	
<p>Preparation of LEP/DCP</p>	<p>1. Rezone land appropriately to ensure stormwater management issues are addressed.</p>	<p>Council</p>

Timing	Action	Responsibility
Implementation Phase	<ol style="list-style-type: none"> 1. Ensure analysis, design, construction and management strategies for stormwater management facilities (short and long term) applied during preparation and assessment of development applications, approvals and construction. 2. Provide management strategies to developers/landowners 3. Apply management strategies and development controls in the investigation and planning for future development. 4. Evaluation of proposal (Development Application) including information submitted by applicant as required by various Council prescriptions. 5. Apply conditions of approval/reasons for refusal on basis of specific management strategies. 6. Ensure that development proceeds in accordance with conditions of approval. 	<p>Council/ developer/ landowner</p> <p>Council</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p> <p>Council</p>
Ongoing	<ol style="list-style-type: none"> 1. Regular performance of stormwater management facilities at regular intervals and after major rainfall events. 2. Review management strategies, having regard to regular monitoring and performance reviews. 	<p>Council</p> <p>Council</p>

7.5 VISUAL IMPACT

The study brief for the Ingleside/Warriewood Visual Impact Study identified as its fundamental goals the following:

To investigate, define and provide planning guidelines and management strategies for the protection and enhancement of visual elements within the landscape that characterise the nature of the study area and contribute the visual amenity of the immediate vicinity, the local area and the region as a whole.

To identify areas that are suitable for urban development subject to the appropriate planning guidelines and management strategies being applied to achieve the aims identified above.

In accordance with the study brief, the report provides an assessment of the visual elements and characteristics of the study area together with an assessment of the visual sensitivity and visual quality.

The report provides a classification of land within the study area as to its visual quality and sensitivity in the form of a map which can be utilised in developing the planning for the land release and the prescription of management strategies to be used to preserve (and where appropriate enhance) the visual characteristics of particular areas. This map identifies five classes of land as follows:

Class I - Areas suitable for residential or associated development without further study, subject to the application of appropriate planning guidelines and management strategies.

Class II - Areas which are considered suitable for residential or associated development subject to the completion, at development application stage of an assessment of their visual characteristics and values and the application of appropriate planning guidelines and management strategies.

Class III - Areas which are considered suitable for residential or associated development, subject to completion at development application stage, of a visual impact study and landscape assessment and subsequent application of appropriate planning guidelines and management strategies to achieve retention or enhancement of the visual characteristics of those areas.

Class IV - Areas that are significant in terms of their visual character and landscape qualities but can accept low density strategically located residential development, with a high degree of ameliorative measures designed to retain or enhance those characteristics, can be applied.

Class V - Areas that are considered essential for retention to conserve or enhance the visual characteristics and landscape values of the area unless a further specific study indicates that retention and conservation is not warranted.

The report provides a series of planning guidelines and management strategies. The planning guidelines to be applied during the various planning stages of development include the preparation of local environmental plans, development control plans and down to the design of individual development sites. The management strategies outline tasks which will be carried out throughout the planning and development process to ensure preservation of the various visual elements which contribute to the area.

The application of the study outputs have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

The action plan designates the required action, its timing in the release process, and the appropriate authority or body responsible for specific tasks.

Table 5 – Visual impact action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Allocate land uses for sectors designated for release</p>	<ol style="list-style-type: none"> 1. Give preference to relatively more intensive forms of land use on land designated Classes I, II and III by the study. 2. Give preference to low density strategically located forms of land use on land designated Class IV by the study. 3. Give preference to conservation and low intensity land use on land designated Class V by the study. 	<p>Council</p> <p>Council</p> <p>Council</p>
<p>Preparation of detailed area planning strategies</p>	<ol style="list-style-type: none"> 1. Further investigate and assess the appropriateness of land for certain land uses based on the study outputs. 2. Detailed area assessment to verify study classification (as necessary). 	<p>Developer/ landowners</p> <p>Developer/ landowners</p>
<p>Preparation of LEP/DCP</p>	<ol style="list-style-type: none"> 1. Zone land as appropriate based on above strategies (carry out further study/investigation as necessary). 2. Prescribe planning controls and management strategies to be applied during preparation and assessment of development applications, approval and construction stages. 	<p>Council</p> <p>Council</p>
<p>Implementation Phase</p>	<ol style="list-style-type: none"> 1. Provide planning guidelines and management strategies to developers/landowners. 2. Apply planning guidelines and management strategies in the investigation and planning for future development. 3. Evaluate proposal including the information submitted by developer as required by the various Council prescriptions taking into consideration planning and management strategies. 4. Apply conditions of approval/reasons for refusal on basis of the planning guidelines and management strategies. 5. Comply with conditions of approval. 6. Ensure that development proceeds in accordance with conditions of approval 	<p>Council</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p> <p>Developer/ landowner</p> <p>Council/developer</p>

Ongoing	1. Review planning guidelines and management strategies as land release proceeds and apply to applications for future development.	Council
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7.6 CONTAMINATED LAND

The study brief for the Ingleside/Warriewood Contaminated Land Study identified as its fundamental goals the following.

To determine if any sections of the Study area are, or are likely to have been contaminated by agriculture or industrial chemical use or toxic waste disposal.

To determine if the level of contamination is likely to be an impediment to the development of the land for residential, or other use, in that it causes a risk to public health and safety.

To determine if further investigations are required, the appropriate stages or timing for any such investigation and appropriate specifications for the investigation procedures.

To define and provide appropriate planning guidelines and management strategies to be incorporated in the planning, design and construction, and occupation stages of any development within the area, to ensure the maintenance of health and safety to construction workers, and others associated with the development process, future residents and members of the public.

In accordance with the study brief, the report provides an assessment of the areas within the study area which are, or are likely to be, contaminated as a result of past land use practices.

The report provides a classification of land within the study area as to its likelihood of contamination in the form of a map which can be utilised in developing the planning for the land release and the prescription of management strategies to be used to identify contaminated lands and remedial processes as necessary. This map identifies four classes of land as follows:

Class 1 - Areas that are highly unlikely to be contaminated and are suitable for residential or associated development without study, subject to the application of appropriate planning guidelines and management strategies.

Class 2 - Areas which are considered suitable for residential or associated development, subject to the completion, at Development Application stage, of an assessment of possible land contamination and the application of appropriate planning guidelines and management strategies.

Class 3 - Areas which are considered suitable for residential or associated development, subject to completion at Development Application stage of a study and assessment to determine possible sources of contamination, and application of planning guidelines and management strategies to ensure that any areas of contamination are identified and appropriately treated prior to development.

Class 4 - Areas that are likely to be contaminated and are not suitable for residential development unless a specific study is carried out which indicates that development can proceed subject to the application of appropriate ameliorative measures, testing and certification as to suitability.

The report provides a series of planning guidelines and management strategies. The planning guidelines to be applied during the various planning stages of development include the preparation of local environmental plans, development control plans and down to the design of individual development sites. The management strategies outline tasks which will be carried out throughout the planning and development process to ensure the identification and remedial action to any contaminated land within the area.

The application of the study outputs have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

The action plan designates the required action, its timing in the release process, and the appropriate authority or body responsible for specific tasks.

Table 6 – Contaminated land action plan

Timing	Action	Responsibility
Planning Phase Preparation of LEP/DCP	1. Identify contaminated land and carrying out of remedial actions as necessary.	Council/ developer/ landowner
Implementation Phase	1. Prepare and provide DCP/Council policy to developers. 2. Comply with requirements of study outputs in preparing DA i.e. site testing, reference to EPA, recommended actions. 3. Evaluate proposal including information submitted by developer as required by DCP/policy including EPA evaluation of testing and subsequent recommendations. 4. Apply conditions of approval/reasons for refusal. 5. Comply with conditions of approval.	Council – Completed Developer Council Council Developer
Ongoing	1. Monitor sites during development. 2. Monitor contamination levels.	Developer Council

7.7 BUSHFIRE HAZARD

The study brief for the Ingleside/Warriewood Bushfire Hazard Study on which the action plan is based identifies its fundamental goal as:

Ensure that future development within the release area has an appropriate degree of safety for people and property from bushfire hazard commensurate with community expectations.

The study is to provide guidelines to be used in the detailed planning of the development which relate to protection from bushfire hazards of various forms of development in the release area, and planning guidelines and management strategies to be carried out through the implementation phase of the project and into the future.

The planning guidelines and management strategies will need to prescribe the appropriate protection measures and standards, including, but not limited to, hazard reduction methods and zones, fuel free zones, perimeter road requirements, service requirements and building standards necessary for a range of development types that will occur in the release area.

The application of the study output have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

Table 7 – Bushfire hazard action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Preparation of broad-scale release area planning strategy</p>	<ol style="list-style-type: none"> 1. Determine the location of the bushfire hazard/development interface for the land release and areas of medium and high bushfire hazard that would remain within the land release area following development. 2. Exclude land steeper than 20° (36%) in bushfire prone areas from development. 3. Ensure land releases are staged so as to be progressive from existing developed areas; avoid isolated developments. 4. Review bushfire fighting resources within the land release and develop a long-term resource enhancement plan to ensure that adequate fire-fighting resources are provided for each stage of the release. 	<p>Council</p> <p>Council</p> <p>Council</p> <p>Council</p>

Timing	Action	Responsibility
Preparation of detailed area planning	1. Carry out a detailed assessment of each release sector to determine requirements for: <ul style="list-style-type: none"> ➤ perimeter roads/fire trails ➤ internal access roads ➤ fire protection zones ➤ minimum lot depths ➤ water supply ➤ 'safety focus' area 	Council
	2. Provide for initial development to occur on the hazard perimeter of each development area bordering a bushfire prone land.	Council/ developer
	3. Ensure that each release sector can be provided with a temporary fire protection zone where it borders neighbouring sectors with a medium to high bushfire hazard until those neighbouring sectors are developed.	Council/ developer
	4. Ensure that developments which reduce bushfire hazard are planned for the hazard side of residential and other developments likely to be affected by bushfires.	Council
	5. Ensure that developments which are unsuitable for bushfire prone areas are not planned for zones within 500m of the boundary of Ku-ring-gai Chase or Garigal National Parks, or the escarpment bushland perimeter.	Council.
	6. Divide residential land use areas bordering bushfire prone areas into suitable 'cells' (ideally equivalent to release stages) and determine a suitable location for a 'safety focus' for each 'cell'.	Council
	7. Ensure that hazard reduction strategies for fire protection zones within, or adjoining, flora and fauna conservation areas (including National Parks) are compatible with the management requirements of those areas.	Council

Timing	Action	Responsibility
Preparation of LEP/DCP	<ol style="list-style-type: none"> 1. Zone land as appropriate based on the above strategies. Carry out further studies/investigations as necessary. 2. Ensure that all developments, including single dwelling houses, in planning zones abutting bushfire prone areas are 'permissible with consent'. 3. Prepare a policy document prescribing the planning controls, management strategies and building codes to be applied during preparation and assessment of development applications, approval of developments and construction stages. 	<p>Council</p> <p>Council</p> <p>Council</p>
Implementation Phase	<ol style="list-style-type: none"> 1. Provide planning guidelines and management strategies to developers/landowners. 2. Apply planning controls, guidelines and management strategies in the investigation and planning for future development. 3. Evaluate proposals, including the information submitted by the developer, against the planning controls, guidelines and management strategies. 4. Apply conditions of approval/reasons for refusal on the basis of the planning controls, guidelines and management strategies. 5. Comply with conditions of approval. 6. Ensure that development proceeds in accordance with conditions of approval. 7. Initiate a bushfire safety education program to ensure that new residents moving into the area are aware of bushfire protection measures for themselves and their property, evacuation procedures, and the location and function of the 'safety focus' area. 	<p>Council/ developer</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p> <p>Developer</p> <p>Council/ developer</p> <p>Council</p>

Timing	Action	Responsibility
Ongoing	<ol style="list-style-type: none"> 1. Review planning controls, guidelines and management strategies as land release proceeds, amend as required and apply to applications for future development. 2. Maintain fire protection zones on public land during the bushfire danger period. 3. Inspect fire protection zones on private property prior to and during the bushfire danger period. Issue Section 13 (Bush Fires Act) notices as appropriate. 4. Regularly review fire-fighting and other emergency services resources within the land release and upgrade as required. 5. Continue the bushfire safety education program to ensure that new residents moving into the area are aware of bushfire protection measures for themselves and their property, evacuation procedures and the location and function of the 'safety focus' area. 6. Review bushfire management and mitigation strategies following any major wildfires and revise as required. 	<p>Council</p> <p>Council</p> <p>Council.</p> <p>Council</p> <p>Council</p> <p>Council</p>

7.8 DEMOGRAPHIC ANALYSIS AND MODEL

The study brief for the demographic analysis and model component of the Ingleside/Warriewood Combined Demographic Study identified as its fundamental goal the following:

To establish the demographic characteristics of the anticipated population within the urban land release area of Ingleside/Warriewood, with particular regard to its requirements through the development period and into the future as regards transport and traffic facilities, retail and service facilities, community facilities and recreation in open space facilities.

The demographic analysis provides the basis upon which considered projections can be prepared for the purpose of developing strategies to satisfy the identified needs of the future community.

The demographic analysis and model will provide a profile of the anticipated release area population for the release area and at critical points during the development phase.

The demographic analysis was constructed by investigating and examining relevant information on both the existing Ingleside/Warriewood community together with the broader community of Pittwater. In addition, regard was had to the implications of historic growth in comparable urban release areas. In this regard, the urban release areas of Cherrybrook, Glen Haven and Menai were examined as they are considered to have provided housing for a similar "market" to that expected within the Ingleside/Warriewood release area.

The demographic model developed as part of the study to provide projections of population size and associated characteristics for the Warriewood Release Area is a dynamic planning tool. That is, the model incorporates a number of key variables which impact on population characteristics which can be updated as detailed information comes to hand as the planning and implementation occurs through the release process.

The application of the study outputs has been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals. The action plan designates the required action, its timing in the release process and the appropriate authority or body responsible for specific tasks.

Table 8 – Demographic analysis and model action plan

Timing	Action	Responsibility
Planning Phase	1. To achieve Minister’s target, apply occupancy rates to the land - uses and densities identified to calculate the estimated population.	Council
Detailed Planning	1. Ensure that the levels of open space and community facilities are sufficient to meet the demand of the expected population and its demographic profile.	Council
<i>Phasing</i>	2. Ensure that the planning framework is responsible and sensitive to demographic changes in terms of infrastructure and service provision.	Council
<i>Infrastructure and community facilities</i>	3. Apply the demographic model to ascertain what level of amenities and services are required by the expected population and its profile.	Council
	4. Ensure that the incoming population is serviced by an appropriate level of infrastructure both physical and social.	Council
Implementation Phase	1. Monitor the demographic characteristics of the actual incoming population	Council
Ongoing	1. Review the demographic profile based on the actual characteristics of the incoming population.	Council
	2. Review the infrastructure and community facilities strategy and associated Section 94 Plans to reflect demographic change.	Council
	3. Review planning guidelines and management strategies as land release proceeds to reflect any changes in population demographics	Council

7.9 TRAFFIC AND TRANSPORT

The study brief for the traffic and transport component of the Ingleside/Warriewood Combined Demographic Study identified as its fundamental goals the following:

To investigate, define and provide planning guidelines and management strategies for the provision of a safe, efficient and controlled public and private transport system for the Ingleside/Warriewood Urban Land Release Area which will integrate with existing transport network.

To investigate, define and provide planning guidelines and management strategies relating to the development of a functional internal and external road hierarchy and related public transport network for the Ingleside/Warriewood Urban Land Release Area.

To investigate, define and provide planning guidelines and management strategies to ensure the provision of adequate transport facilities for anticipated urban development throughout the release process.

In accordance with the study brief, the study report provides a detailed analysis of the existing situation with regard to land use, the road system, traffic flows, intersection operation, traffic management, traffic accidents, parking, public transport and other traffic issues together with assessing the future development scenarios. The report then examines the traffic implications of the proposed development scenarios and recommends a number of road improvement and traffic management strategies.

The application of the study outputs together with the detailed outputs of the Warriewood Valley Urban Land Release Traffic and Transport Study have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals. The action plan designates the required action, its timing in the release process and the appropriate authority or body responsibility for specific tasks.

Timing	Action	Responsibility
Implementation Phase	<ol style="list-style-type: none"> 1. Provide management strategies to developers/landowners. 2. Apply management strategies & development controls in the investigation and planning for future development. 3. Evaluation of proposal (Development Application) including information submitted applicant as required by various Council prescriptions. 4. Apply conditions of approval/reasons for refusal on basis of specific management strategies. 	<p>Council</p> <p>Developer/ landowner</p> <p>Council</p> <p>Council</p>

7.10 RETAIL AND SERVICES

The study brief for the retail and services facilities component of the Ingleside/Warriewood Combined Demographic Study identified as its fundamental goal the following:

Identify the range and appropriate level of provision of retail and service facilities that will need to be provided to support the project new population within the release area and to provide planning guidelines and management strategies to achieve that provision.

In the context of the study, retail facilities are those which are generally provided in shops, giving residents the opportunity to purchase food and other convenience items, in addition to the complete range of goods consumed by a typical household. Service facilities are these personal and professional services provided by business enterprises normally associated with retail facilities and includes general household support services, some recreation and entertainment facilities and private medical and other health services.

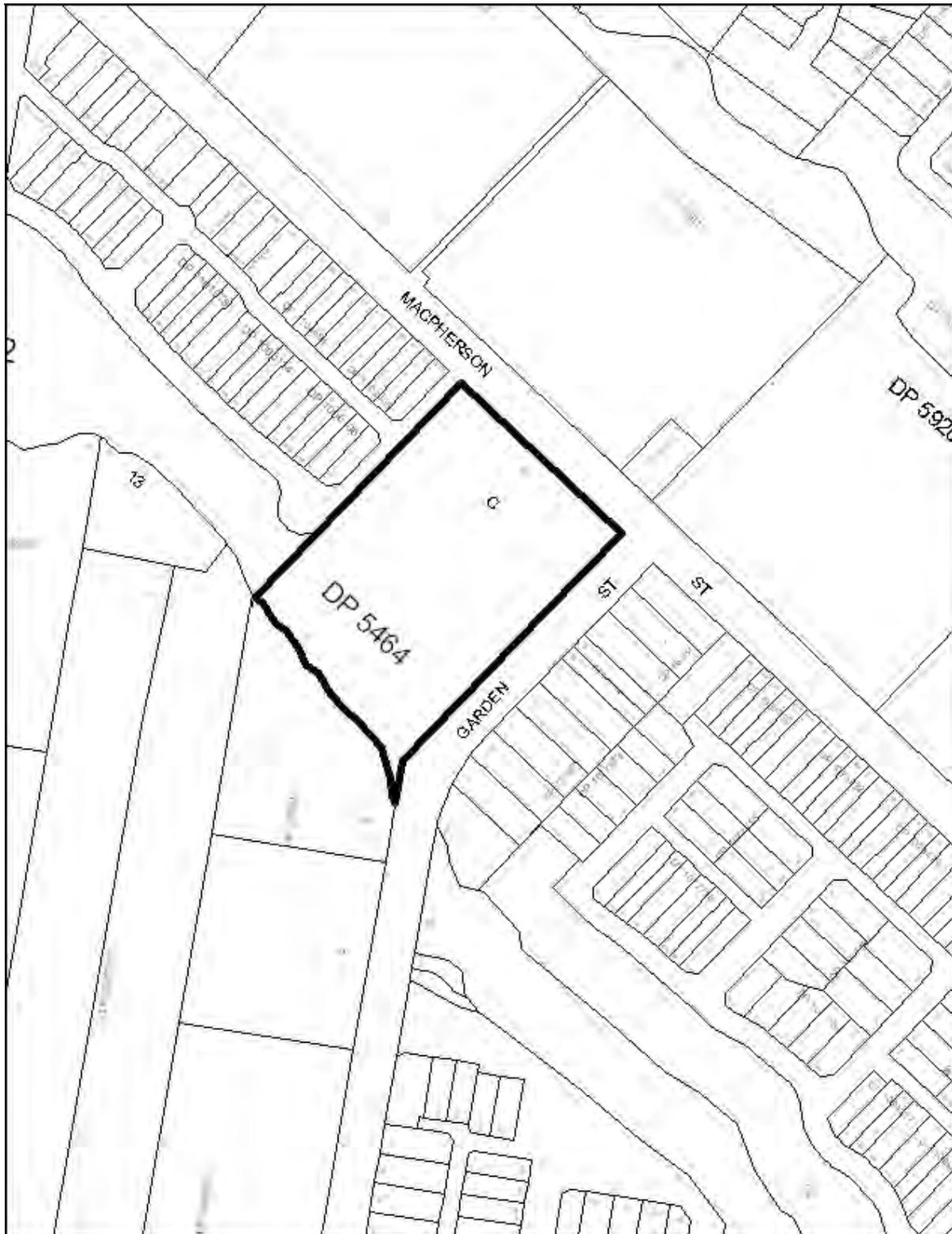
The study examines the existing and anticipated supply of retail and service facilities which will be immediately accessible to the future residents of the release area and outlines the scale of future retail facilities which will be required by the release area population under the various development scenarios. In particular, the analysis given in the study report recognises that retailing is a particularly dynamic industry and is therefore subject to rapid change.

