

Proposed residential development of AGL 933057 19 MAY 1999

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# PROPOSED RESIDENTIAL DEVELOPMENT OF THE AGL OYSTER COVE SITE BY THE AGL PROPERTY GROUP

## STATEMENT OF ENVIRONMENTAL EFFECTS

June 1990



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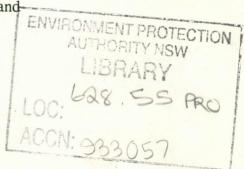
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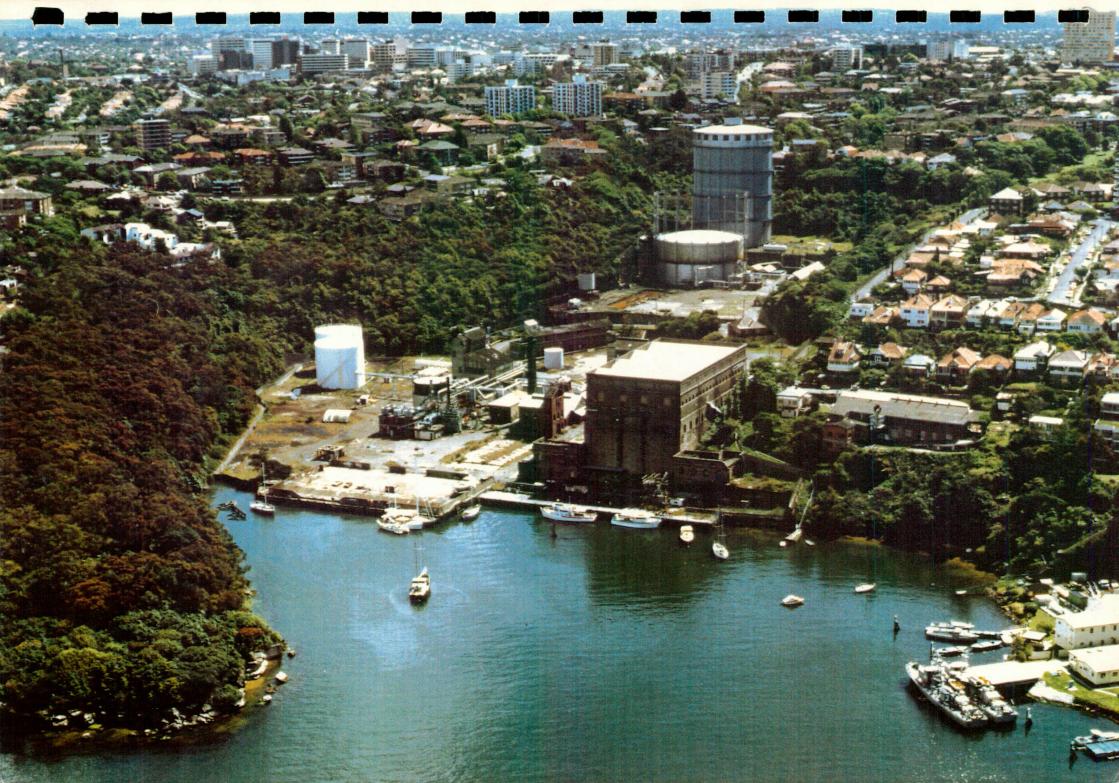
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## 1. INTRODUCTION

This report has been prepared to accompany a development application to North Sydney Council for residential development, including civil works and site rehabilitation, of the AGL Oyster Cove site. The property is located between the suburbs of Wollstonecraft and Waverton, at the head of the Wollstonecraft Bay, extending from the harbour foreshore back to the North Shore railway line (Figures 1 and 2).

The proposed development site is zoned part Residential 2(e) and part Open Space 6(e) under North Sydney Local Environmental Plan 1989 gazetted on 3 November 1989 (as amended). The proposed development is a permitted use under that Plan.

The proposed development involves a total of 305 residential units comprising townhouses, garden units and residential apartments. Aged persons accommodation in the form of 40 x one-bedroom units is also to be developed on the site. The proposal incorporates a minor non-residential component generally located within existing buildings of heritage value which are proposed to be retained. Those non-residential uses include some 375m2 GFA of commercial floorspace, squash courts, a small corner store and a kindergarten.

