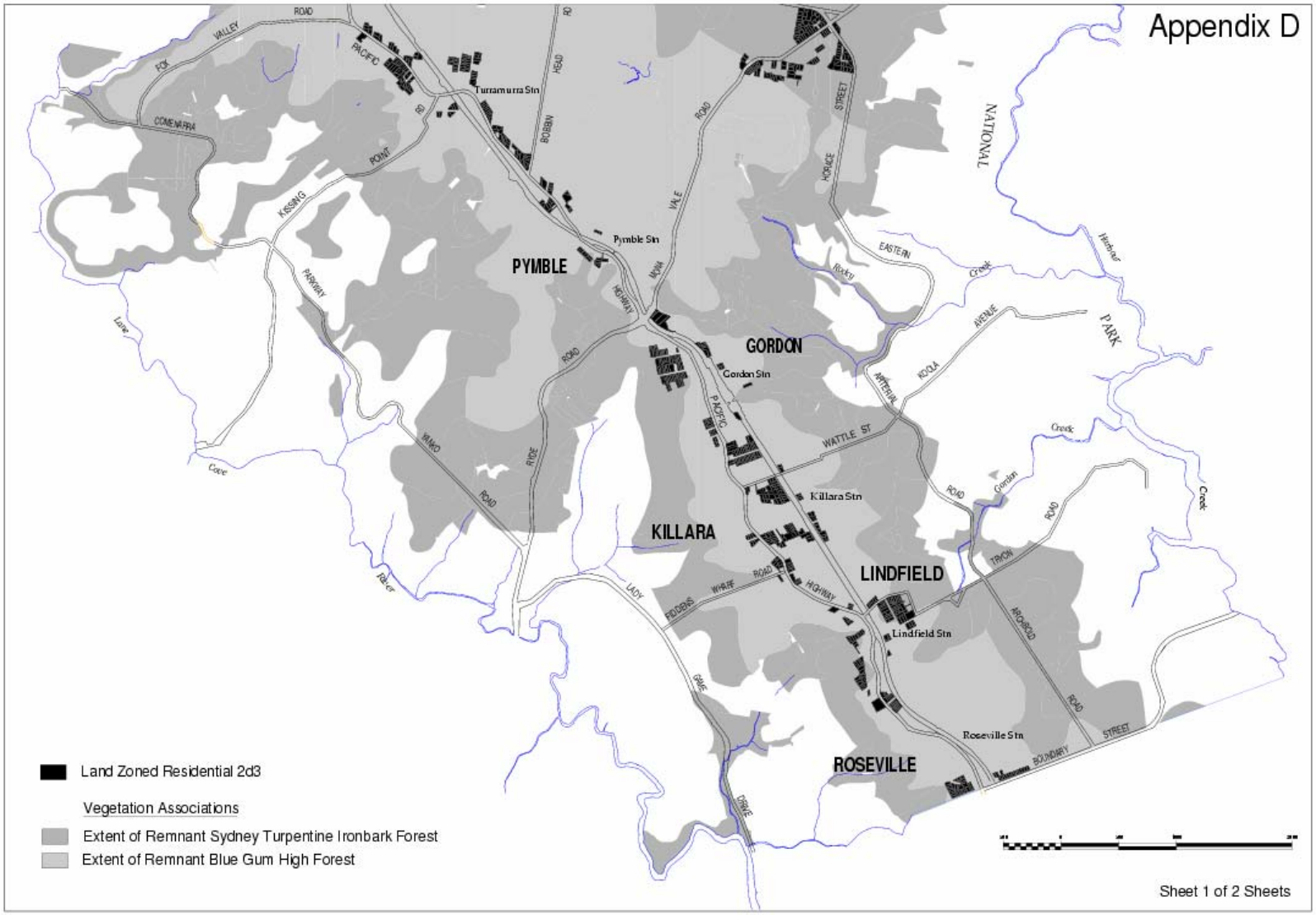