As a result of the approved masterplan for Sector 8, the south-eastern corner of Sector 8 was selected as the site for the Focal Neighbourhood Centre. This site is known as 23B Macpherson Street, namely Lot 11 Section C in Deposited Plan 5464 (see Location Map, on following page). The Focal Neighbourhood Centre is to incorporate a retail floorspace of between 855 and 2,222m² to meet the daily retail convenience needs of the incoming population. The retail potential of the Focal Neighbourhood Centre is limited to this size given nearby established retail/commercial centres at Mona Vale and Warriewood Square².

Note: In November 2009, Pittwater resolved to proceed with an LEP amendment to permit 'neighbourhood shop' and 'restaurant' on 23B Macpherson Street, Warriewood. This LEP will, when gazetted, facilitate the development of the Warriewood Focal Neighbourhood Centre on 23B Macpherson Street, Warriewood.

² Ingleside/Warriewood Urban Land Release Area Demographic and Facility/Service Needs Studies (December 1994)

Figure 2 – Location of the Focal Neighbourhood Centre for Warriewood Valley



7.11 COMMUNITY FACILITIES

The study brief for the community facilities component of the Ingleside/Warriewood Combined Demographic Study identified as its fundamental goal the following:

Identify the range and appropriate level of provision of community facilities that will need to be provided to support the projected population within the release area and to provide planning guidelines and management strategy to achieve that provision.

The study report provides a profile of the incoming residents which is based on the demographic model prepared for the study. This included a projected community profile by target groups which are identified within the various demographic cross sections within the expected population.

The study report also identified the existing community services and facilities provided within the Pittwater area so as to identify need and any spare capacity. A number of normative standards, baselines and thresholds were then put forward based on the existing Pittwater services together with an analysis of services and facilities identified within the comparable release areas of Menai and Cherrybrook. The study concludes with an assessment of the likely demand and a strategy for the provision of community facilities within the release area.

The application of the study outputs has been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals. The action plan designates the required action, its timing in the release process and the appropriate authority or body responsible for specific tasks.

Table 10 – Community facilities action plan

Timing	Action	Responsibility
Planning Phase Preparation of Section 94 Contribution Plan	1. Prepare community facilities strategy and associated Section 94 Contribution Plan.	Council
Implementation Phase <i>Needs Based Planning</i>	1. Identify potential sites. 2. Design, locate and construct community facilities. 3. Prepare a need based plan for the whole of Pittwater to identify the needs for the future population of Warriewood Valley. 4. Establish a Community Planning Release Area Committee involving Council, Government departments and the community. 5. Develop a strategy for community services and facilities.	Council Developer/ landowners Council Council Council
Ongoing	1. Maintenance of community facilities. 2. Recurrent costs for staffing and programs.	Council Council

7.12 OPEN SPACE AND RECREATION

The study brief for the open space and recreation component of the Combined Ingleside/Warriewood Demographic Study identified as its fundamental goal the following:

Identify the appropriate level of provision of open space and recreational facilities for the proposed release area and to provide planning guidelines and management strategies to achieve that provision.

The main issues considered in the study report were the future needs of the population for open space and outdoor recreation facilities and the likely timing of demand by type of open space and facility.

This included an analysis of the existing provision of open space and facilities and any spare capacity currently located within the Pittwater area to cater for the expanding population during the early stages of development. The study also examined planning guidelines which identify the suitability of areas with certain characteristics for outdoor active and passive open space and further environmentally sensitive open space. Having regard to the constrained financial resources of Council the study then gave an indication of the potential for provision of recreational facilities by the private sector and identified the potential cost of providing facilities and any likely sources of funding.

The application of the study output have been incorporated into the following action plan which prescribes the task to achieve the study goals. The action plan designates the required action, its timing in the release process and the appropriate authority or body responsible for specific tasks.

Table 11 – Open space and recreation action plan

Timing	Action	Responsibility
Planning Phase	1. Link to Pittwater Open Space and Recreation Plan.	Council
	2. Prepare Open Space Strategy and associated Section 94 Plan.	Council
Implementation Phase	1. Develop Open Space Master Plan. Detailed design.	Council
	2. Facilities Provision.	Developer/ landowners
Ongoing	Maintenance of facilities.	Council

7.13 HERITAGE

The study brief for the Ingleside/Warriewood Heritage Study on which this action plan is based identified as its fundamental goal the following:

The purpose of the Heritage Study is to investigate, define and provide planning guidelines and management strategies, to ensure that the environmental heritage of the study area is protected. This heritage study focuses on the European built development and cultural landscape within the area.

In accordance with the study brief, the report provides an analysis of the areas history and then identifies a number of items which are of significance in terms of European built settlement and cultural landscapes and features.

The surveys of the study area (which were aided by historical maps and research) have identified eight items within the area which are of heritage significance. The principal recommendation arising from this inventory is to provide heritage protection to these items through appropriate planning guidelines and management strategies.

The planning guidelines to be applied during the various planning stages of development include the preparation of local environmental plans and development control plans. The management strategies outline tasks which will be carried out throughout the planning and development process to ensure preservation of the various items of heritage which contribute to the area.

The application of the study outputs have been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goals.

The action plan designates the required action, its timing in the release process, and the appropriate authority or body responsible for specific tasks.

Table 12 – Heritage action plan

Timing	Action	Responsibility
Planning Phase	1. Identify items requiring specific preservation.	Council – Completed
Allocate land uses for sectors designated for release	2. Prepare a Register of Sites (register and map).	Council – Completed
	3. Prepare management guidelines for development specifying management procedures to be applied at development application, approval, and construction stages.	Council
Preparation of LEP/DCP	1. Zone land as appropriate to achieve 1 and 2 above.	Council
	2. Prescribe controls.	Council
Implementation Phase	1. Provide management strategies to developers.	Council
	2. Apply management guidelines in the investigation and planning of future development.	Developer
	3. Evaluate proposal including information submitted by developer as required by the management guidelines.	Council
	4. Apply conditions of approval (reasons for refusal) on basis of management guidelines.	Council
	5. Comply with conditions of approval.	Developer/ landowner
Ongoing	1. Plan of management for identified heritage item.	Council/ developer

7.14 **ABORIGINAL HERITAGE**

The study brief for the Ingleside/Warriewood Aboriginal Archaeological Study on which this action plan is based identified as its fundamental goal the following:

To investigate, define and provide planning guidelines and management strategies, for the investigation, identification and protection, where warranted, of known, or expected Aboriginal heritage resources within the study area, during the planning and development phases of urban land release and in the long term.

In accordance with the study brief, the report provides a detailed assessment of known Aboriginal archaeological resources within the study area and an evaluation of the likelihood of the existence of further items together with recommended planning guidelines and management strategies.

The principle recommendations of the report are as follows:

- That Pittwater Council include a Conservation Policy on Aboriginal heritage in relevant statutory planning instruments;
- That Pittwater Council include in statutory planning instruments, the assessment requirements for identification of Aboriginal sites as identified in the study report;
- That Pittwater Council implement the recommendations for management of sites already recorded within the release area as specified for each site;
- That Pittwater Council produce a management plan for the special reserve incorporating sites identified in the report;
- That Pittwater Council implement the management procedures as set out in the report;
- That Pittwater Council ensures all information relating to the location of sites remains confidential.

To support these recommendations, the study provides the following:

- Identification of known Aboriginal sites and resources;
- A map showing the likelihood of the occurrence of currently unknown Aboriginal resources;
- Recommendations for the management of sites already recorded within the release area;
- Recommended procedures for the identification of currently unknown resources during the development phase and appropriate management of those resources.

The application of the study outputs has been incorporated into the following action plan which prescribes the tasks to be carried out to achieve the study goal.

The action plan designates the required action, its timing in the release process, and the appropriate authority or body responsible for specific tasks.

Table 13 – Aboriginal heritage action plan

Timing	Action	Responsibility
<p>Planning Phase</p> <p>Allocate land uses for sectors designated for release</p>	<ol style="list-style-type: none"> 1. Identify items requiring specific preservation. 2. Consult with NPWS and appropriate Aboriginal groups. 3. Prepare a Register of Sites (register and map). 4. Prepare management guidelines for development specifying management procedures to be applied at development application, approval and construction stages. 	<p>Council</p> <p>Council</p> <p>Council</p> <p>Council</p>
<p>Preparation of LEP/DCP</p>	<ol style="list-style-type: none"> 1. Zone land as appropriate to achieve 1 and 2 above. 2. Prescribe controls. 	<p>Developer/ landowners</p>
<p>Implementation Phase</p>	<ol style="list-style-type: none"> 1. Provide management strategies to developers. 2. Apply management guidelines in the investigation and planning of future development. 3. Evaluate proposal including information submitted by developer as required by the management guidelines. 4. Apply conditions of approval (reasons for refusal) on basis of management guidelines. 5. Comply with conditions of approval. 	<p>Council</p> <p>Developer</p> <p>Council</p> <p>Council</p> <p>Developer</p>
<p>Ongoing</p>	<ol style="list-style-type: none"> 1. Plan of management for identified Aboriginal heritage item. 	<p>Council</p>

7.15 URBAN DESIGN

An important component of the development in the Warriewood Valley will be to ensure that the final built form adds to the environment of the area and the wider community.

It is imperative that the community's desire for a higher standard of development incorporates architectural innovations, a diversity of housing styles and forms, acknowledgment of topographical and natural features with a need for a sense of community and belonging to the estate which is integrated into the wider community. In particular, the following issues are an important component for the urban design for the future development of Warriewood Valley:

- Ensure an integrated approach to each sector that achieves model development through best practice design and community acceptance;
- Ensure that the bulk, scale and form and external finishes of development are compatible with the surrounding development and the colours and textures existing in the local area;
- Encourage community focal points within the estate;
- Encourage the separation of buildings and/or grouping of buildings to provide opportunities for screen planting and landscaping between the buildings;
- Encourage architectural initiatives in design through modulation, building indents, varied window design, setbacks, landscaping and external finishes;
- To encourage energy efficiency through appropriate design and use of materials;
- To encourage development, when viewed from the street, to achieve an overall sense of unity without limiting initiatives in design or exterior finishes;
- Encourage by appropriate design adequate levels of sunlight and privacy, efficient layout of rooms, provision of private open space, security and detachment from neighbours;
- Encourage design which blends with the natural surrounding environment rather than dominating it;
- Ensure that any building, where the site adjoins a creek line, open space or road is not visually dominant;
- To encourage the minimisation of site disturbance and use of soil conservation practices to conserve existing site features and vegetation;
- Retain where possible existing natural vegetation and thereby reduce the impact of stormwater and nutrients that encourage dieback, weed infestation runoff and siltation;
- Promote the use of native trees and shrubs which occur in that locality. Such to be integrated with any "exotic" plantings to enhance the overall amenity of the area and its visual context;
- Limit hard paved areas thereby providing the maximum landscaping area possible;
- Encourage environmentally sensitive water management and site management techniques;
- Encourage appropriate buffer areas between incompatible land uses;
- Provide for innovation in the engineering design for infrastructure which complements the design of the development and is consistent with Council's environmental values.

These matters have been incorporated into Pittwater 21 DCP as controls applicable to new developments in Warriewood Valley.

7.16 FINANCIAL

The release of land in Warriewood Valley for urban development has major financial ramifications for all stakeholders involved in the development process.

This includes land owners/developers, relevant Government infrastructure providers as well as Pittwater Council. In broad terms, the success or otherwise of the land release will be to some extent measured by the financial implications which arise from the release area.

In particular, Council's major concerns with the financial implications of the release will be highlighted through the development of a Section 94 Contributions Plan under the *Environmental Planning and Assessment Act 1979*. These contribution plans will identify the level of community facilities and public infrastructure required to service the incoming population associated with the land release and identify how the funding of these facilities will occur.

Council has to ensure that the development of land in Warriewood Valley does not put any significant cost impact on the existing Pittwater community. In this regard, a major goal of the planning process for the release area is to ensure that the release area remains cost neutral for the Pittwater Council and wider community.

The following action plan indicates how this financial objective can be achieved for Council and what parts need to be undertaken to achieve this goal.

The action plan designates the required action, its timing in the release process and the appropriate authority or body responsible for specific tasks.

Table 14 – Financial action plan

Timing	Action	Responsibility
Planning Phase	1. Develop Section 94 Contribution Plans to identify public infrastructure and community facilities and how funded.	Council
	2. Quality assurance of plans.	Council
Implementation Phase	1. Implement Section 94 Contributions Plans.	Council/ developer
	2. Continually review and refine Section 94 Contributions Plans as implemented.	Council

8. LAND USE SELECTION

The form and scale of development that is to occur within the release area will depend on the capability of the land to support development (as indicated by the environmental and demographic studies), the ability to provide infrastructure and the characteristics of the particular land use types that might occur.

To facilitate the selection of land uses for individual areas of land within the release area, Council has prepared Draft Land Use Policy Sets and *Draft Land Use Models* to provide an accountable methodology for land use selection and planning.

Draft Land Use Policy Sets

The *Draft Land Use Policy Sets* lists possible land uses which may occur within the land release and discusses each of those land uses in terms of suitability in relation to the environmental attributes of the area. The document also outlines relationships between land uses in terms of compatibility to assist in determining the appropriateness of adjoining land uses.

When applied together with the outputs of the environmental studies, this document provides a basis for determining a range of appropriate land uses for a particular land unit, and provides an indication of the compatibility of land uses for adjoining land units.

Draft Land Use Models

The *Draft Land Use Models* contains descriptive representations of various types of land uses that may form part of the Warriewood Valley Urban Land Release. The Development Models have been provided for a range of forms and densities of residential use, community facility use, retail/service uses, light industrial uses, open space and recreational uses as generally outlined in the land use policy set.

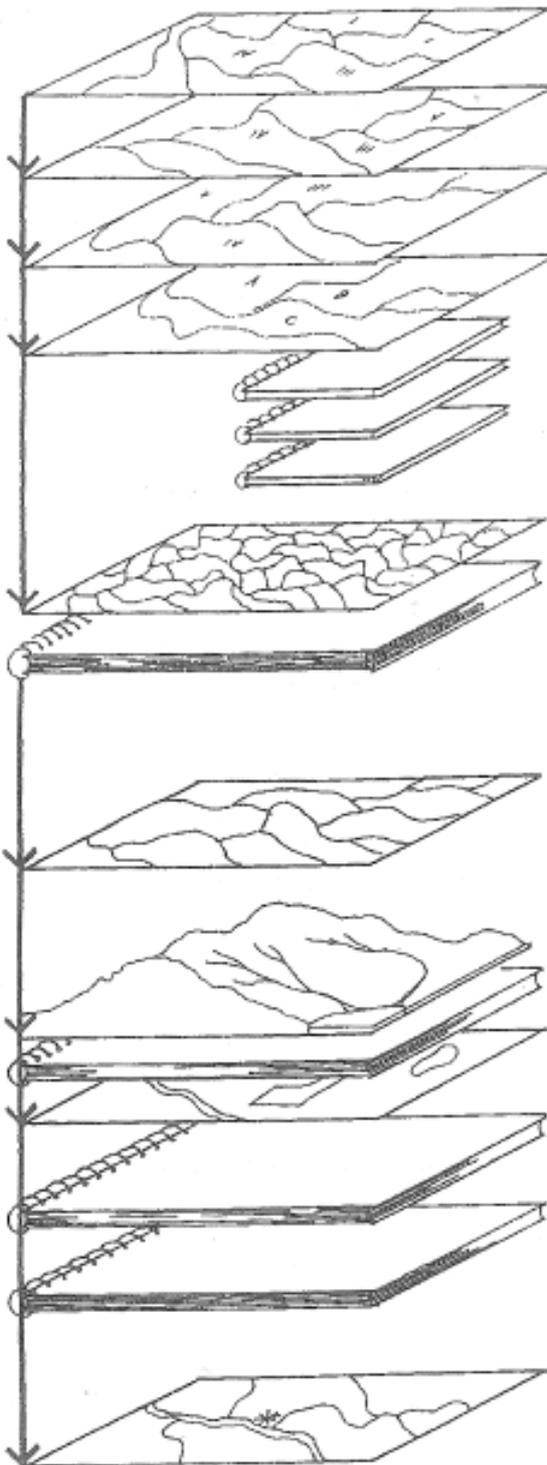
Each model provides an explanation of the particular land use together with locational guidelines and other relevant information. The Development Models also provide an outline of locational criteria in relation to the environmental studies. Suitable land classes in terms of vegetation conservation, fauna conservation, land capability and visual impact, among others, have been identified from most land uses.

The models will be used to assist the detailed planning for the release area, determination of dwelling density, and the formulation of future Local Environmental Plans and Development Controls.

Planning methodology

The following briefly describes the methodology which has been used to develop the planning framework for the release area.

The methodology is an integrated process that draws together the information and strategic outcomes from the array of detailed environmental and demographic studies undertaken for the release area. The planning methodology is illustrated in the following diagram:



- Visual Impact Study
- Vegetation Conservation Study
- Fauna Conservation Study
- Urban Land Capability Study
- Contaminated Land Study
- Heritage Study
- Aboriginal Heritage Study
- Composite Capability Map
- Land Use Policy Sets
- Development Capability Map
- Water Cycle Management Study
- Existing Land Use Constraints/ Opportunities Map
- Demographic & Facilities/ Service Needs Studies
- Land Use Models
- Planning Strategy Map

Planning Methodology Diagram Warriewood Urban Land Release Area

Figure 3 – Planning methodology diagram

The environmental studies have identified and located the constraints and opportunities for urban development imposed by the existing physical and cultural environment of the release area. These studies have also provided planning guidelines and management strategies that aim to reduce the impact of urban development on the environment of the release area.

In particular, four key environmental studies (urban land capability, vegetation conservation, fauna conservation and visual impact) have each classified and mapped land areas according to their suitability for urban land uses. These four studies mapped land on a classification based approach with Class A (or 1) lands being the most suitable for urban purposes while Class E (or 5) lands comprised high environmental constraints and hence was of minimal urban development potential.

These four studies provide the basis for determining the development capability of land in the release area. The remaining environmental studies (Aboriginal heritage, heritage and contaminated land), prescribe actions and controls to be undertaken to facilitate development rather than a broadscale limitations on development types.