An earlier development application for residential development of the Oyster Cove site (DA1014/89) was lodged with North Sydney Council in January 1989. That development application was for slightly more residential units (345 units) than the current (June 1990) application.

Both applications involve a site rehabilitation strategy based on dividing the site into a "Capped Sector" and an "Unrestricted Sector", with gasmaking byproduct affected soils contained in the Capped Sector by a double barrier "cap" comprising an impermeable HDPE membrane and low permeability cover of clay. However, while the January 1989 development application located some of the residential development in the Capped Sector, the current (June 1990) development application proposes to locate all of the residential development in the Unrestricted Sector.

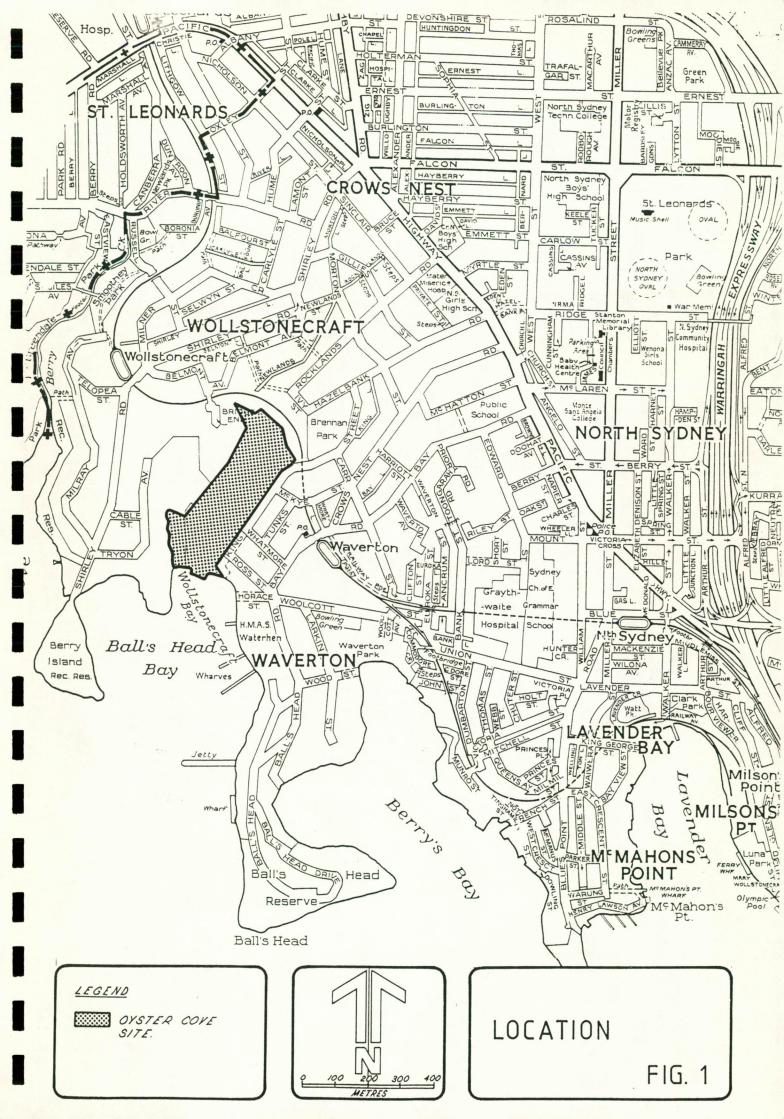
The purpose of this report is to present a Statement of Environmental Effects for the proposed development in satisfaction of the requirements of s77(3)(c) of the Environmental Planning and Assessment Act, 1979 (as amended). To that end, the report:

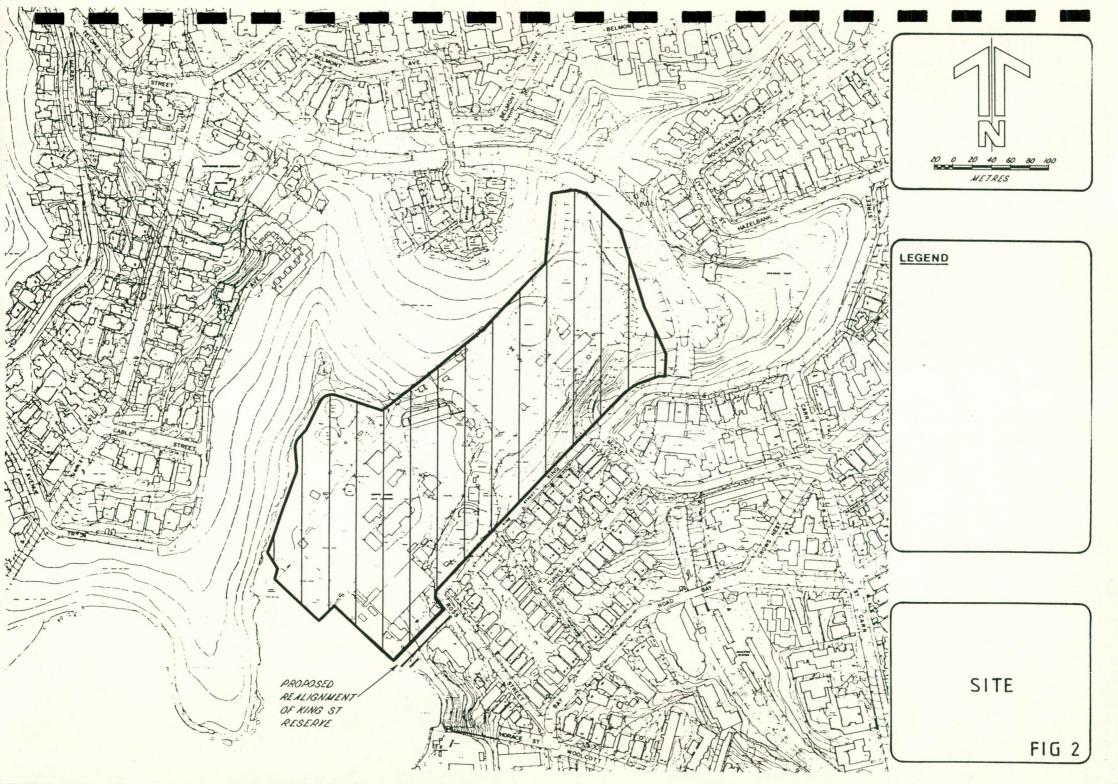
- \* describes the site, its present and past use and former and existing structures on the site
- \* reviews the statutory provisions which apply to the site
- \* describes the development proposal
- \* reviews the main environmental issues associated with the development
- \* sets out a summary Statement of Environmental Effects.

This Statement of Environmental Effects is one of a series of technical reports addressing specific environmental issues associated with the proposed development. Other reports include:

- \* Project Planning Associates Pty Ltd "Proposed Residential Development of the AGL Oyster Cove Site by the AGL Property Group Site Rehabilitation and Major Civil Works: Statement of Environmental Effects" June 1990
- \* Johnstone Environmental Technology Pty Limited and Gibb Environmental Sciences.

  "Rehabilitation Strategy and Remedial Works for Redevelopment of the Oyster Cove
  Disused Gas Works Site for Residential Use. Proposed Redevelopment with all
  Housing outside Capped Sector" June 1990
- \* Project Planning Associates Pty Limited "Proposed Residential Development of the AGL Oyster Cove site by the AGL Property Group - Traffic and Parking Assessment" June 1990





## 2. SITE IDENTIFICATION AND DESCRIPTION

#### 2.1 Location

The proposed development site is located at the head of Wollstonecraft Bay, between the Ball's Head and Berry Island points, extending northwards from the harbour foreshore to the North Shore railway line. It is bounded by King Street to the east and by the regional open space reservation adjacent to Tryon Avenue in the west.

## 2.2 Description

The proposed development site has an area of 8.41ha and a waterfrontage of approximately 189m. It comprises the site of the former North Shore Gas Company at Oyster Cove, Waverton which incorporates a landfill area at the western end of the waterfrontage; this area was the small inlet known as Oyster Cove prior to the landfill operation. It also includes the lower part of King Street leading down to the waterfront on the south-eastern side of the site and an adjacent residential property owned by AGL. It is proposed to realign the lower end of King Street further to the south-east as shown on the accompanying plan prepared by Denny Linker and Co, Consulting Surveyors.