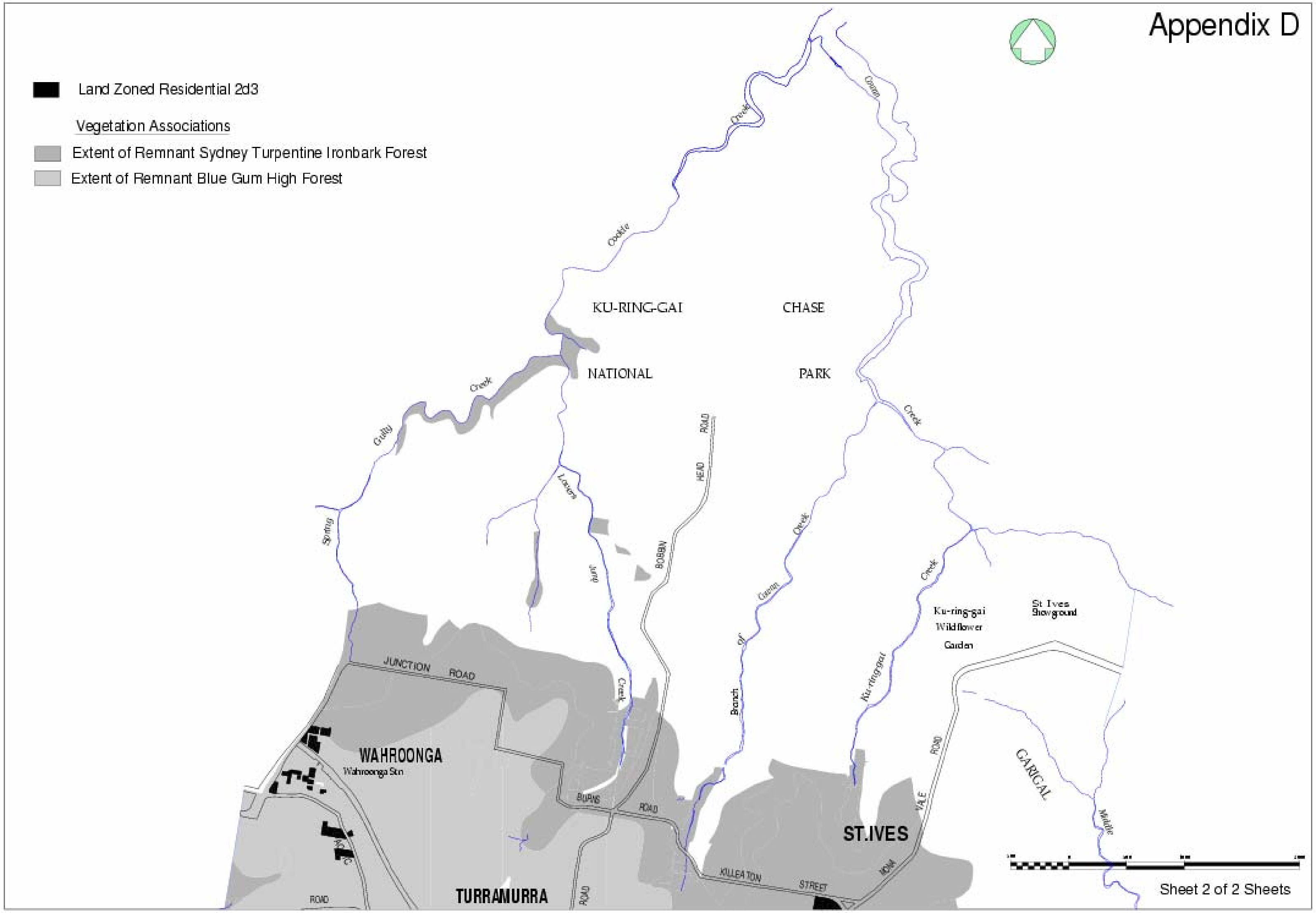
Appendix D