When the classification maps of each of the four environmental studies (urban land capability, vegetation conservation, fauna conservation, and visual impact) are overlaid, a composite capability map is produced. This map consists of a large number of areas each of which have a particular combination of classes from each of the four studies which classify development capability. Refer to Appendix 1 for the series of maps that inform the Development Capability map.

The *Draft Land Use Policy Sets* provides a basis for allocating land uses to areas with a particular combination of capability classes from the environmental studies. This document describes the possible range of land uses for the release area and provides policies that may exclude certain land uses from areas with capability classes considered unsuitable for those uses. The policies enable preferred land uses to be allocated to areas where these uses are sustainable, and suitable, based on sound principles of ecological planning.

The individual areas on the composite map which have a similar range of preferred land uses will also have a similar potential for development. Hence, a Development Capability Map may be produced by grouping these individual areas where they have similar ability to support development or conservation land uses.

A Development Capability Map for the release area which comprises six classes of land has been produced:

- Class 1 - High development capability
- Class 2 - Medium high development capability
- Class 3 - Medium development capability
- Class 4 - Restricted development capability
- Class 5 - Low development capability (conservation value)
- Class 6 - Minimal development capability (high conservation value)

Table 15 – Development capability classes in relation to study classifications

<p><u>Class 1</u> A11a B11a A21a B*11a A31a B21a A41a B*21a</p>	<p><u>Class 2</u> A13a B23a C11a D11a A23a B31a C21a D21a A24a B41a C31a A33a B51a A51a</p>
<p><u>Class 3</u> A23d B*15a C24a D31a E11a A34a B21e C51a D51a E*11a A44a B24a E21a A53a B34a E*21a A54a B44a E31a B53a</p>	<p><u>Class 4</u> A13e B*15d C51e E*15a A14d B23d C53a E51a A15d B23e C54a A15e B24d A23e B33d A24d B33e A24e B34d A33d B51d A34d B51e A33e B54a A25d A24e A34e A44d A51e A53e A54d</p>
<p><u>Class 5</u> A25e B*15e C23e D23e A44e B24e C24e D24d A54e B25d C33d A55d B25e C33e B34e B44d B44e B53e B54d</p>	<p><u>Class 6</u> A55e B54e C25e D24e E23e B55d C34e D34e E24d B55e C53e D33e E24e C54d D53e E*25d C54e D54d E*25e C55e D54e E33d D55d E34e D55e E51c E53e E54d E54e E55d E55e E*15d</p>

Note: Order of study classification: land capability, visual impact, vegetation conservation, fauna conservation e.g. A23d is a discrete area having the following environmental study classifications:

- *Land capability:* A
- *Visual impact:* 2
- *Vegetation conservation:* 3
- *Fauna conservation:* d

A key component of the natural and built environment is the management of storm and waste water. Accordingly, the strategic outcomes of the Ingleside/Warriewood Water Cycle Management Study and Integrated Water Management Strategy are integral to those of the natural environmental studies (Vegetation Conservation, Fauna Conservation and Land Capability).

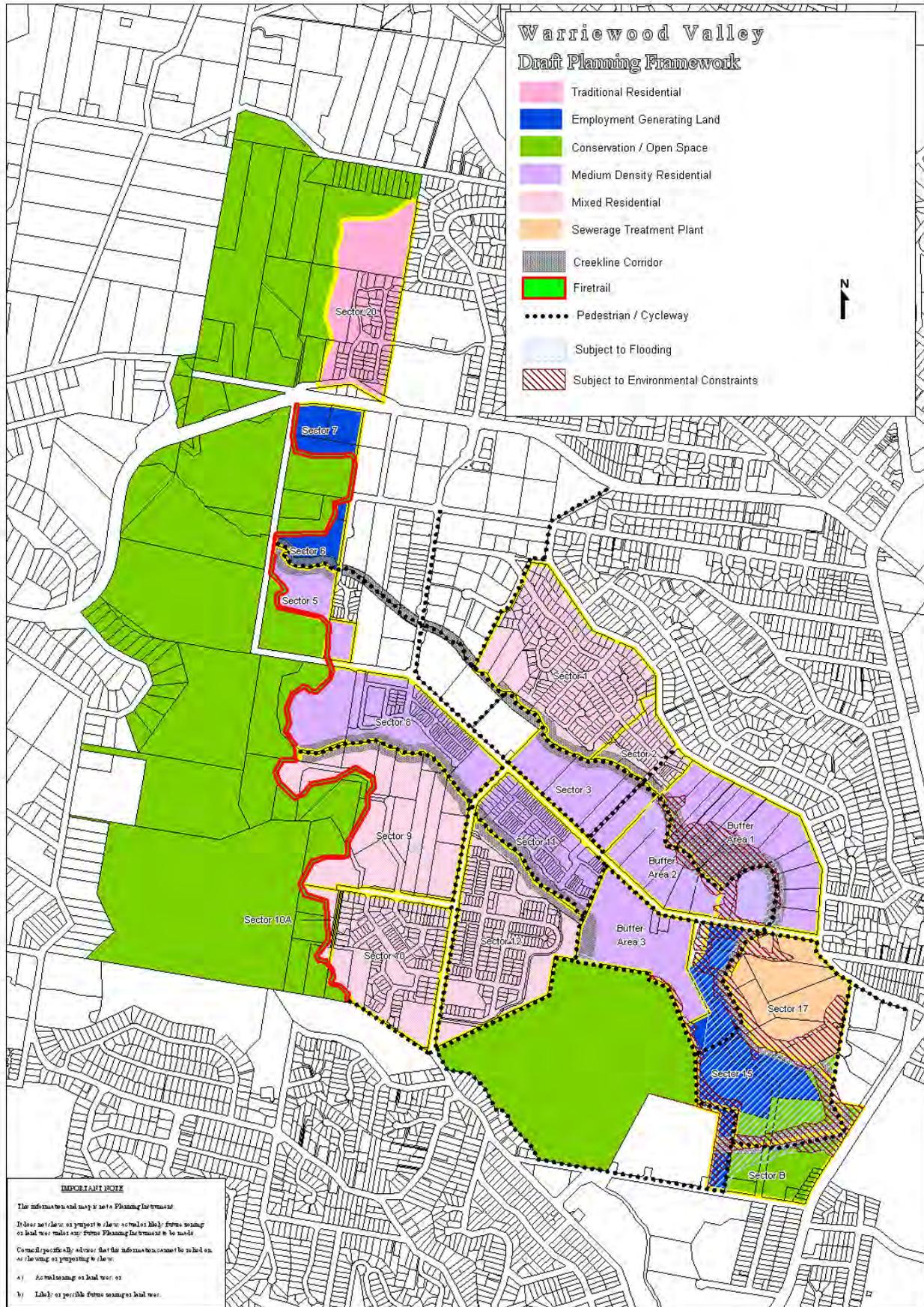
Many key recommendations of the water management strategies overlap with those of the environmental studies and together provide a framework for the total catchment management of the release area. Of particular importance in this regard, is the need to preserve creekline corridors, floodways and wetlands.

Other factors, apart from development capability, will influence the suitability of land to be used for various urban and associated land uses. Of particular importance is the constraints/opportunities imposed by existing land uses within or adjacent to the study area, such as roads and State Government facilities. In addition, land in public ownership or land which Council has an interest in (for drainage or other purposes) may also influence the allocation and suitability of land uses. Maps depicting the constraints/opportunities are in Appendix 1 of this document.

A land use allocation map has been prepared by dividing the land release study area into sectors. The boundaries of the sectors relate to natural features (such as creeks, ridgelines, escarpments etc), cadastral boundaries and development capability.

A proposed range of suitable land uses for each sector including Principal Land Use, Secondary Land Use and Ancillary Land Uses based on the Development Capability Map, Draft Land Use Policy Sets and Draft Land Use Models can then be nominated. The principal land use for each sector has been mapped on the land use allocation map. This Map is the Warriewood Valley Planning Framework 2010 map (as shown on following page).

Figure 4 – Warriewood Valley Planning Framework 2010 map



9. DEVELOPMENT DENSITY AND POPULATION PROJECTIONS

9.1 INTRODUCTION

Based on the allocation of differing land uses for each sector, population projections have been prepared.

The following table apply the land use selection process outlined in the *Draft Land Use Policy Sets* and *Draft Land Use Models* to the development capability assessment of land in Warriewood Valley.

The development capability of each sector provides a range of options for land use. These options are considered in light of adjoining land uses and the objective to provide an appropriate mix of development with a focus on residential land use.

The process determines a principal land use, and any secondary land uses, for each sector, and where the land use is designated for residential use, allocates a dwelling density and population projection taken from the *Draft Land Use Models* for that part of the sector suitable for that use.

Where secondary uses have been nominated, the area allocated for this use is not taken into account in determining population projections.

As a result of the review undertaken in 2009, this table also shows land that has not yet been developed or, in certain areas, land not yet rezoned for residential development.

Table 16 – Development density and population projection as estimated in 1997 (updated following Draft STP Buffer Sector Planning Framework 2001)

Sector		Land Capability & Land Use Possibilities				Land Suitability			Determination of Land Use and Density Identification					Status (November 2009)	
Sector number	Capability Classes	Area (Ha)	Possible Land Uses	Preferred Land Uses Primary Secondary		Adjoining Land Uses	Compatibility	Buffer	Land Use	Dwellings Per Ha	Area (Ha)	Total Dwellings	Occupancy Rate	Population	
1	1 5	16.8	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Industrial Residential Conservation	Low High Low	Yes	Principal Mixed Resid.	15	12.7	195	2.8	546	1 lot undeveloped (101)
								Nil		Secondary Cons.	-	4.1	-	-	-
2	1 5	4.8	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Industrial Residential Conservation	Low High Low	Yes	Principal Mixed Resid.	15	3.7	51	2.8	143	✓
								Nil		Secondary Cons.	-	1.1	-	-	-
3	1 5	8.2	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Residential Conservation	High Low	Nil	Principal Medium Density	25	6.6	165	2.8	462	3 lots undeveloped (301, 302 and 303)
								Yes		Secondary Cons.	-	1.6	-	-	-
5	1 2 6	3.7	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	Cons.	Residential Conservation Industrial	High Low Low	Nil	Principal Medium Density	25	3.0	75	2.8	210	Not yet rezoned
								Yes		Secondary Cons.	-	0.7	-	-	-
6	1 4 6	2.3	Residential Commercial Industrial Recreation Conservation Community Service	Indust.	Cons.	Industrial Conservation	High Low	Nil	Principal Industrial	-	2.3	-	-	-	✓
								Yes		Secondary -	-	-	-	-	-
7	1 2 4	3.0	Residential Commercial Industrial Recreation Conservation Community Service	Indust.	Cons.	Commercial Conservation	High Low	Nil	Principal Commercial	-	3.0	-	-	-	2 lots undeveloped
								Yes		Secondary -	-	-	-	-	-

Sector		Land Capability & Land Use Possibilities				Land Suitability			Determination of Land Use and Density Identification						Status (November 2009)
8	1 2 3 5 6	13.1	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	Cons.	Residential Conservation	High Low	Nil Yes	Principal Medium Density	25	10.5	263	2.8	736	1 lot undeveloped
									Secondary Cons.	-	2.6	-	-	-	-
9	1 2 5 6	17.1	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Residential Conservation	High Low	Nil Yes	Principal Mixed Resid.	15	13.7	205	2.8	577	Not yet rezoned
									Secondary Cons.	-	3.4	-	-	-	-
10	1 2 3	13.9	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Residential Conservation	High Low	Nil Yes	Principal Mixed Resid.	15	11.1	167	2.8	468	2 lots undeveloped (Sector 10A not yet rezoned)
									Secondary Cons.	-	2.8	-	-	-	-
11	1 5	8.2	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Residential	Low	Nil	Principal Medium Density	25	6.6	165	2.8	462	✓
									Secondary Cons.	-	1.6	-	-	-	-
12	1 3 4 5 6	17.4	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Residential Conservation	High Low	Nil Yes	Principal Mixed Resid.	15	8.7	131	2.8	367	✓
									Secondary Cons.	-	8.7	-	-	-	-
20	1 4 5	12.3	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	-	Residential	Low High	Yes Nil	Principal Traditional Resid.	8	11.1	89	2.8	249	✓
									Secondary Restricted Resid.	2.5	1.2	3	2.8	9	
101 (STP Buffer 1)	1 3 4 5 6	15.7	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	Cons. Rec.	Residential Commercial Industrial Conservation	High Low Low Low	Nil Yes Yes Yes	Principal Mixed Resid.	15	9.1	136	2.8	381	All lots undeveloped
									Secondary Cons./Rec.	-	7.0	-	-	-	-

Sector		Land Capability & Land Use Possibilities				Land Suitability			Determination of Land Use and Density Identification						Status (November 2009)
102 (STP Buffer 2)	1	6.1	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	Cons. Rec.	Residential Commercial Industrial Conservation	High Low Low Low	Nil Yes Yes Yes	Principal Medium Density	25	5.0	125	2.8	350	0.5 lot undeveloped
	3								Secondary Cons./Rec.	-	1.4	-	-	-	
103 (STP Buffer 3)	1	8.4	Residential Commercial Industrial Recreation Conservation Community Service	Resid.	Cons. Rec.	Residential Commercial Industrial Conservation	High Low Low Low	Nil Yes Yes Yes	Principal Medium Density	25	6.0	151	2.8	423	All lots undeveloped
	3								Secondary Cons./Rec.	-	1.7	-	-	-	
104 (Sector 17)	1	-	Commercial Industrial Recreation Conservation	STP	Cons. Rec.	Residential Commercial Industrial Conservation	Low Low Low Low	Yes Yes Yes Yes	Principal STP	-	10.7	-	-	-	-
	3								Secondary Cons./Rec.	-	-	-	-	-	
105 (Sector 15)	1	-	Commercial Industrial Recreation Conservation	Comm. Indust.	Cons. Rec.	Residential Commercial Industrial Conservation	Low High High Low	Yes Nil Nil Yes	Principal Comm./ Indust.	-	8.9	-	-	-	Not yet rezoned
	3								Secondary Cons./Rec.	-	5.2	-	-	-	
106 (Sector B)	1	-	Residential Commercial Industrial Recreation Conservation Community Service	Cons. Rec.	-	Residential Commercial Recreation Comm. Serv. Conservation	Low Low High High High	Yes Yes Nil Nil Nil	Principal Cons./Rec.	-	9.6	-	-	-	Not yet rezoned
	3														

9.2 INITIATIVES TO ENCOURAGE RAPID DEVELOPMENT TAKE-UP

In 1997, development in Warriewood Valley was projected to be completed by 2012. Since mid-2008, there has been a slow-down in development in Warriewood Valley due to the global financial crisis and has had a significant impact on the Section 94 Contributions Plan in terms of receiving contributions to deliver the necessary infrastructure in a timely manner such that it is likely only 80% of the development will be completed by 2014/2015, and the remaining 20% being completed in the following 5 year period (that is, 2015-2020).

The extension of the development cycle and the fact that there is a 20% (approximate) “tail” of development that will not be completed within 5 years development is a result of the following factors:

- Properties with significant existing infrastructure investment, (i.e. Flower Power)
- Properties subject to relatively high levels of capital investment, (i.e. Sector 9)
- Land owners with low level of interest of development, (i.e. happy to live there)
- Properties where planning prescription does not provide sufficient financial incentive to encourage development (i.e. small existing residential properties in the industrial/ commercial area in the northern end of the Valley).

It is appropriate that through an orderly planning process, initiatives to encourage a more rapid completion of the development cycle be developed and implemented to address the range of issues preventing completion of the development cycle in Warriewood Valley.

The 2009 review has been timely as it enabled Council to examine ways to encourage rapid take up and identify the development ‘tail’, as these facts influence orderly planning and development of the land release.

These initiatives must be based on appropriate planning grounds and implemented so as to ensure that development of the Valley is achieved in accordance with the recommendations of the original environmental studies.

Major features to encourage development take up has been:

- Land that has not yet been developed or in certain areas, land not yet rezoned for residential development which in turn, resulted in the revision of the sector boundaries;
- Identified land capable of increasing dwelling yield (consistent with the density of 25 dwellings per hectare, in accord with the outcomes of the original, background environmental studies for Warriewood Valley).

The 2010 Revised Sectors map (on the following page) shows the revised sectors. The accompanying table (on page 69) estimates the dwelling yields for the revised sectors as well as the anticipated timing of development. The 5-10 year time period (being the years 2015-2020) is the “tail” of the development cycle.

Figure 5 – Warriewood Valley Urban Land Release revised sectors

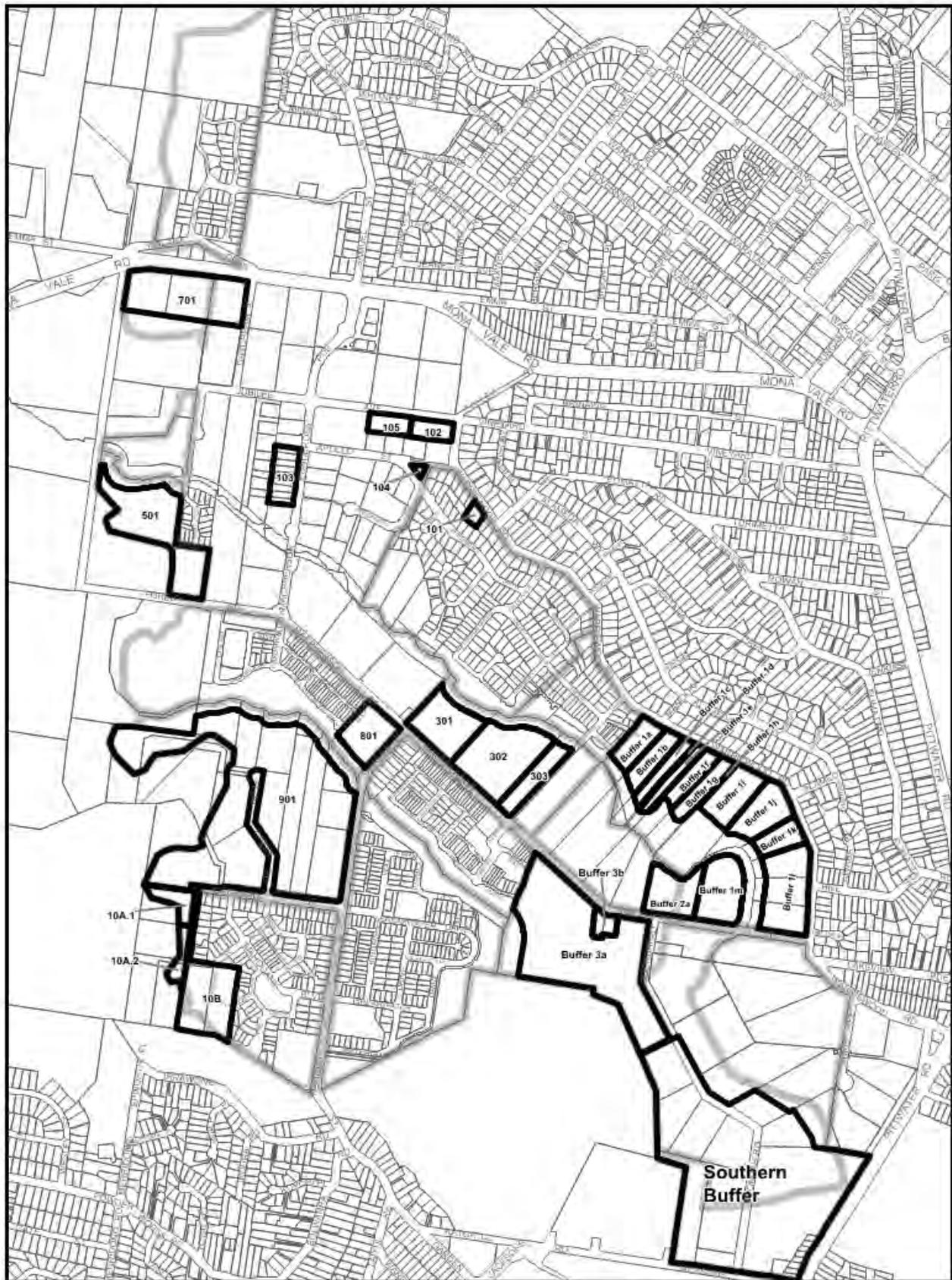


Table 17 – Projected dwelling yields for revised sectors

Designated Residential Sectors					
Reviewed Sectors	Address	Dwelling Density (# dwgs/ha)	Number of Dwellings	Constraint to Development Progressing	Timing Phase
101	165-167 Warriewood Road	No change (15/ha)	1	Already zoned 2(f). Original owner; no environmental impediment for redevelopment	5-10 years
301	20 Macpherson Street	No change (Already 25/ha)	42	Already zoned 2(f) however, existing nursery development on site (current owners not looking at redevelopment to residential)	5-10 years
302	18 Macpherson Street	No change (Already 25/ha)	66	Recently sold to new owners, likely to proceed development	1-2.5 years
303	16 Macpherson Street	No change (Already 25/ha)	23	Already rezoned 2(f). Further liaison required between Council officers and owners	2.5-5 years
501	4 & 8 Forest Road	No change (Already 25/ha)	75	Already under LEP Amendment process – likely to be completed end 2010	1-2.5 years
801	23B Macpherson Street	No change (Already 25/ha)	19	Nominated site for Focal Neighbourhood Centre	1-2.5 years
901	11, 12 and 13 (Sector 8); 1, 2, 4, 5, 9 & 10 Fern Creek Road; 2, 4, 6, 12 & 14 Orchard Street, 204 & 206 Garden Street, and Orchard Street road reserve (2A, 4A, 6A & 8 Orchard Street)**	25/ha (with 15m street frontage)	245 (+9*)	Still to be rezoned 2(f)	5-10 years
10A.1	115 Orchard Street	No change (15/ha)	8	Still to be rezoned	5-10 years
10A.2	111, 111A and 113 Orchard Street	No change (15/ha)	6	Still to be rezoned	5-10 years

* Potential dwelling yield subject to review of infrastructure provision

** Orchard Street road reservation (Council land)

Designated Residential Sectors (cont.)