The site is described as:

- i) C.T.Vol.905,Fol.41 Lot 11,Sec 4, DP1098
- ii) C.T.Vol.2733,Fol.179 Lot 10, Sec 4, DP1098
- iii) C.T.Vol.4159,Fol.239Lot 1 in DP932748Lot 1 in DP180599 and land in DP52227 and DP448539

- iv) C.T.Vol.5135,Fol.29 DP189100, and
- v) C.T.Vol.10740,Fol.120

  Being Lot 1 in DP232859

  Municipality North Sydney

  Locality Wollstonecraft and Waverton

  Parish Willoughby

  County Cumberland

The landform of the site is man-made and is in the form of three, large, level terraces, the lowest being a few metres above water level and the highest being at RL = 27 metres. The site is sparsely vegetated.

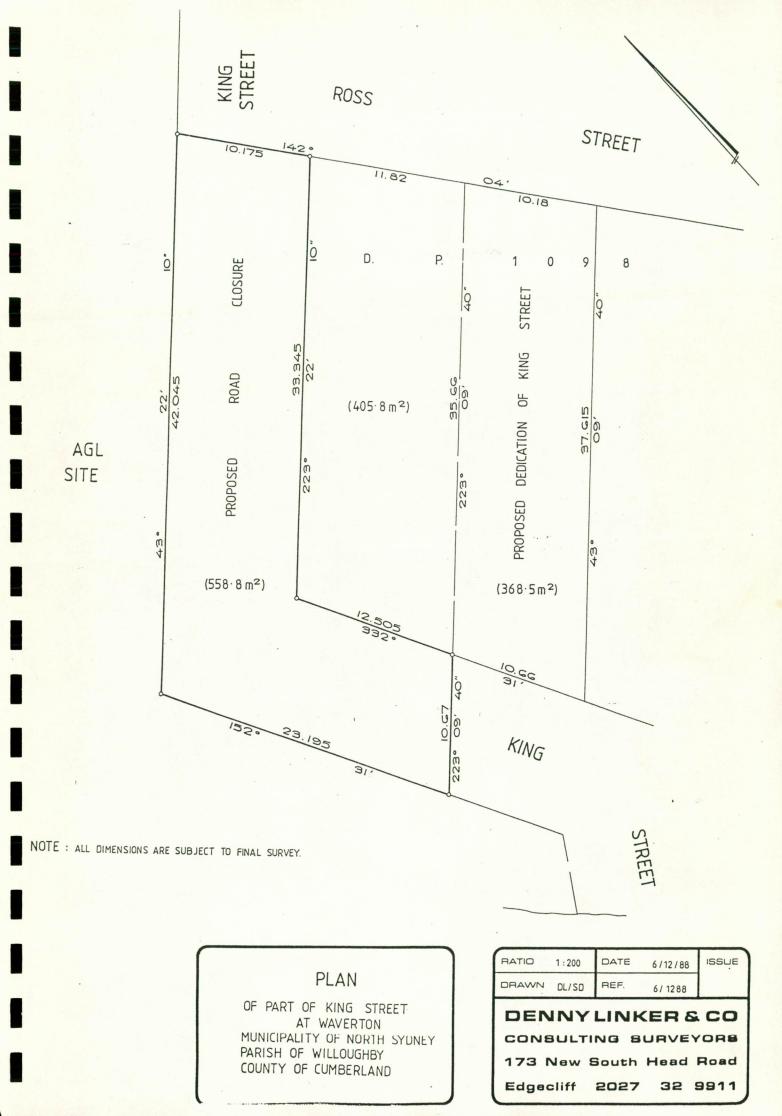
The main existing vehicular access for the site in current use is from Ross Street. A steep, service road, partly sealed, runs from the upper terrace level of the site to King Street opposite the intersection of McKye Street.

## 2.3 Existing and Past Landuse

The site has been used for the last 70 years for the purposes of gas production, storage, distribution and associated service facilities by the North Shore Gas Company Limited. Wharves were constructed along the waterfront of Wollstonecraft Bay to enable ships to discharge coal to a large bunkering building in the southwest corner of the site. Stockpiled coal was then used for the production of gas which was stored in large gas holders located at the higher levels of the site. A by-product of the gas production, coke, was bagged and distributed from the site for heating fuel and at some stage ammonia was also produced.

Initially gas was made at Oyster Cove by retorting coal to produce coal gas. This continued until 1969 when it was superseded by the reforming of oil. Gas making by this process continued on the site until 1983, after which the site and facilities have been used only for the pumping and reconstituting of natural gas.