Extent of Blue Gum High Forest and Sydney Turpentine Ironbark Forest within the railway corridor and St Ives areas


Appendix D
PYMBLE
GORDON
KILLARA
LINDFIELD
ROSEVILLE
Turramurra Stn
Pymble Stn
Gordon Stn
Killara Stn
Lindfield Stn
Roseville Stn
PACIFIC HIGHWAY
WATTLE ST
ROSEVILLE ROAD
Land Zoned Residential 2d3
Vegetation Associations
Extent of Remnant Sydney Turpentine Ironbark Forest
Extent of Remnant Blue Gum High Forest
Sheet 1 of 2 Sheets


Appendix D
Land Zoned Residential 2d3
Vegetation Associations
Extent of Remnant Sydney Turpentine Ironbark Forest
Extent of Remnant Blue Gum High Forest
KU-RING-GAI
CHASE
NATIONAL
PARK
WAHROONGA
ST.IVES
TURRAMURRA
GARIGAL
JUNCTION ROAD
BURNS ROAD
KILLEATON STREET
Ku-ring-gai Wildflower Garden
St Ives Showground
Sheet 2 of 2 Sheets

Appendix E

Suitable Canopy Tree Species

	Soil type		Soil moisture			Origin		Leaf drop	
TREE SPECIES	**Shale**	**Sand stone**	**Moist**	**Dry**	**LOCAL**	**NATIVE**	**EXOTIC**	**EVER GREEN**	**Deciduous**
Blue Gum High Forest – Tall Canopy Species									
Eucalyptus saligna (Sydney Blue Gum)	●		●		●	●		●	
Eucalyptus paniculata (Grey Ironbark)	●		●		●	●		●	
Eucalyptus pilularis (Blackbutt)	●		●		●	●		●	
Angophora floribunda (Rough Barked Apple)	●		●		●	●		●	
Syncarpia glomulifera (Turpentine)	●	●	●		●	●		●	
Other Canopy Species									
Agathis robusta (Queensland Kauri Pine)	●		●			●		●	
Angophora costata (Sydney Red Gum)	●	●	●	●	●	●		●	
Araucaria cunninghamii (Hoop Pine)	●	●	●			●		●	
Araucaria heterophylla (Norfolk Island Pine)	●	●	●			●		●	
Carya illinoiensis (Pecan Nut)	●		●				●		●
Cedrus atlantica (Atlantic Cedar)	●		●				●	●	
Cedrus deodara (Himalayan Cedar)	●		●				●	●	
Ceratopetalum apetalum (Coachwood)	●	●	●		●	●		●	
Corymbia citriodora (Lemon Scented Gum)	●		●			●		●	
Corymbia gummifera (Red Bloodwood)	●	●	●	●	●	●		●	
Corymbia maculata (Spotted Gum)	●	●	●			●		●	
Cryptocarya glaucescens (Native Tammarind)	●	●	●			●		●	
Diploglottis cunninghamii (Native Tamarind)	●	●	●			●		●	
Doryphora sassafras (Sassafras)	●	●	●		●	●		●	
Elaeocarpus kirtonii (Pigeonberry Ash)	●	●	●			●		●	
Eucalyptus acmenioides (White Mahogany)	●		●		●			●	
Eucalyptus globoidea (White Stringybark)	●		●		●			●	
Eucalyptus micocorys (Tallowood)	●		●			●		●	

	Soil type		Soil moisture			Origin			Leaf drop
TREE SPECIES	**Shale**	**Sand stone**	**Moist**	**Dry**	**LOCAL**	**NATIVE**	**EXOTIC**	**EVER GREEN**	**Deciduous**
Eucalyptus piperita (Sydney peppermint gum)		●	●		●	●			
Eucalyptus punctata (Grey Gum)	●	●	●	●	●	●		●	
Eucalyptus racemosa (Scribbly Gum)	●	●	●	●	●	●		●	
Eucalyptus resinifera (Red Mahogany)	●		●		●	●		●	
Eucalyptus sieberi (Silvertop Ash)	●	●	●	●	●	●		●	
Flindersia australis (Crow's Ash)	●		●			●		●	
Liriodendron tulipfera (Tulip Tree)	●		●				●		●
Michelia champaca (Golden Champaca)	●		●				●	●	
Metasequoia glyptostroboides (Dawn Redwood)	●		●				●		●
Nageia falcata (Outeniqua yellow-wood) syn. Podocarpus falcatus	●		●			●	●	●	
Nyssa sylvatica (Tupelo)	●	●	●				●		●
Platanus x hybrida (Plane Tree)	●		●				●		●
Platanus orientalis (Oriental Plane Tree)	●		●				●		●
Podocarpus elatus (Brown Pine)	●		●			●		●	
Pyrus calleryana (Chinese Wild Pear)	●		●				●		●
Pyrus ussuriensis (Manchurian Pear)	●		●				●		●
Quercus coccinea (Scarlet Oak)	●		●				●		●
Quercus palustris (Pin Oak)	●		●				●		●
Quercus rubra (Red Oak)	●		●				●		●
Waterhousia floribunda (Weeping Lillypilly)	●		●			●		●	
Syzygium francisii (Francis Water Gum)	●		●			●		●	
Zelkova serrata (Zelkova)	●		●				●		●

Appendix F

Adaptable housing in Ku-ring-gai

Adaptable housing

Adaptable housing is housing that is designed with basic accessible features which can easily be complemented with further features to meet an individual's needs over time. The dwelling can be easily adapted, if required, to cater for the changing needs and capabilities of an older or persons of persons with a disability, and then be readapted to a conventional unit if that person moves out.