Reviewed Sectors	Address	Dwelling Density (# dwgs/ha)	Number of Dwellings	Constraint to Development Progressing	Timing Phase
10B	109 Orchard Street	No change (15/ha)	28	Already rezoned 2(f). Further liaison required between Council officers and owners	5-10 years
Buffer 1a	61 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	17	Proposed increase in density requires rezoning (LEP Amendment)	1-2.5 years
Buffer 1b	53 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	17	Proposed increase in density requires rezoning (LEP Amendment)	1-2.5 years
Buffer 1c	53A Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	13	Proposed increase in density requires rezoning (LEP Amendment)	2.5-5 years
Buffer 1d	53B Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	1	Proposed increase in density requires rezoning (LEP Amendment). Access arrangements may delay timing of development	2.5-5 years
Buffer 1e	53C Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	11	Proposed increase in density requires rezoning (LEP Amendment). Access arrangements may delay timing of development	2.5-5 years
Buffer 1f	49 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	14	Proposed increase in density requires rezoning (LEP Amendment). Access arrangements may delay timing of development	1-2.5 years
Buffer 1g	45 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	17	Proposed increase in density requires rezoning (LEP Amendment). Access arrangements may delay timing of development	1-2.5 years

Designated Residential Sectors (cont.)

Reviewed Sectors	Address	Dwelling Density (# dwgs/ha)	Number of Dwellings	Constraint to Development Progressing	Timing Phase
Buffer 1h	43 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	1	Proposed increase in density requires rezoning (LEP Amendment). Access arrangements may delay timing of development	1-2.5 years
Buffer 1i	41 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	27	Proposed increase in density requires rezoning (LEP Amendment). Access arrangements may delay timing of development	1-2.5 years
Buffer 1j	31 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	26	Proposed increase in density requires rezoning (LEP Amendment). Already under single ownership	2.5-5 years
Buffer 1k	29 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	14		2.5-5 years
Buffer 1l	23, 25 and 27 Warriewood Road	25/ha (with 15m street frontage @ 10/ha)	43		2.5-5 years
Buffer 1m	2 Macpherson Street	No change (no allocation)	0	N/A	N/A
Buffer 2a	4 Macpherson Street	Requires site specific design	Max 20	Proposed increase in density requires rezoning (LEP Amendment) and will require site specific design/masterplan to alleviate environmental constraints to maximum development potential	2.5-5 years
Buffer 3a	14-18 Boondah Road	25/ha	186	Proposed increase in density requires rezoning (LEP Amendment)	2.5-5 years
Buffer 3b	5 and 7 Macpherson Street	25/ha	7	Proposed increase in density requires rezoning (LEP Amendment)	2.5-5 years
Total Dwellings			927		

DESIGNATED INDUSTRIAL SECTORS

Reviewed Sectors	Address	Land Area	Constraint to Development Progressing	Timing Phase
102	185 Warriewood Road	4,554m ²	Already zoned 4(b)	5-10 years
103	10C, 10D, 12A, 12B, 12C, 14A, 14B, 14C, 16A Ponderosa Parade	8,199m ²	Already zoned 4(b). Individual allotments with approximate 15m widths. Dimensions of individual site difficult to development on its own	5-10 years
104	3 Harris Street and 16 Apollo Street	595m ²	Dimension and shape of site difficult for redevelopment. Will require specific use and design (adjoining pedestrian pathway)	5-10 years
105	15 Jubilee Avenue	4,554m ²	Already zoned 4(b). Development consent issued	1-2.5 years
701	2 Daydream Street and 96 Mona Vale Road	29,812m ²	Already rezoned 3(e)	1-2.5 years

9.3 RANGE OF LOT SIZES

Residential development in Warriewood Valley is based on the premise of providing a range of lot sizes accommodating a mixture of development styles and forms. In this regard, a sector designated for mixed residential development has a net density lot size of 625m² this does not infer that all lots will be near that lot size.

For example, a mixed residential sector targeted to yield 200 lots at a net density of 625m² per lot could develop three lot types as part of an integrated design.

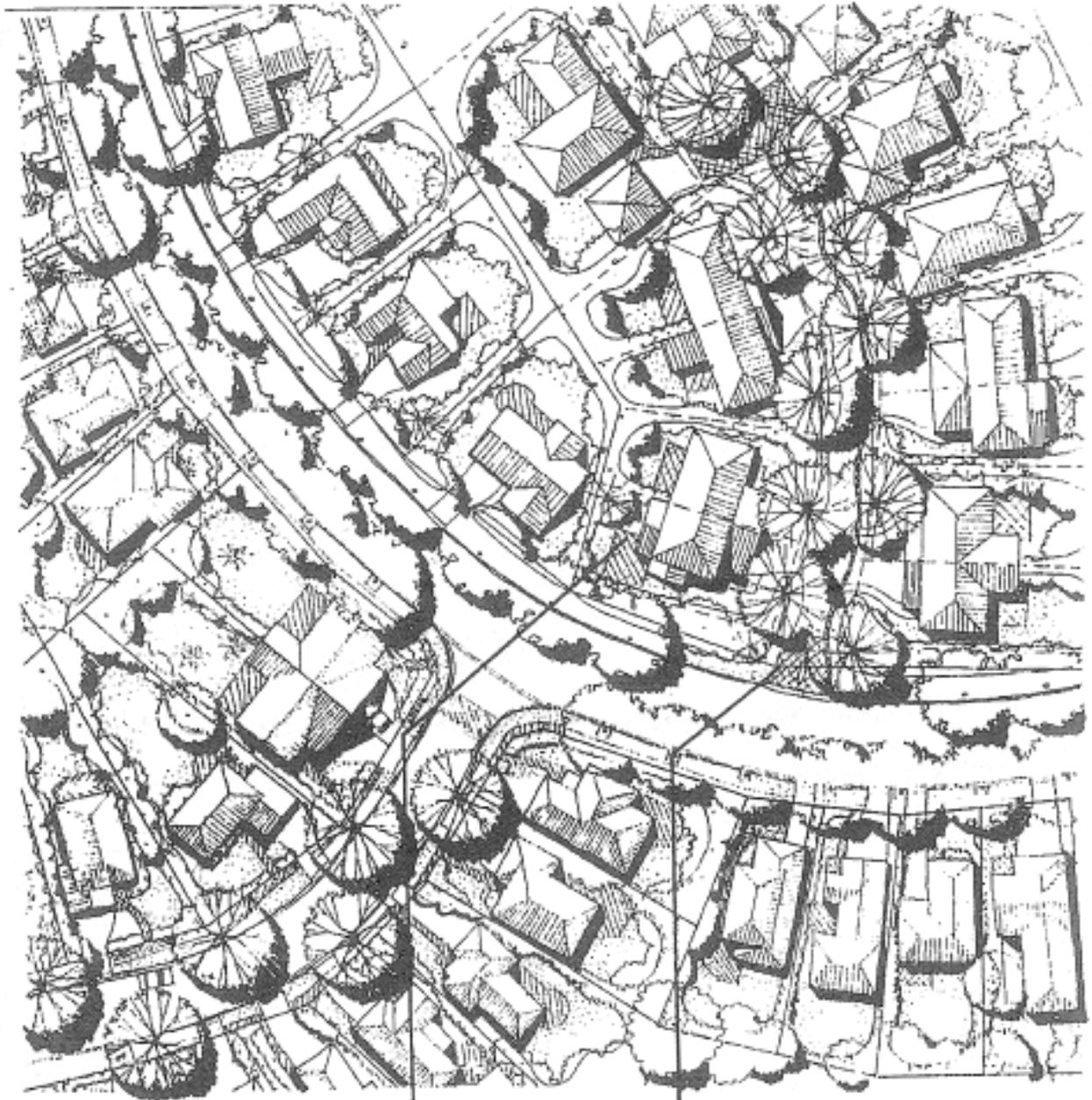
- Large lots adjoining an environmentally sensitive area which incorporates areas of vegetation protection area e.g. lots adjacent to a creekline corridor – 1000-1200m²
- Standard residential developments – 550-650m²
- Garden lots – 300-400m²

Rather than 200 x 625m² lots, an equivalent development density could consist of 35 large lots, 120 standard residential lots and 45 garden lots. Obviously there is a variety of combinations that can be used.

The detailed design for each sector will need to take into account its particular characteristics and produce an appropriate development proposal.

A series of representations of development alternatives and scenarios is shown in the following diagrams.

Figure 6 – Drawing A



**INTERGRATED HOUSING
'CLUSTER'**

Site density: 25 dwellings/ Ha
Range of lot sizes: 300 - 500m²

Small housing 'cluster' utilising
semi-detached/ zero lot line forms

Paved 'shareway'

DRAWING A

Figure 7 – Drawing B

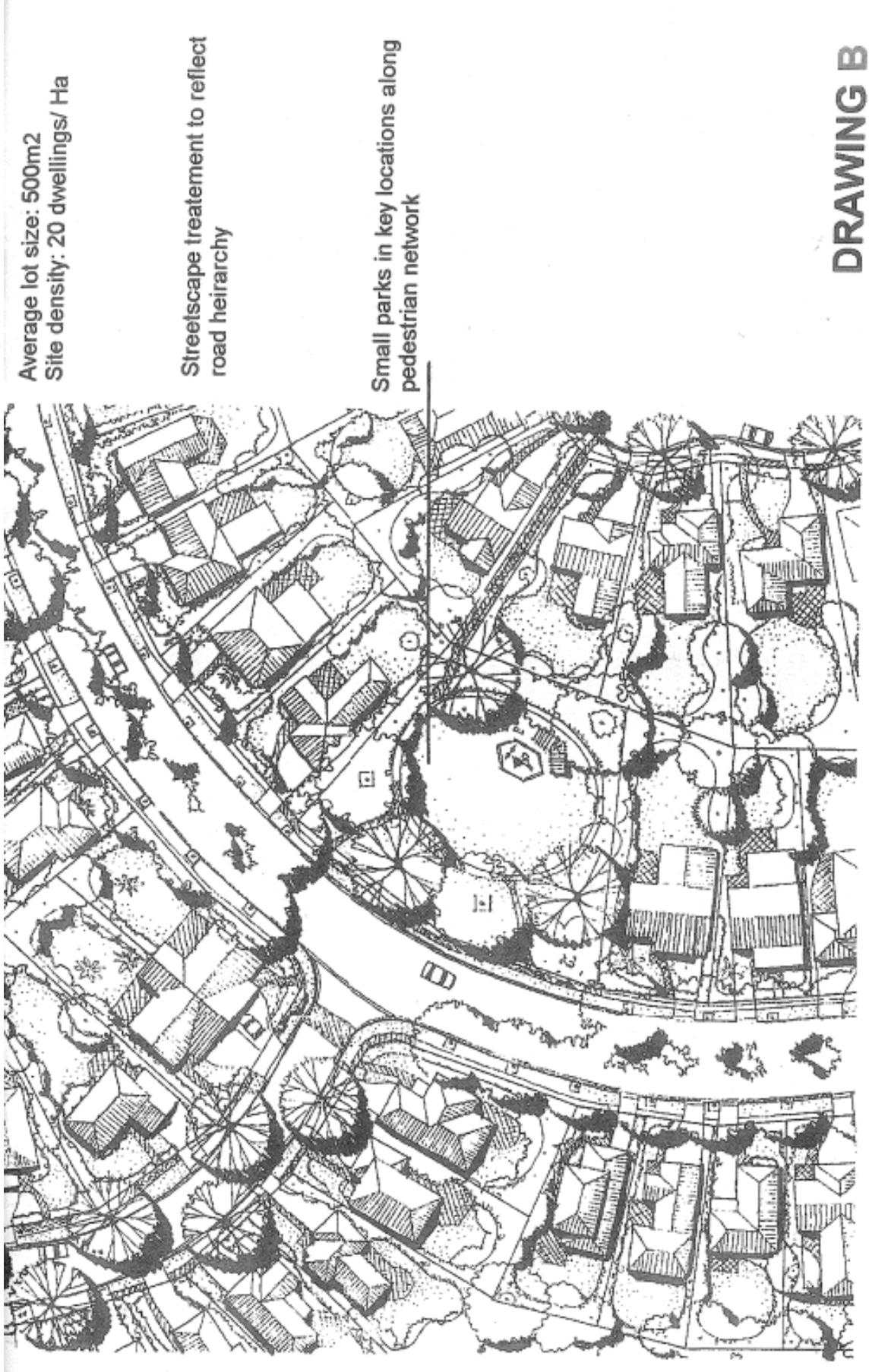
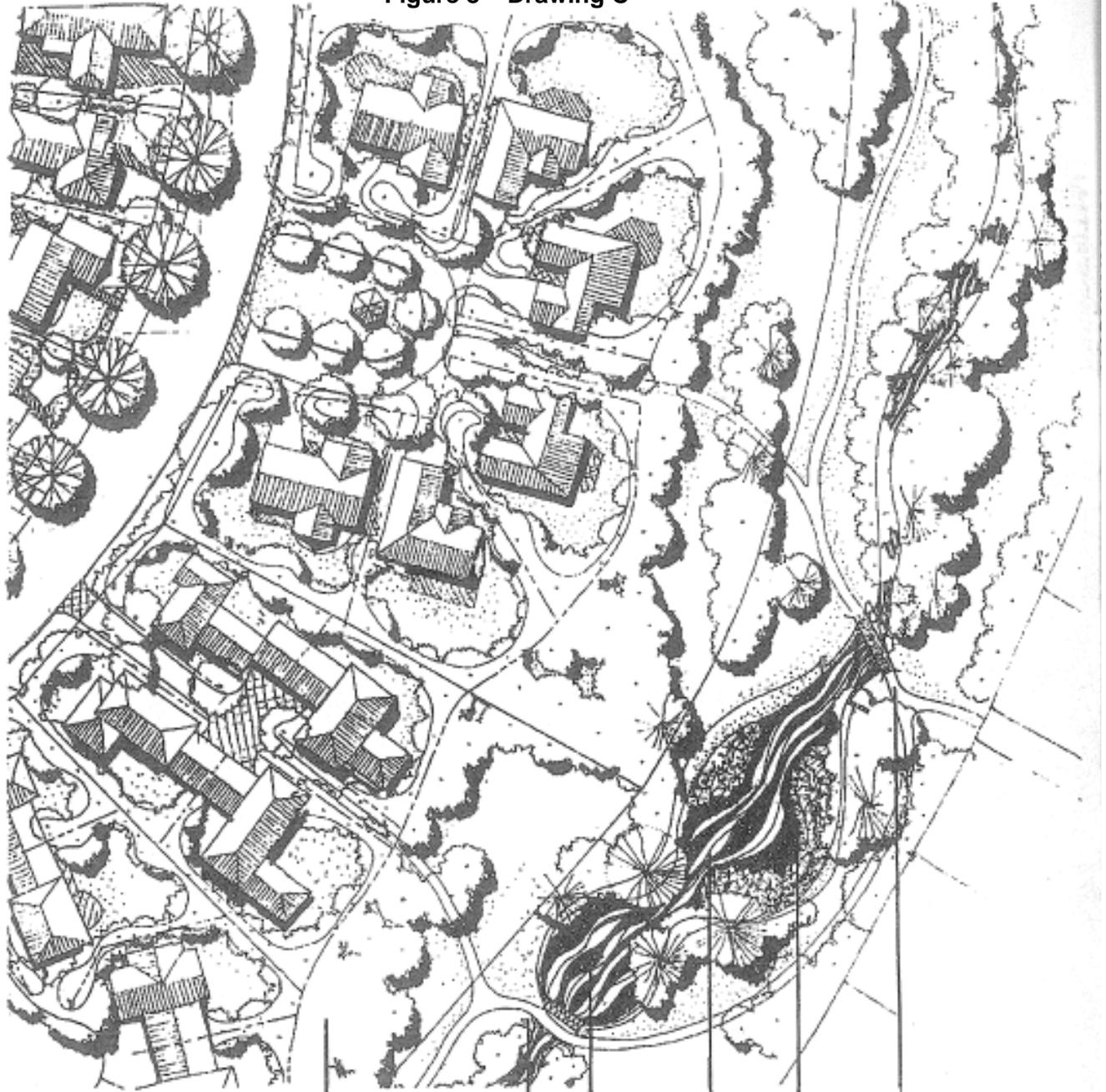


Figure 8 – Drawing C



INTERGRATED HOUSING

'CLUSTER'
(with restricted use buffer to creepline corridor)

Site densities:
15-25 dwellings/ Ha

Communal open space as buffer between residential and creepline corridor

WETLAND
(water pollution control pond)

'Trash rack'
(gross pollutant trap)

Forebay (traps heavier sediments)