Other Gas Company functions carried out on the site in recent times include:



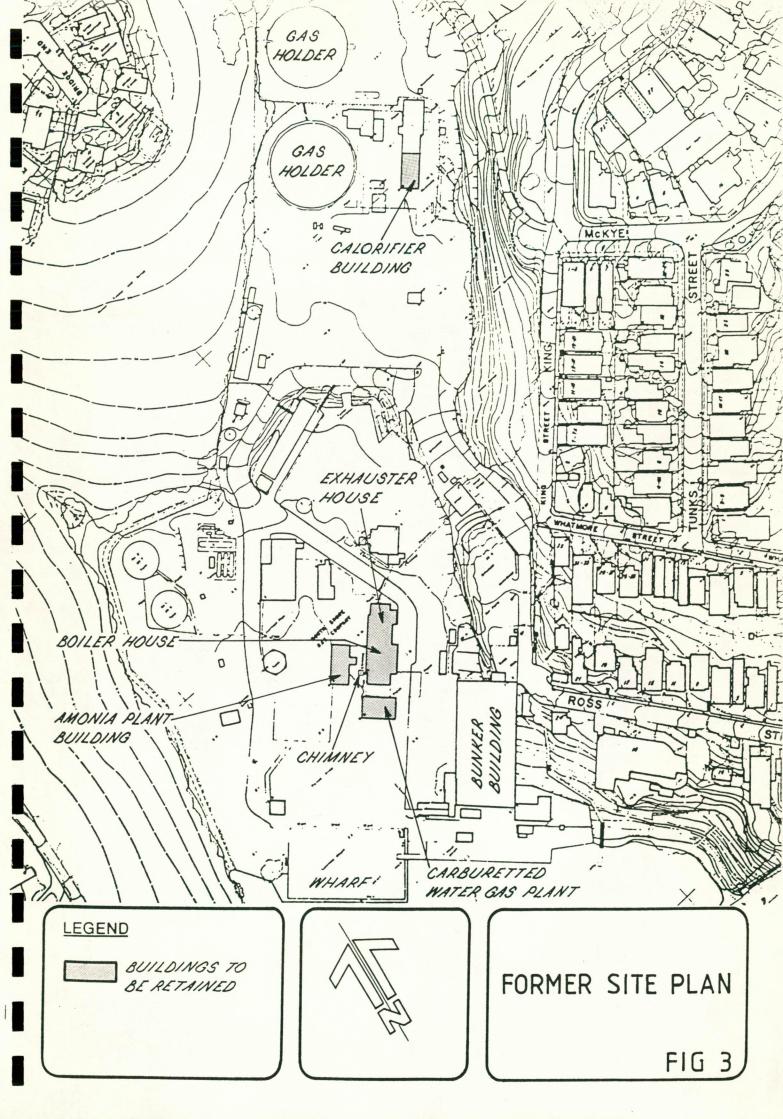
- \* natural gas conversion centre
- \* LP gas storage and filling facilities
- \* booster station for North Shore gas reticulation
- \* Naptha storage facilities
- \* stores function
- \* servicing of gas meter equipment. Part of the old bunkering building has been used for this purpose
- \* servicing of gas company vehicles. This is also being carried out in part of the old bunkering building.

In addition, the site has been used for amateur boat building in the past with some mooring at the wharf.

## 2.4 Existing Structures

The former site plan for the Oyster Cove site is shown as Figure 3. The following buildings, which are shown on Figure 3, have been retained and will be given an adapted reuse in the proposed development:

- \* Carburetted Water Gas Plant Building which will be reused for commercial purposes
- \* Ammonia Plant Building which will also be reused for commercial purposes
- \* Boiler House Building which will be reused as a corner store and squash courts
- \* Chimney which will be retained as a visual feature in the proposed development scheme and will also be reused as the sewerage pump station vent
- \* Exhauster Building which will be reused as a community centre/kindergarten
- \* Calorifier Building on the upper level of the site to be reused as a games/change room for a swimming pool to be located there.



## 3. STATUTORY PROVISIONS

The site is governed by the provisions of North Sydney Local Environmental Plan 1989 (relevant extracts reproduced in Appendix A), and is zoned part Residential 2(e) and part Open Space 6(e) by that Plan. The proposed development is permitted by the Plan.