The Australian Bureau of Statistics 1993 Survey of Disability, Aging and Carers estimated than 18% of the Australian population had a disability. Around 60% of those persons with a disability have some difficulty with mobility. For people aged over 60 years, the percentage of persons with a disability increases to almost 50%. The need for adaptable housing is therefore substantial, and growing with the aging of the population. The provision of adaptable housing should not be limited to special purpose built housing for a sector of the community, but rather applied to all housing types (HillPDA).

Australian Standard AS4299 – Adaptable housing defines the essential and desirable features for adaptable housing. The cost of adapting most items in Australian Standard AS4299 is minimal provided they are designed in from the beginning. The HillPDA report found that the initial cost of adapting a unit in high-rise units (4 storeys or greater) with prior provision added 0.3%-0.7% to the cost of construction while modifying the same unit if there was no prior adaptive features added 9.2%-12.9% to the cost of construction. Similarly for low-mid rise housing units the initial cost of adapting a unit with prior provision added 0.3%-7.0% while modifying the same unit of there was no prior adaptive features added 10.3%-21.9% to the cost of construction (HillPDA, 1999).

Most of the adaptable items with the greatest cost savings have minimal or nil upfront costs but would be very difficult to retrofit at a latter stage. Some items of AS4299 increase costs and floor area particularly for small units. These include basement car parking, passenger lifts, accessible pathways, and wheelchair accessibility in bedrooms. The impact of these features is relative to the project circumstances. For example:

- The major cost impact of adaptable housing standards from the Hill PDA research is to low-rise residential development because of the need to incorporate a lift.
- Moderate to high quality dwellings often feature larger bedrooms with open plan accommodation that can easily adopt wheelchair manoeuvrability.

SEPP (Seniors Living) 2004 requires that all self care housing comply with a modified set of adaptability standards. Also between 50% to 100% of dwellings must be accessible by a continuous path of travel (within the meaning of AS 1428), depending on gradients.

Definitions

"*Manageable housing*" is housing in accordance with Class C – Adaptable Housing Features as set out in Australian Standard AS4299 and must contain a bedroom, kitchen, dining area and bathroom on the ground floor, or where not on the ground floor, lift access is provided.

"*Visitable housing unit*" is to be visitable by people who use wheelchairs, in that there must be at least one wheelchair accessible entry and path of travel to the living area and to a toilet that is either accessible (A toilet complying with the floor space requirements described in AS1428.1) or visitable (A toilet which has a space of minimum 1250mm in front of the toilet that is either accessible or visitable.

AS4299 contains the technical requirements to achieve a visitable dwelling.

"*Accessible housing*" is designed to allow a wheelchair user to enter, move about and use all rooms and facilities in a dwelling unaided.

Typical accessible features include wider doors, sufficient clear floor space for a wheelchair, entrance free of steps and stairs, audible and visual signals, lowered Kitchen counters, grab bars in the toilet and bathroom, knee spaces under sinks and counters and shower screens can be removed to allow hobless entry and appropriate waterproofing.

Features are provided up front, permanently fixed in place, and noticeable. As a result, many persons that do not require such features view them as clinical in appearance and not marketable to the wider population.

AS1428 Part 1 and Part 2 and AS4299 contain the technical requirements for accessible housing.

"*Adaptable housing*" is designed with the basic accessible features which can easily be complemented with further features to meet needs over time.

Adaptable house features can be invisibly incorporated into plans for all types of housing. The only difference is that the dwelling can be easily adapted, if required, to cater for the changing needs and capabilities of an older or "disabled" occupant, and then be readapted to a conventional configuration of the person moves out. Adaptable design means readily adjusted. Adaptable features are those than can be adjusted in a short time without involving structural or major material changes.

Typical adaptable features that are aimed at all users and available the moment the dwelling is built include level and wider doorways and corridors, slip resistant floor surfaces, reachable power points, lever door handles and lever taps. Features that may be utilised at a later stage include kitchen counters that may be adjusted in height or replaced, strengthened walls onto which grab rails may be fixed, and the provision of a hobless shower.

AS4299 contains the technical requirements for adaptable housing. Appendix A of AS4299: Adaptable housing provides a schedule of features for adaptable housing.

Section 4.7 of this DCP outlines the requirements and provisions for adaptability and accessibility.