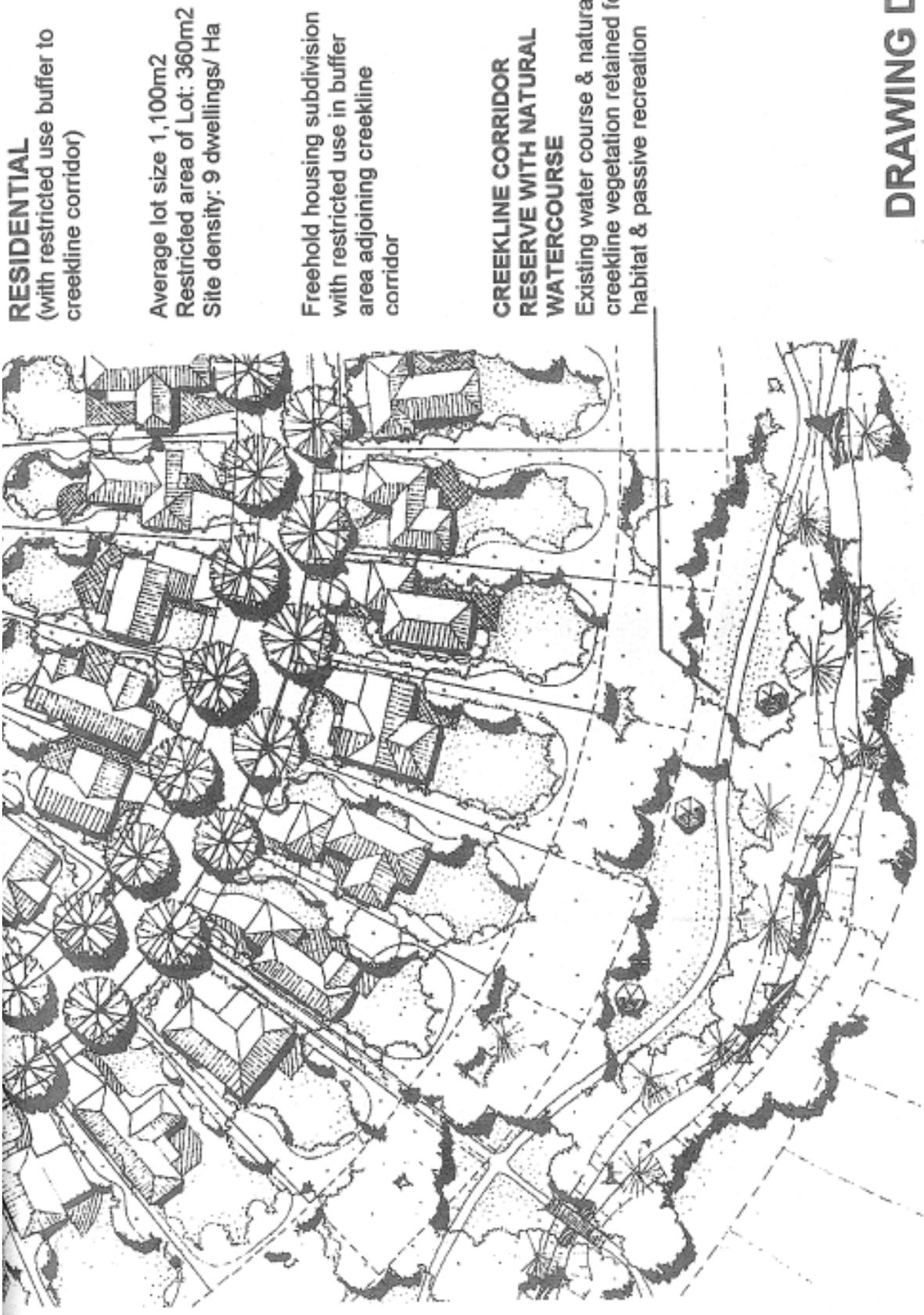
Waterbody
(settling fine sediments and biological processing of nutrients)

Emergent and submergent macrophyte zone

Outlet / weir
(dual use as footbridge)

DRAWING C

Figure 9 – Drawing D



RESIDENTIAL
(with restricted use buffer to creekline corridor)

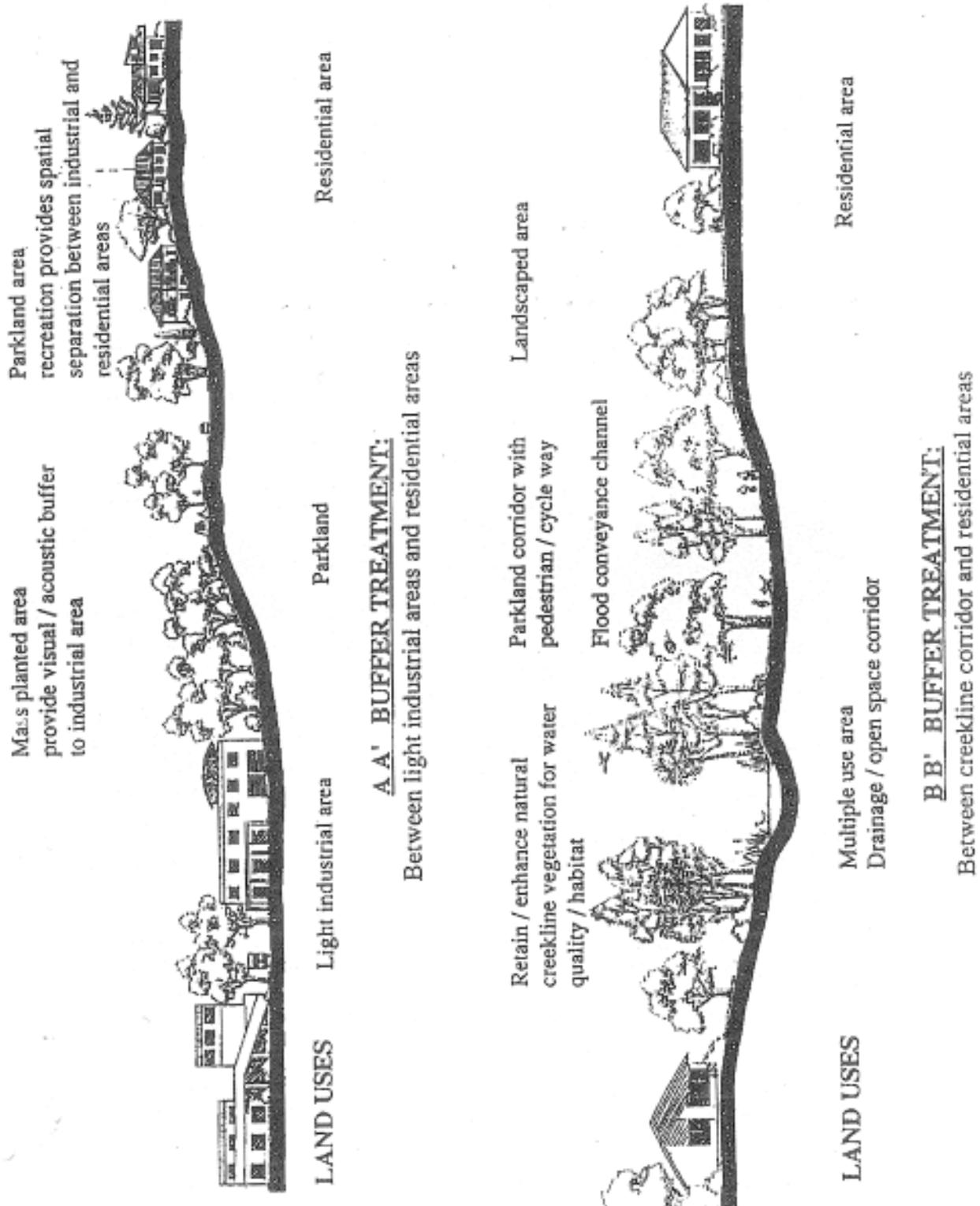
Average lot size 1,100m²
Restricted area of Lot: 360m²
Site density: 9 dwellings/ Ha

Freehold housing subdivision with restricted use in buffer area adjoining creekline corridor

**CREEKLINE CORRIDOR
RESERVE WITH NATURAL
WATERCOURSE**
Existing water course & natural creekline vegetation retained for habitat & passive recreation

DRAWING D

Figure 10 – Buffer treatment diagram



10. PROVISION OF COMMUNITY FACILITIES AND INFRASTRUCTURE

The area that makes up Warriewood Valley combined with the industrial/commercial and residential land in Stage 1 released for development in 1986, comprises an identifiable area creating its own specific needs in terms of community facilities and infrastructure.

While some individual sectors within the land release will be independently developed, the implementation of an overall “system” of community facilities and infrastructure will bind the developed sectors together. A coordinated approach to provision of these facilities and infrastructure is required to ensure a safe and amenable development outcome for future residents and occupiers.

Additionally, the final development must be compatible with surrounding development and land uses linking the new areas with established facilities, minimising any adverse effect on surrounding communities, land uses and environmental assets.

10.1 PRINCIPLES FOR THE PROVISION OF COMMUNITY FACILITIES AND INFRASTRUCTURE

Each of the categories of community facilities and infrastructure will need to be provided through the development process.

Council has two principle methods to achieve provision of infrastructure and facilities through the development process as follows:

- Direct provision by developers;
- The utilisation of Section 94 Contribution Plans to collect funds, which are in turn expanded to provide facilities and infrastructure.

In order to achieve provision of facilities and infrastructure as early in the development process as possible, it is appropriate that Council as much as possible rely on direct provision of facilities and infrastructure by developers. This can be through conditions of Development Consent or through utilisation of a Material Public Benefit, rather than relying on traditional Section 94 Contribution Plans principles, which sees Council collecting money from developers and providing facilities at a later date.

In particular, this traditional approach of relying on monetary contributions from Section 94 Contribution Plans causes delays in the provision of facilities and infrastructure. In addition, over the period of development it may see considerable pressure placed on the general community (through its Council) to fund construction in the interim periods between development commencing and overall development being completed.

Within each sector, facilities and infrastructure which directly relate to that development (i.e. local roads, footpaths, stormwater management facilities etc.) will be directly provided by the development process.

Only where the infrastructure and facilities are common to the overall development is there a need to provide an alternative method of provision, beyond direct provision, by the developer. That is, these infrastructure and facilities do not relate specifically to a particular development but are part of a “shared” system servicing the overall land release.

A Section 94 Contribution Plan, incorporating each category of community facilities and infrastructure, will be based on the following strategies, prior to development occurring.

10.2 STORMWATER MANAGEMENT FACILITIES PROVISION STRATEGY

Objective

To provide an overall stormwater management system which serves those areas within Warriewood Valley designated for urban development and ensures that stormwater does not adversely impact on private property, public land, or receiving waters.

Land to which this strategy applies

The strategy applies to all land in Warriewood Valley Urban Land Release together with the residential and industrial/commercial areas of Stage 1 (of the Warriewood Valley Urban Land Release) released in 1986.

Note: In 1997, part of Sector 1 was zoned for light industrial use under the 1986 Warriewood Valley Stage One Release. Its inclusion in the land release as residential land follows from Council decision based on the premise that there should be no financial disadvantage to Council in terms of its existing and future Section 94 liabilities.

The strategy applies to all of the land shown on the map, in that the provision of the drainage and stormwater management facilities, while being located along or adjacent to major watercourses through the Valley, provide a shared level of amenity for all these undeveloped areas designated for urban development.

On this basis, provision of community water management facilities by developers (either direct or indirect) should be proportional to the number of dwellings to be developed in the residential areas regardless of location or sector. Contributions from remaining land undeveloped in the Stage 1 industrial/commercial areas and proposed new industrial/commercial areas at the northern end of the Valley should be on a per m² basis.

Sector 20 is an isolated sector to the north of Mona Vale Road and drains towards Pittwater. As it is a single sector draining to independent receiving waters the implementation of stormwater management facilities and structures are isolated from those associated with the remaining development area and therefore should be treated independently and as part of the development process for that sector.

Combined use of land required for Stormwater Management Facilities

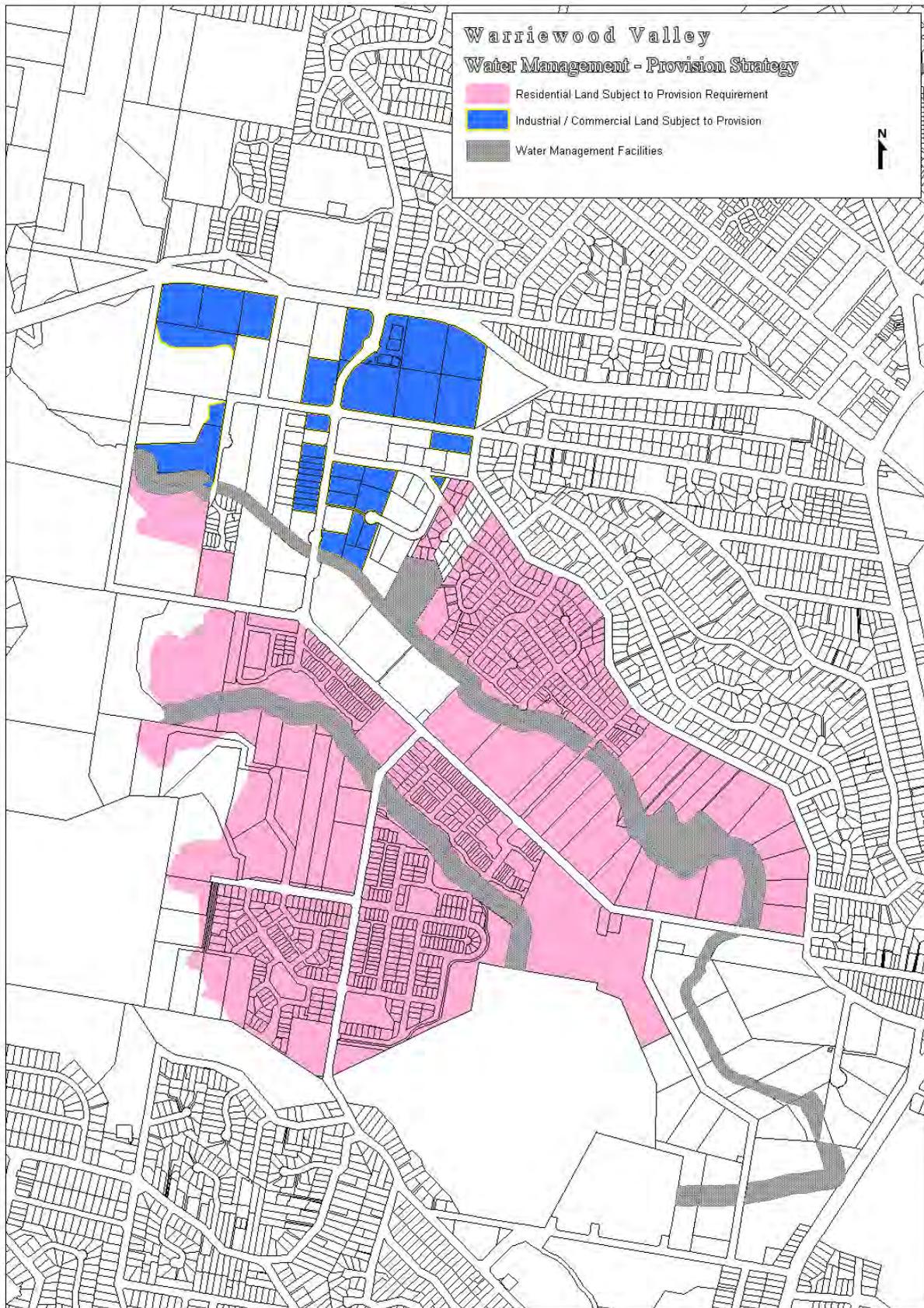
The Environmental and Demographic studies for the land release have identified a requirement for preservation of open space strips along natural watercourses flowing through the Valley including Narrabeen Creek, Mullet Creek and Fern Creek. These open space strips will need to include Stormwater Management structures designed in an environmentally sensitive way to achieve the combined objectives of both the Stormwater Management Strategy and the need to provide open space.

In this regard 30% of the land provided by residential development for the Stormwater Management Facilities can be credited towards open space contributions that would otherwise be required.

Opportunities for provision of facilities

Those sectors which have direct frontage to the water courses passing through the Valley allow an opportunity for developers to directly provide facilities. Remaining areas which are not adjacent to watercourses (including the underdeveloped properties in the industrial/commercial area) can be levied through Section 94 Plan Contribution or offered an opportunity to construct facilities on land already acquired by Council to the value of the contribution that would otherwise be payable.

Figure 11 – Water management



10.3 TRAFFIC AND TRANSPORT PROVISION STRATEGY

Objective

To provide an overall traffic and transport management system which serves those areas of Warriewood Valley designated for urban development.

Land to which this strategy applies

The strategy would apply to all of the land in Warriewood Valley Urban Land Release with the exception of Sector 20, together with the industrial/commercial and residential areas of Stage 1 of Warriewood Valley released in 1986 in the northern sections of the Valley.

Note: In 1997, part of Sector 1 was zoned for light industrial use under the 1986 Warriewood Valley Stage One Release. Its inclusion in the land release as residential land follows from Council decision based on the premise that there should be no financial disadvantage to Council in terms of its existing and future Section 94 liabilities.

The strategy requires the provision of the traffic and transport facilities at a shared level of amenity for all those undeveloped areas designated for urban development.

On this basis provision of traffic and transport facilities by developers (either direct or indirect) should be proportional to the number of dwellings to be developed in the residential areas regardless of location or sector. Contribution from remaining land undeveloped in the Stage 1 industrial/commercial and residential areas at the northern end of the Valley together with the adjoining sectors designated for industrial/commercial development should be on a per m² basis and relate to the traffic generation capacity.

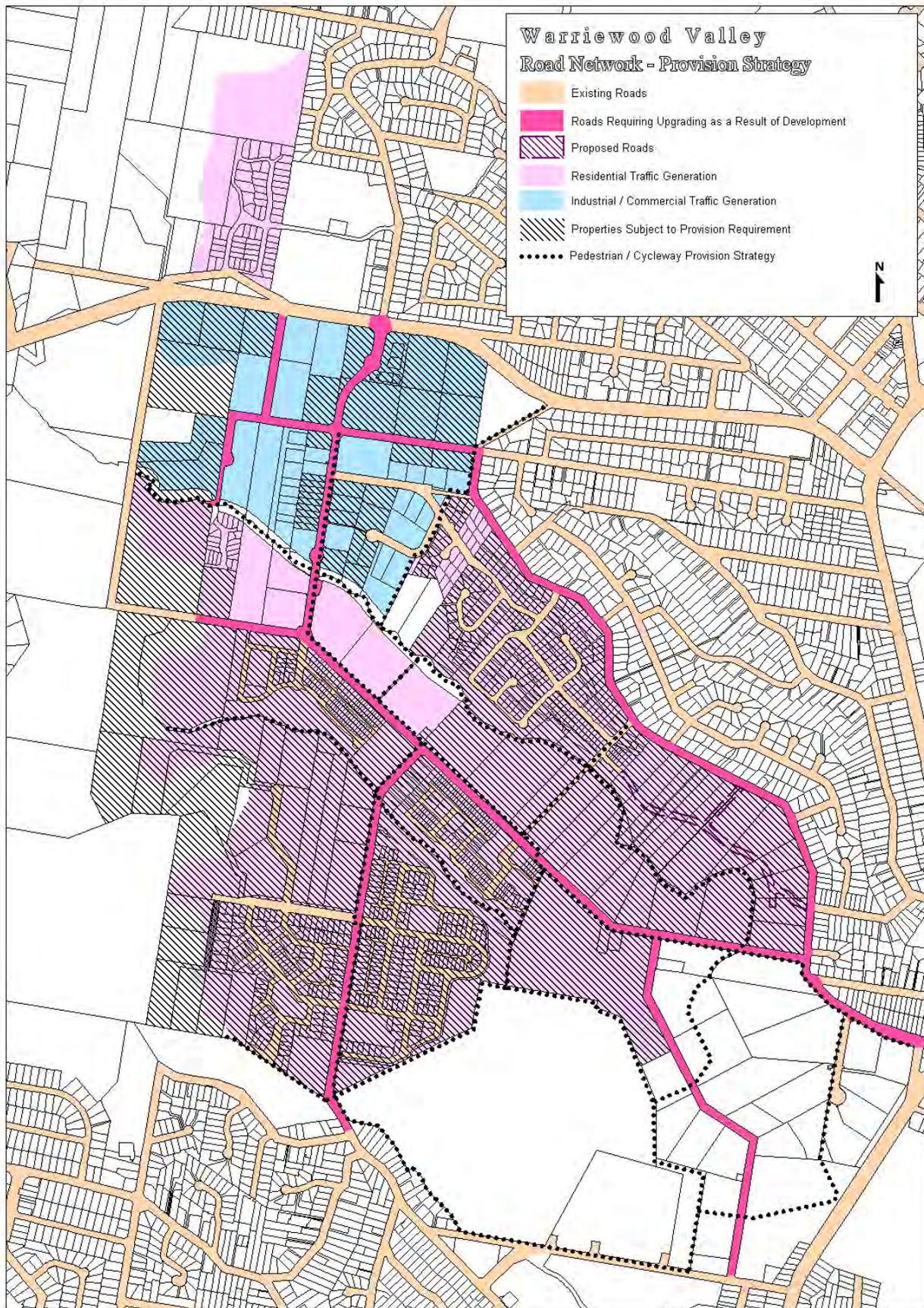
Sector 20 is an isolated sector to the north of Mona Vale Road. The implementation of its traffic and transport management facilities to service this sector is not associated with the remaining development area and therefore should be treated independently and as part of the development process for that section.