DRAFT Development Control Plan No 6 <sup>1</sup> (Appendix A) was prepared specifically to control development of the Oyster Cove site and although never adopted by Council, it has served as the basis for identifying broad development guidelines for the site. DRAFT DCP No 6 specifies a number of provisions concerning landscaped area, average dwelling size, maximum number of bedrooms, carparking provisions, building control planes, conservation, roadways and contributions for roads, landscaping etc, rehabilitation and on-site treatment, and marina and boating facilities. The proposed development generally conforms with those standards except for:

- \* minor non-compliance with the height control planes as discussed in Chapter 5.2 of this report
- \* amendments to the buildings required to be conserved under the Plan. A full discussion of those issues is included as Chapter 5.4 of this report.

Since the preparation of DRAFT DCP No 6 (The Oyster Cove Gas Works Plan), North Sydney Council has prepared DRAFT DCP No 1 which covers the whole of the Municipal area. Although DRAFT DCP No 1 repeals DRAFT DCP No 6, the Residential 2(e) zone, which applies to the Oyster Cove site, is excluded from the Residential part of DRAFT DCP No 1 (PART 2). In these circumstances, it can be concluded that the Oyster Cove site is not subject to the provisions of any Council development control plan.

North Sydney Draft Development Control Plan No 6 for the Regulation of the Rehabilitation of the Redevelopment of the AGL Gas Works Site, Waverton - the Oyster Cove Gasworks Plan'

## 4. DEVELOPMENT PROPOSAL

## 4.1 Development Concept

As discussed in the Introduction to this report, the current residential proposal for the Oyster Cove site evolved from an initial development concept submitted to North Sydney Council in 1984. A recent development application for redevelopment of the site was lodged with Council in January, 1989 (DA 1014/89). The scale of the current (June 1990) Development Application is slightly reduced and conflicts of interests and ownership between rehabilitation land and residential development have been avoided.

The location of the capped sector containing gas-making by-product affected soils is approximately the same in both schemes. However, in DA 1014/89 this was to be land in private ownership with residential flat buildings above, while in the current (June 1990) DA it is proposed to be public recreation space. Although the approach embodied in DA 1014/89 was at no time considered dangerous or unhealthy, the modifications adopted by the current (June 1990) DA simplifies the long term management of the capped sector and removes the need for any State Pollution Control Commission notices to be attached to the titles for sale. All residential development will now be on clean ground.

Under the current (June 1990) DA, all residential buildings have been eliminated from the north-west sector of the site, and most of the buildings in the north-east sector have been redesigned to accommodate some of the lost residential units. As a consequence, the total number of bedrooms in the current (June 1990) DA is 70 less than the 900 bedrooms permitted on the site by North Sydney LEP, 1989. That reduction was made to preserve external views over the site and achieve a high urban design standard. The only additional building (Marked "E") dresses the face of the previously exposed cliff below King Street.

The current (June 1990) DA therefore has a lower development density and greater open space provision than previous schemes providing far in excess of the required 30% open space and incorporating a creative landscape design where the approach to the buildings is across an almost continuous water feature.

The development proposal has also been designed to take advantage of the two main environmental characteristics of the site:

- \* the Harbour Foreshore and its extensive water views over Wollstonecraft Bay, and
- \* the natural valley form of the site.

The development concept is for a "maritime garden neighbourhood" with water and landscape as the unifying elements which provide the necessary cohesion for the residential accommodation. It locates the residential structures against the valley walls concentrating the public spaces in the centre of the valley to create an open style development and maximise views for both the proposed development and surrounding properties. Public access to the waterfront is highlighted by the inclusion of a foreshore promenade and major open space feature in the form of "The Green" in the centre of the waterfrontage. The community/recreational/commercial precinct formed by the adaptive reuse buildings is located adjacent to those public foreshore areas to reinforce the effect. The open space system incorporating a major water feature extends through the central valley floor of the site emphasising the maritime flavour of the development and providing convenient pedestrian access to all residential areas.

Specific objectives of the development concept are:

- \* to provide the development with its own identity
- \* to enable the maximum number of residents to enjoy waterfrontage, views and aspects
- \* to minimise impact and building bulk
- \* to maximise open space and maintain view/outlook and access to the waterfront and reserve
- \* to locate the aged persons units in a most convenient position in terms of access to shops, railway, bus stops etc

- \* to vary building scale, height and architectural styles
- \* to maximise aspect, prospect, cool breezes
- \* to provide maximum flexibility to accommodate development staging requirements.