Opportunities for provision of facilities

All sectors that have direct frontage to road reserves where there is opportunity to directly provide facilities particularly half width road construction.

In addition to half road constructions there are significant opportunities for direct provision of traffic and transport facilities through construction of intersections, traffic control structures and bridges.

Figure 12 – Road network



10.4 **BUSHFIRE PROTECTION TRAIL PROVISION STRATEGY**

Objective

To provide a bushfire protection trail that serves those areas within Warriewood Valley designated for urban development to ensure that development is adequately protected by providing a bushfire trail and perimeter access where development abuts areas of high bushfire hazard.

Land to which this strategy applies

The strategy would apply to all of the land in Warriewood Valley Urban Land Release.

Note: In 1997, part of Sector 1 was zoned for light industrial use under the 1986 Warriewood Valley Stage One Release. Its inclusion in the land release as residential land follows from Council decision based on the premise that there should be no financial disadvantage to Council in terms of its existing and future Section 94 liabilities.

The strategy applies to all of the land shown on the map in that the provision of the bushfire protection facilities provide a shared level of amenity for all the undeveloped areas designated for residential and industrial/commercial urban development.

Provision of bushfire protection facilities by developers (either direct or indirect) should be proportional to the number of dwellings to be developed in the residential areas regardless of location or sector. Contribution from the new industrial/commercial areas at the northern end of the Valley should be on a per m² basis.

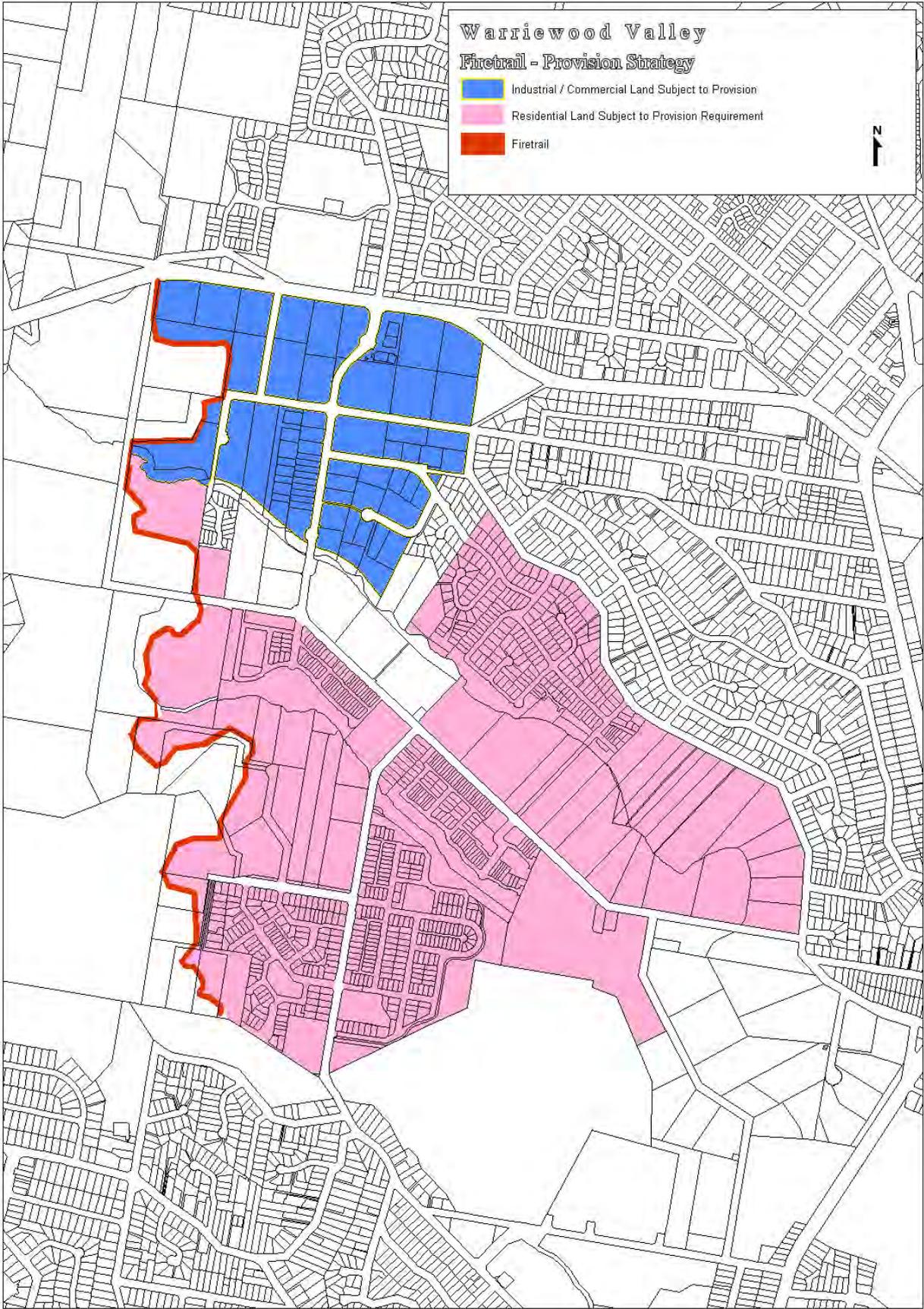
Sector 20 which is an isolated sector to the north of Mona Vale Road. The implementation of bushfire protection measures is isolated from those associated with the remaining development area and therefore should be treated independently and as part of the development process for that sector.

Opportunities for Provision of Facilities

Those sectors which are adjacent to the high bushfire area provide an opportunity for developers to directly provide facilities.

Remaining areas which cannot directly provide facility can be levied through a Section 94 Contribution Plan Contribution or offered an opportunity to construct facilities on land already acquired by Council to the value of the contribution that would otherwise be payable.

Figure 13 – Firetrail



10.5 PUBLIC RECREATION AND OPEN SPACE PROVISION STRATEGY

Objective

To provide a public recreation and open space system which serves those areas within Warriewood Valley designated for urban development.

Land to which this strategy applies

The strategy applies to all of the land in Warriewood Valley Urban Land Release, in that the provision of public recreation and open space facilities provide a shared level of amenity for all these undeveloped areas designated for residential urban development.

Note: In 1997, part of Sector 1 was zoned for light industrial use under the 1986 Warriewood Valley Stage One Release. Its inclusion in the land release as residential land follows from Council decision based on the premise that there should be no financial disadvantage to Council in terms of its existing and future Section 94 liabilities.

On this basis provision of facilities by developers (either direct or indirect) should be proportional to the number of dwellings to be developed in the residential areas regardless of location or sector.

Land provided by multiple use facilities

The buffer areas, open space links and drainage facility areas provide a multiple use function. Where residential development has provided for these facilities it is appropriate to credit that contribution with a 30% factor in regard to open space requirements.

All proposed residential development has contributed to these facilities (in combination) other than Sector 20. In the case of Sector 20, offsets can be offered depending on the level of provision of these facilities at detailed planning and development application stage.

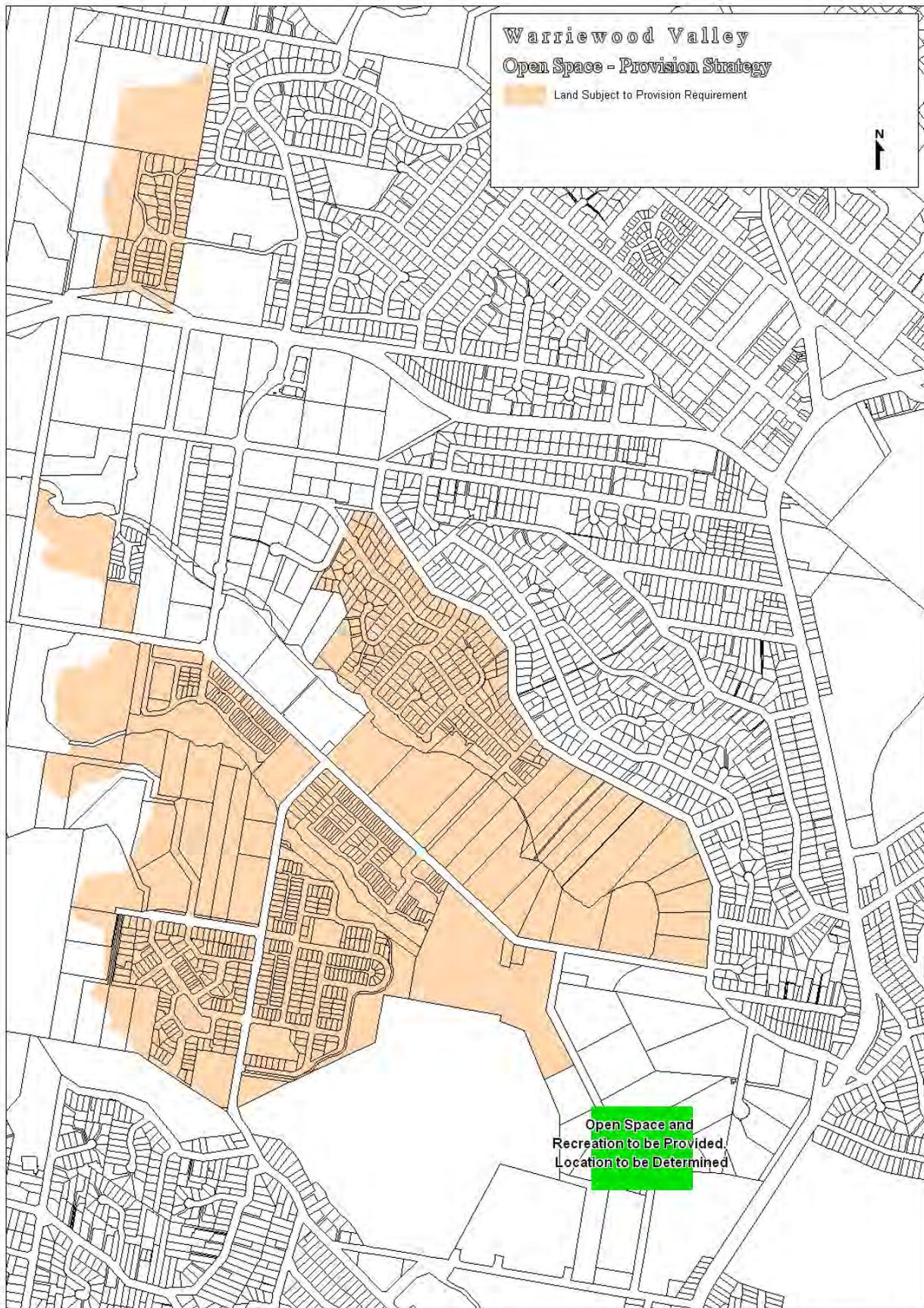
This principle may also be applicable to other sectors should land be proposed to be used in a way that will provide realistic multi-use open space functions (i.e. water management structures).

Opportunities for provision of facilities

Those sectors which have land suitable for public open space and recreation facilities provide an opportunity for developers to directly provide facilities. There is relatively limited opportunity in the early stages of development to directly provide recreation and open space as an open space plan specifying areas to be targeted for development will need to be produced.

Areas which cannot directly provide facility, can be levied through a Section 94 Plan Contribution or offered an opportunity to construct facilities on land already acquired by Council to the value of the contribution that would otherwise be payable.

Figure 14 – Open space



10.6 PEDESTRIAN AND CYCLEWAY NETWORK PROVISION STRATEGY

Objective

To provide an overall pedestrian and cycleway network which serves those areas within Warriewood Valley designated for urban development.

Land to which this strategy applies

The strategy would apply to all of the land in the Warriewood Valley Urban Land Release.

Note: In 1997, part of Sector 1 was zoned for light industrial use under the 1986 Warriewood Valley Stage One Release. Its inclusion in the land release as residential land follows from Council decision based on the premise that there should be no financial disadvantage to Council in terms of its existing and future Section 94 liabilities.

The strategy applies to all residential land in that the provision of a pedestrian cycleway network provides a shared level of amenity for all these undeveloped areas designated for residential development.

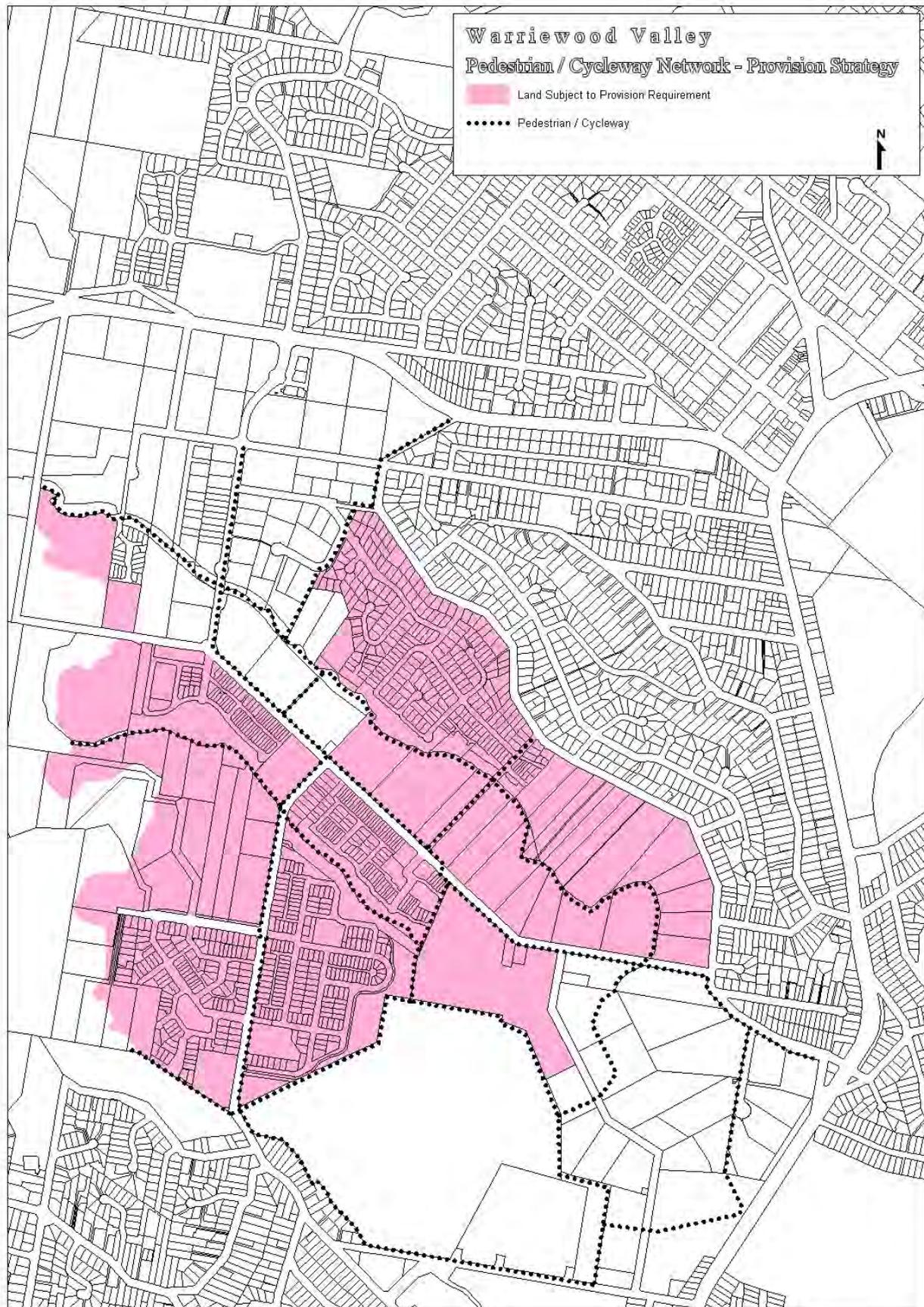
On this basis, provision of facilities by developers (either direct or indirect) should be proportional to the number of dwellings to be developed in the residential areas regardless of location or sector.

As Sector 20 is an isolated sector to the north of Mona Vale Road, the provision of this facility to service its future residents should be treated independently and as part of the detailed planning and development process for that sector.

Those sectors which provide an opportunity for developers to directly provide facilities will be encouraged to do so. In this regard the majority of sectors have an opportunity for direct provision.

Where facilities cannot be directly provide costs can levied through a Section 94 Contribution Plan.

Figure 15 – Pedestrian/cycleway network



10.7 COMMUNITY SERVICES PROVISION STRATEGY

Objective

To provide an appropriate level of community service facilities which serves those areas within Warriewood Valley designated for urban development.

Land to which this strategy applies

The strategy would apply to all of the land in Warriewood Valley.

Note: In 1997, part of Sector 1 was zoned for light industrial use under the 1986 Warriewood Valley Stage One Release. Its inclusion in the land release as residential land follows from Council decision based on the premise that there should be no financial disadvantage to Council in terms of its existing and future Section 94 liabilities.

The strategy applies to all residential land in that the provision of community service facilities provide a shared level of amenity for all these undeveloped areas designated for residential development.

On this basis, provision of facilities by developers (either direct or indirect) should be proportional to the number of dwellings to be developed in the residential areas regardless of location or sector.

11. IMPLEMENTING THE DETAILED PLANNING PROCESS

11.1 SECTOR-BY-SECTOR REZONING APPROACH

In 1997, Pittwater Council introduced a sector-by-sector approach towards the development of the Warriewood Valley Urban Land Release, where landowners cooperatively participate in the detailed design process to achieve the objectives set out in the 2010 Planning Framework.

This cooperative planning process, whereby detailed planning accompanies the rezoning process for individual sectors, ensures that at the time of the final rezoning Council and developers are assured of the eventual development style for the land. This also advantages the developers in that the detailed planning process can occur concurrently with the rezoning process decreasing the development process time frame.

Further the process allows an opportunity for the direct provision of community facilities and services as against the traditional Section 94 financial Contribution process, and, above all, ensures coordinated development within each sector regardless of land tenure.

11.2 REVISED SECTORS

The review has identified the properties not yet developed or, in certain cases, land not yet rezoned for residential development. As of December 2009, 801 dwellings are still to be realised on those properties to be developed/rezoned. These properties were therefore reviewed to ascertain opportunities and the appropriateness of increasing the dwelling yields to offset the impact of the Ministerial directive (issued to Pittwater Council in July 2009*) and to attend to the incomplete or delayed take up of development. Key considerations of the review are as follows:

- Maintain the integrity of the original findings of the environmental studies
- Ensure consistency with the *Ingleside/Warriewood Urban Land Release Draft Planning Strategy*, in terms of development capability of the land. As such, certain lands retained their existing yield due to development constraints identified under the *Ingleside/Warriewood Urban Land Release Draft Planning Strategy*
- Equity across the Valley, particularly those sectors already developed, which may have a parcel or parcels of land not yet developed. Allotments already rezoned will have an allocated dwelling potential based on the approved sector masterplan. As such, it was appropriate not to increase the dwelling yield on these rezoned, vacant lands.
- Revise the sector boundaries based on individual allotment or landownership (where adjoining allotments are in the one ownership).

* Minister's Direction was issued under Section 94E of the Environmental Planning and Assessment Act 1979

11.3 FORWARD PATH

Final planning framework

Following the review/consultation process by the community and relevant Government authorities, a reviewed Final Draft Warriewood Valley Planning Framework 2010 will be forwarded to Council for its adoption.

Section 94 Contributions Plan

An integral component of the planning and management process is the preparation of a Section 94 Contributions Plan to ensure the timely and cost effective provision of local infrastructure through an appropriate Section 94 Contribution Plan. The type of infrastructure items, included in the Section 94 Contributions Plan, will be consistent with the Environmental Planning and Assessment Act 1979, accompanying Regulations and the applicable Local Development Contributions Guidelines.

The preparation of an effective Section 94 Contribution Plan is an important part of the release area planning process aimed at encouraging the maximum amount of direct provision of facilities and services by developers, and hence minimise financial contributions which inherently increase Council's cost exposure.

Phasing strategy

Integral to the preparation of this planning framework has been the development of a strategy to encourage rapid development take-up as well as identify the quantum of the development "tail", aimed at facilitating completion of the development cycle.

In this way, the strategy aims to provide for the orderly release of land and ensure that appropriate services and facilities are available to occupants of future dwellings and that Council and State Government authorities responsible for providing services and facilities can do so in a cost effective manner (refer to Revised Sectors map).

Local Environmental Plans

Local Environmental Plans will be prepared for revised sector land units as appropriate to facilitate release of land in accordance with the objectives of the 2010 Planning Framework.

12. CONCLUSION

The Warriewood Valley Planning Framework 2010 prepared for the Warriewood Valley Urban Land Release Project, as described in this document and the associated maps and tables, is based on the precursor Planning Framework documents dated 1997 and 2001. The 2010 Planning Framework continues to allocate appropriate land uses to the various sectors of the land release area, based on the original environmental and demographic studies carried out to facilitate responsible planning of the project and delivery of development that achieves environmental, social and economic sustainability.

In this regard, the *Ingleside/Warriewood Urban Land Release Draft Planning Strategy* had provided a forward path to carry the outputs of the range of investigative studies carried out to support the project into the future detailed planning and implementation.

The Warriewood Valley Planning Framework 2010 indicates that the area has the capability to provide for 2012 dwellings through development of approximately 140 hectares. In addition, 27 hectares are designated for industrial/commercial development.

The 2010 Planning Framework is the fundamental planning document for the Warriewood Valley Urban Land Release Project and has utilised contemporary planning practices to provide a basis for a sound decision making throughout the land release process.

Through the action plans for each of the studies, the 2010 Planning Framework ensures that the original goals and objectives of these studies will be carried forward into the detailed planning and future management of development and conservation initiatives, and that, where necessary, further detailed investigation will proceed future planning and release of land.

The 2010 Planning Framework for the Warriewood Valley Urban Land Release Project provides a clear path for the environmentally, socially and economically sustainable use of land in the Ingleside/Warriewood area, and sets a challenge to those involved in the project to ensure those goals are achieved.

REFERENCES

Background documents

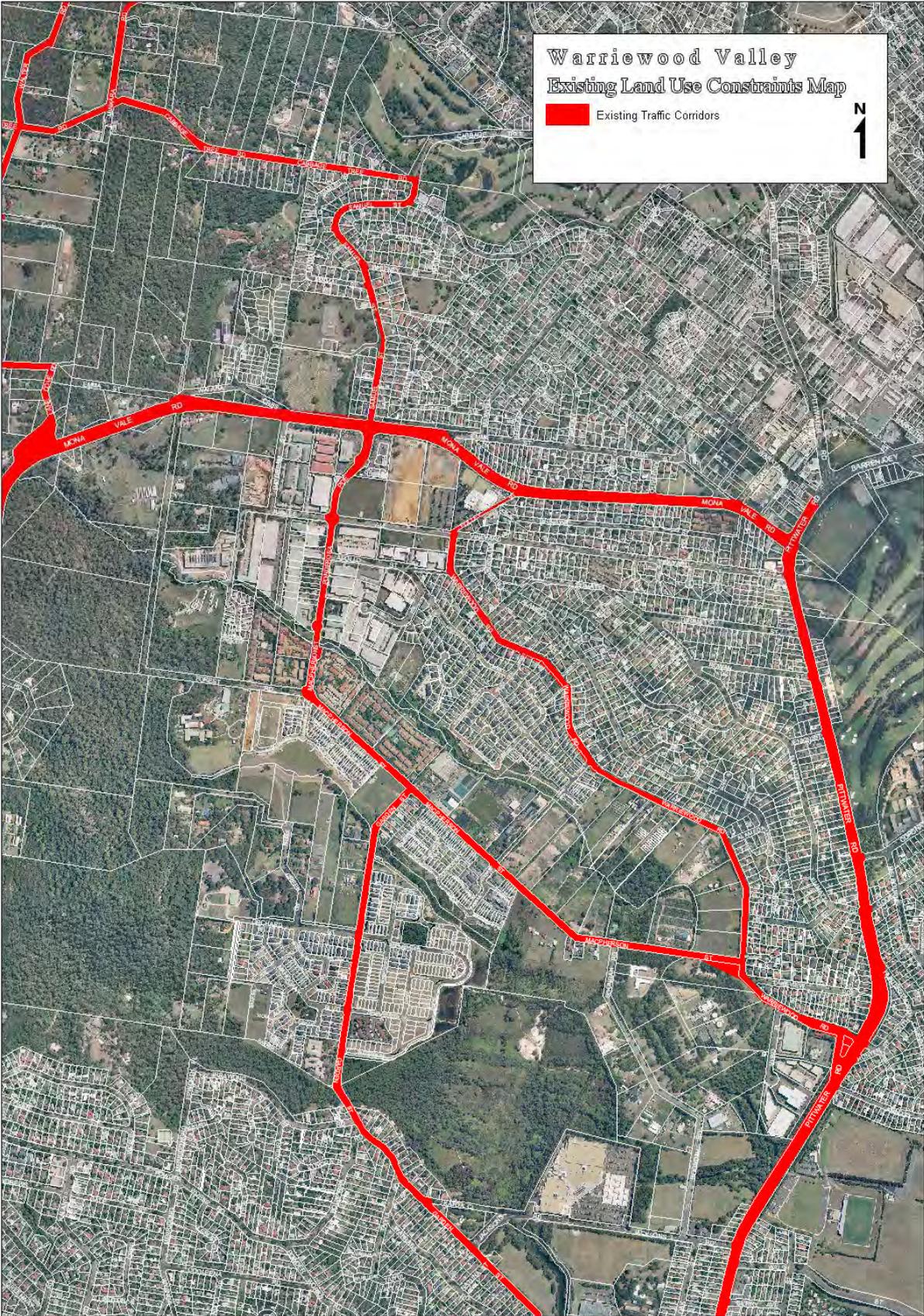
- *Ingleside/Warriewood Urban Land Release Draft Planning Strategy*
- *Draft Land Use Policy Sets*
- *Draft Land Use Models*
- *Draft Warriewood Valley Urban Land Release Planning Framework 1997*
- *STP Buffer Sector Draft Planning Framework 2001*
- *Warriewood Section 94 Contributions Plan No. 15 (Amendment No. 16)*

Background environmental studies (not attached)

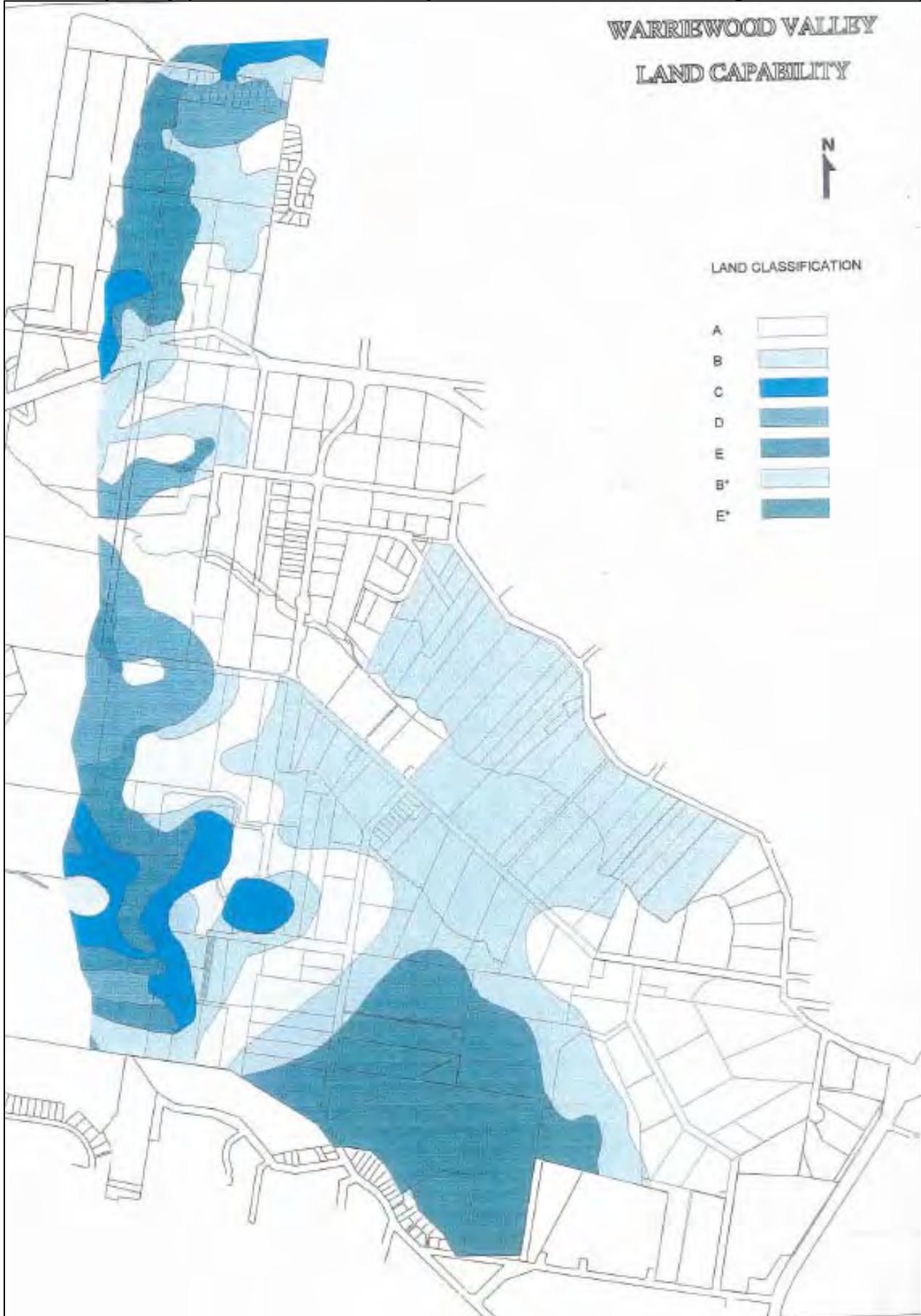
- *Ingleside/Warriewood Vegetation Conservation Study*
- *Ingleside/Warriewood Fauna Conservation Study*
- *Ingleside/Warriewood Land Capability Study*
- *Ingleside/Warriewood Contaminated Land Study*
- *Ingleside/Warriewood Visual Impact Study*
- *Ingleside/Warriewood Aboriginal Archaeological Study*
- *Ingleside/Warriewood Heritage Study*
- *Ingleside/Warriewood Water Cycle Management Study and Integrated Water Management Strategy*
- *Ingleside/Warriewood Bushfire Hazard Study*
- *Ingleside/Warriewood Combined Demographic Study*
 - *Demographic Analysis and Modeling*
 - *Traffic and Transport*
 - *Retail and Service Facilities*
 - *Community Facilities*
 - *Open Space and Recreation*
- *Integrated Water Management Strategy Warriewood Valley*
- *Warriewood Valley Urban Land Release Traffic and Transportation Study*

APPENDIX 1 – ENVIRONMENTAL STUDIES MAPS

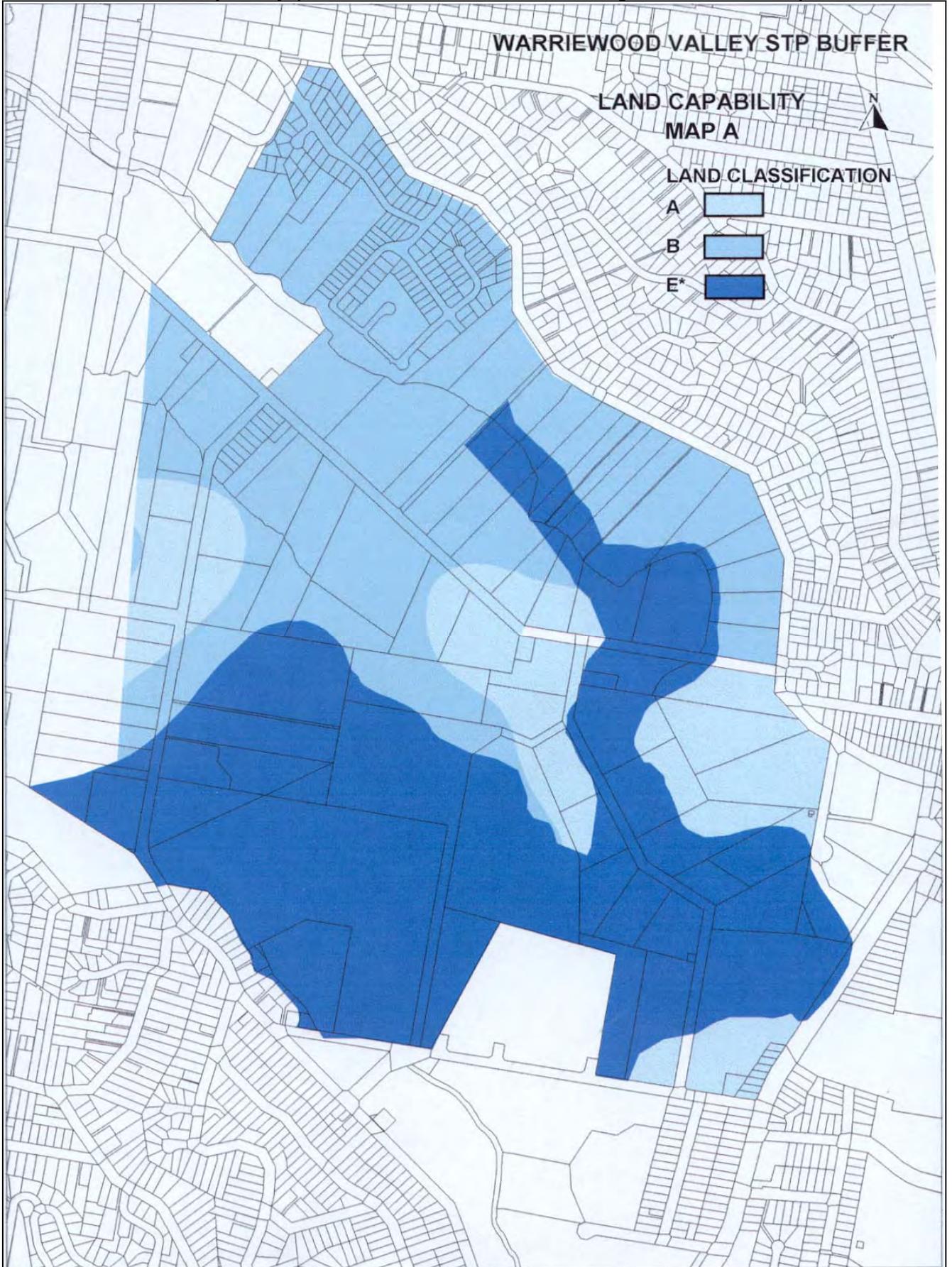
1. Existing land use constraints (Draft Warriewood Valley Urban Land Release Planning Framework 1997)



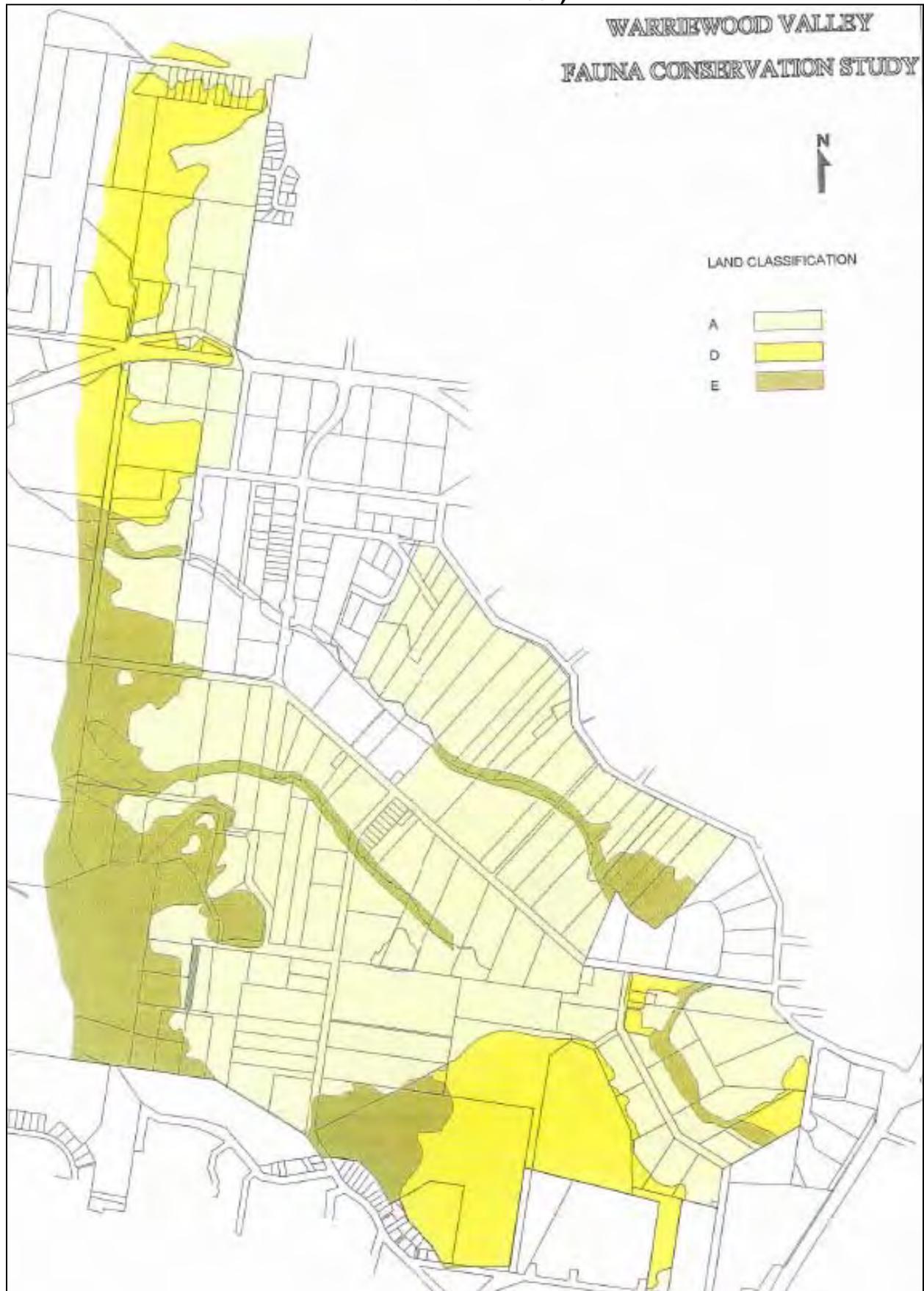
2. Land capability (Draft Warriewood Valley Urban Land Release Planning Framework 1997)