## 4.2 Details of Proposed Development

The current development proposal for the Oyster Cove site evolved from the initial development concept submitted to North Sydney Council in mid-1984. That initial concept was the subject of extensive public scrutiny and comment, particularly concerning potential traffic effects, which lead to the progressive elimination of most of its non-residential features. A development application for a predominantly residential development at a reduced scale than the original concept was lodged with North Sydney Council in January 1989 (DA 1014/89). This current (June 1990) application further reduces the residential component of the development proposal. A comparison of the three development schemes (initial 1984 concept, January 1989 DA 1014/89, and June 1990 DA) is presented in Table 4.1.

A plan of the development proposed by the June 1990 DA prepared by Henry Pollack and Associates, Architects Pty Limited is reproduced in the following pages. It incorporates a total of 305 residential units yielding 830 bedrooms with 220 x three bedroom units and 85 x two bedroom units. The residential units are in the form of townhouses, garden units and two-storey walk-up flats, and residential apartments in buildings served by lifts. They are distributed around the perimeter of the site in nine blocks marked C - K of varying composition and size. Provision has been made for two off-street resident parking spaces for each unit with a separate allocation for visitor parking. Those parking spaces are generally located within the structure of each of the residential blocks.

TABLE 4.1 COMPARISON OF DEVELOPMENT SCHEMES

Development Component	June 1990 Current DA	January 1989 DA 1014/89	1984 Concept	
Residential	305 units/830 beds 220 x three-bed 85 x two-bed	345 units/899 beds . 209 x three-bed . 136 x two-bed	500 units/1100 beds . 133 x three-bed . 334 x two-bed	
Aged Persons	40 units	40 units	-	
Shops/Professional Suites	425m2	485m2	1000m2	
Cafe/Restaurant	-	-	500m2	
Community Hall/ Pre School	260m2	260m2	300m2	
Health Care			200m2	
Estate Office	-	-	200m2	
AGL Service Facility	-	-	2500m2	
Sports/Fitness Centre	260m2	260m2	260m2	
Tennis Courts	four courts	two courts	four courts	
Ferry Wharf	No	No	Yes	

The proposed development also incorporates aged persons accommodation with 40 x one-bedroom units on the King Street frontage in the eastern corner of the site. That location was chosen because it provides convenient and easy access to nearby shops and public transport services. The aged persons hostel has been allocated 8 parking spaces.

The non-residential component of the existing development proposal is minor and is generally confined to adaptive reuse of existing buildings. It comprises:

- \* 200m2 GFA of commercial floorspace in the carburetted water gas plant building
- \* 175m2 GFA of commercial floorspace in the ammonia plant building
- \* a corner store (50m2 GFA) and squash courts (260m2 GFA) in the boiler house building
- \* a community centre/kindergarten of 260m2 GFA in the exhauster house