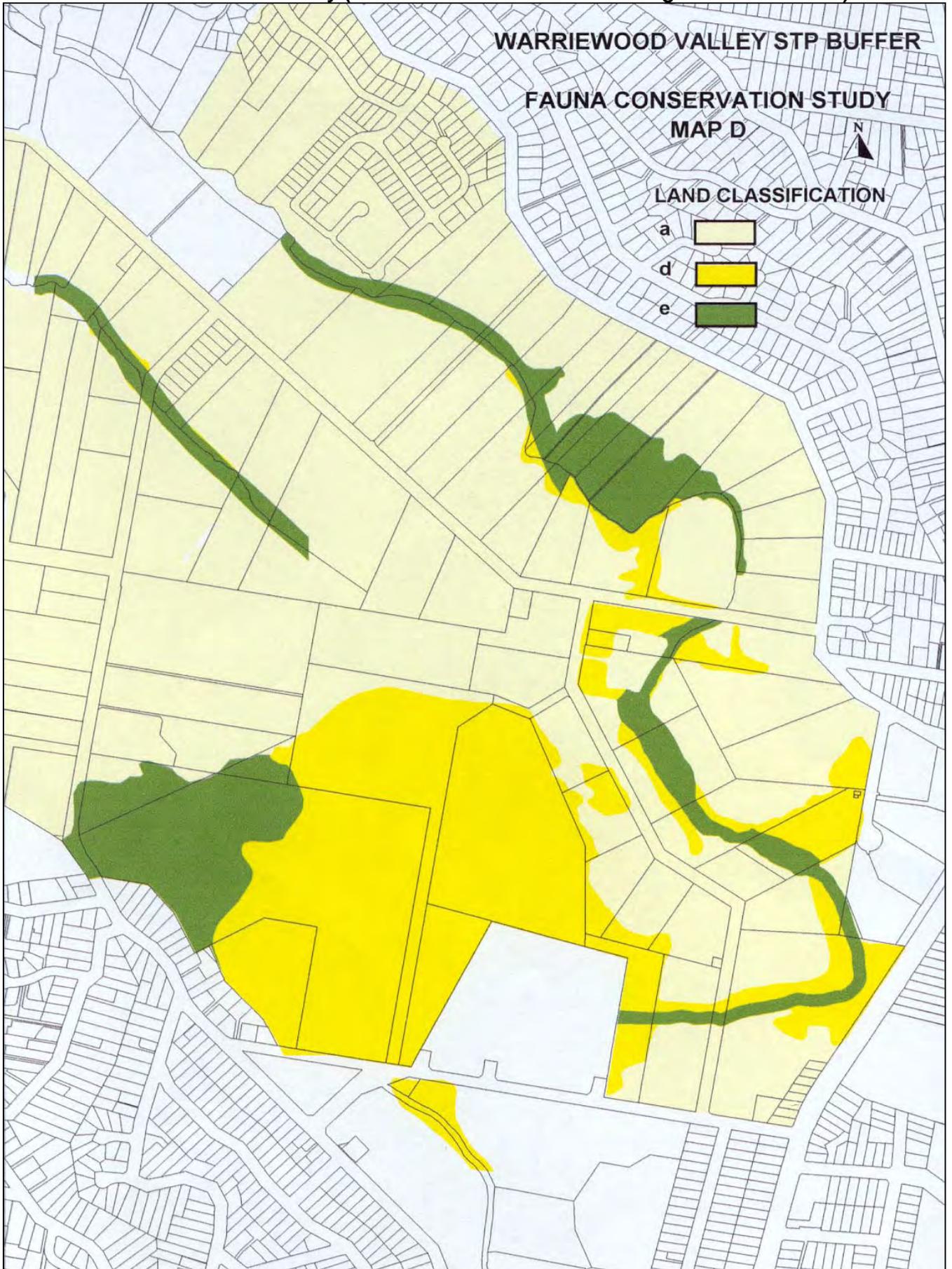
3. Land capability (STP Buffer Sector Draft Planning Framework 2001)



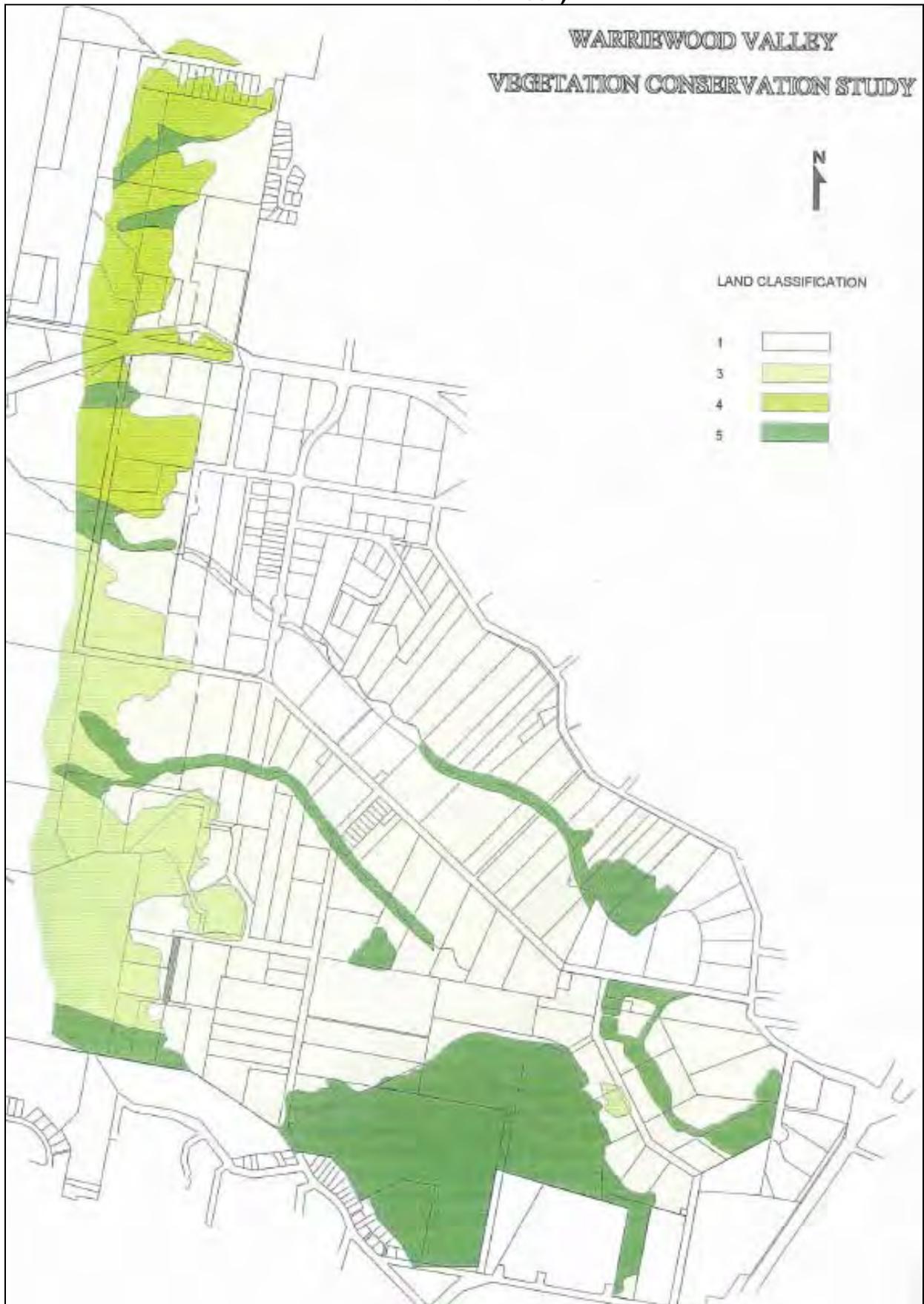
4. Fauna conservation study (*Draft Warriewood Valley Urban Land Release Planning Framework 1997*)



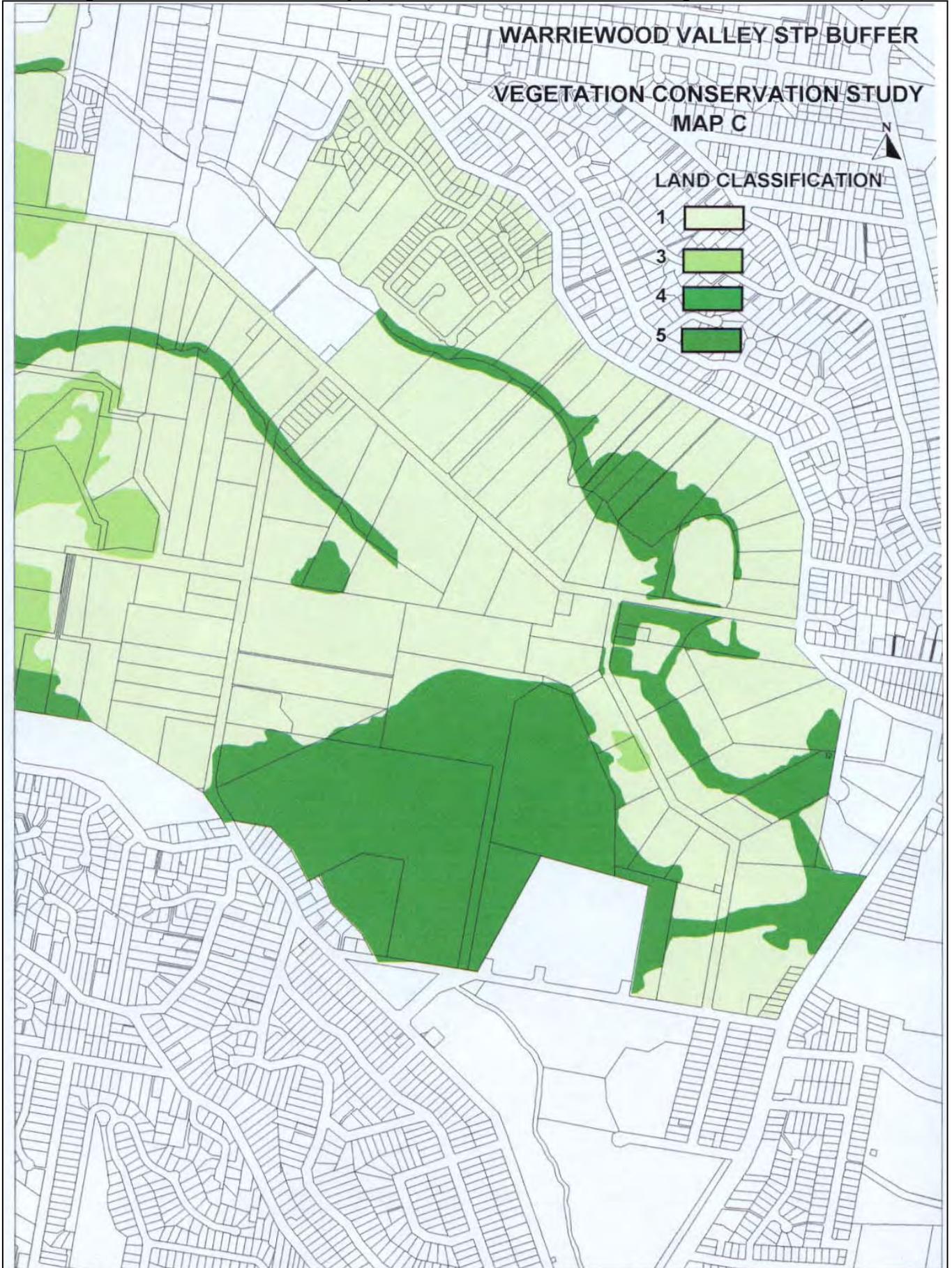
5. Fauna conservation study (STP Buffer Sector Draft Planning Framework 2001)



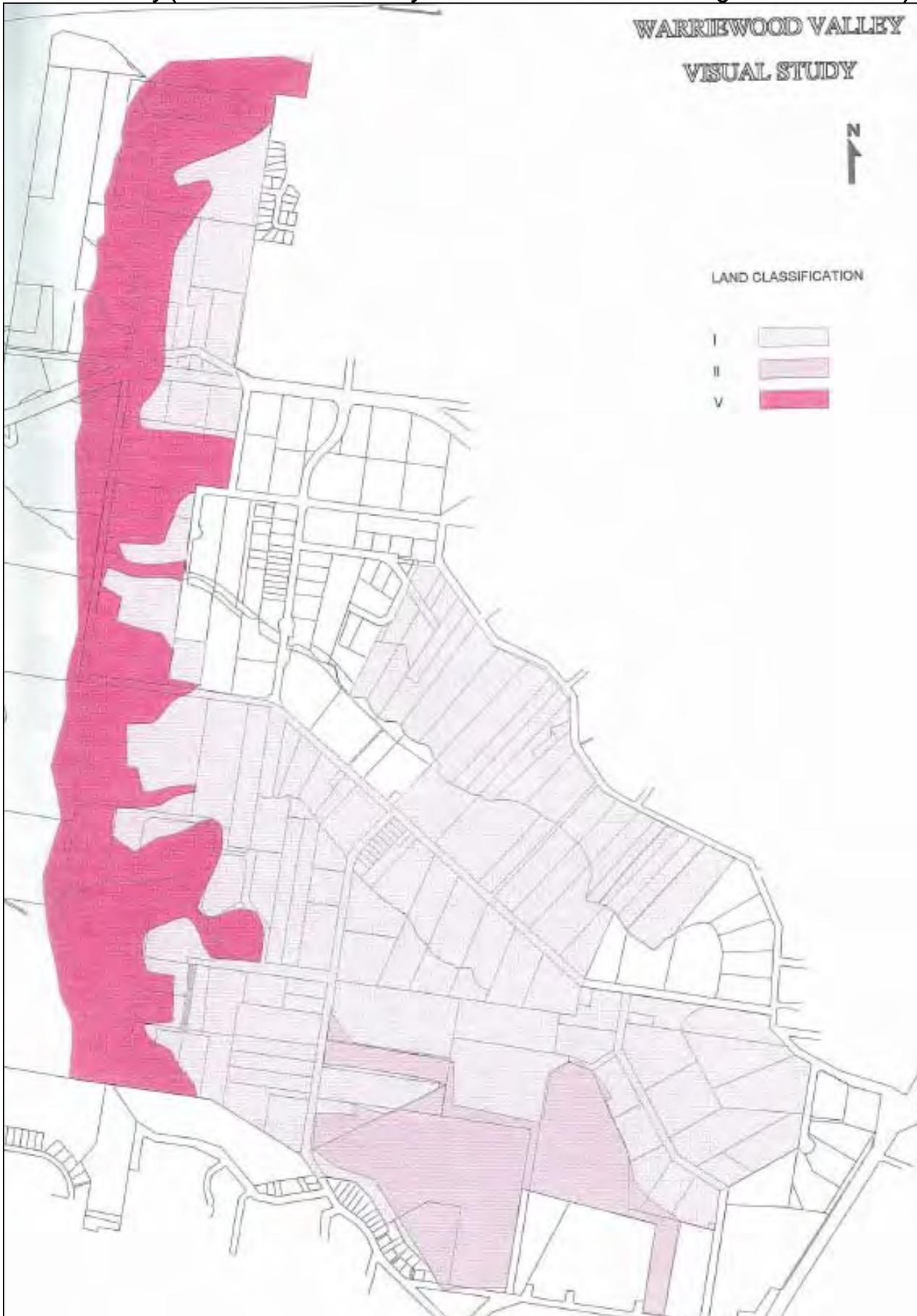
6. Vegetation conservation study (*Draft Warriewood Valley Urban Land Release Planning Framework 1997*)



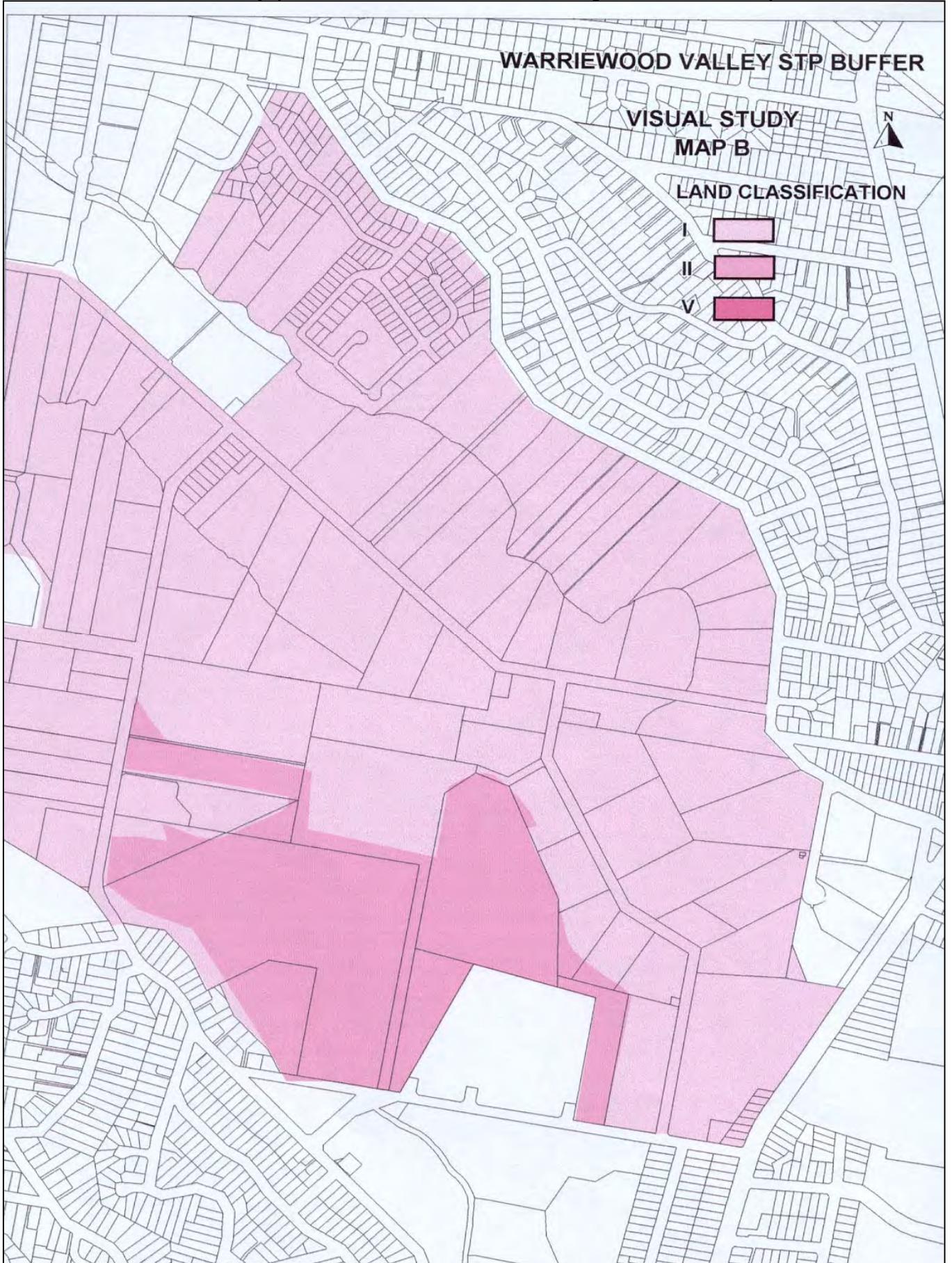
7. Vegetation conservation study (STP Buffer Sector Draft Planning Framework 2001)



8. Visual Study (Draft Warriewood Valley Urban Land Release Planning Framework 1997)



9. Visual study (STP Buffer Sector Draft Planning Framework 2001)



10. Development capability (Draft Warriewood Valley Urban Land Release Planning Framework 1997 and STP Buffer Sector Draft Planning Framework 2001)