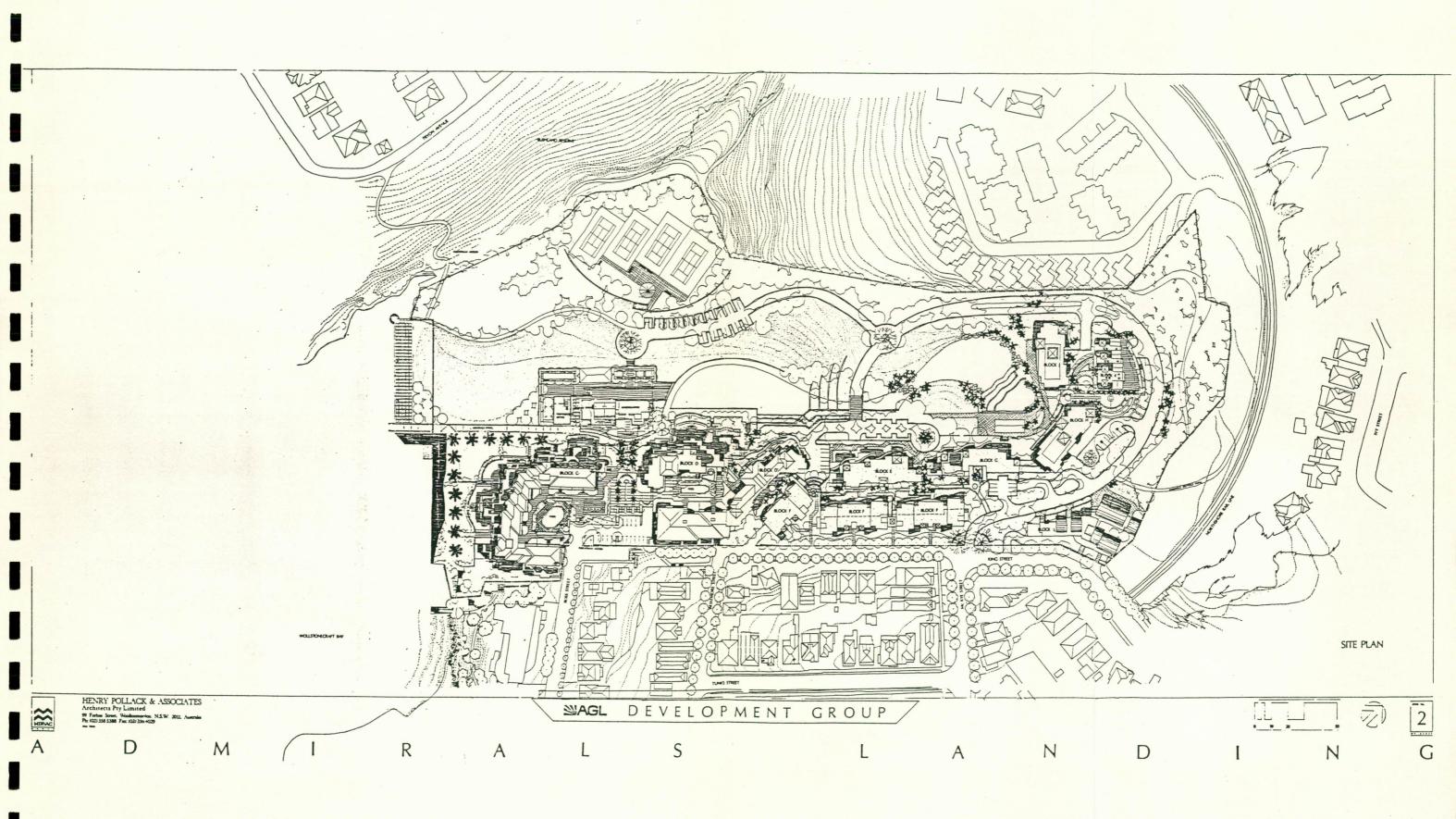
The proposed non-residential uses are therefore of a minor scale and are not expected to have any significant, external traffic generation potential. A total of 30 parking spaces are allocated for the non-residential component of the proposed development.

The composition of each of the buildings incorporated in the development proposal and the parking allocated to each is summarised in Table 2.2.

Unobstructed public access to the Harbour Foreshore is a feature of the current proposal and provision has been made for cross-site pedestrian links to provide better integration between the suburbs of Wollstonecraft and Waverton. The most important of these links connects Ross Street, Waverton with Tryon Avenue, Wollstonecraft via the foreshore. Secondary links are provided by the public road system.

TABLE 4.2 COMPOSITION AND PARKING ALLOCATION OF BUILDINGS IN THE PROPOSED DEVELOPMENT

Use/ Building	No of Dwellings			Floorarea	No of Parking Spaces			
	1 Bed	2 Bed	3 Bed	Total		Resident	Visitor	Total
		turn by						
Residential								
C	_	2	69	71	_	142	14	156
D	_	8	21	29		58	6	64
D'	-	2	36	38	_	76	8	84
E	-	15	19	34	-	68	8	76
F	-	- 1-	22	22	-	44	9	53
G	- /	19	25	44		88	11	99
H	-	20	11	31	_	62	7	69
J	-	20	12	32	-	64	8	72
K	-		4	4	-	8	2	10
Total		85	220	305	-	610	73	683
Aged Persons Hostel	40	-		40	-	4	4	8
Non-Residenti	al							
Commercial					375m2			8
Corner Store						-	_	
					50m2	-	-	1
Squash Courts					260m2	-	-	2 3
Kindergarten Public					260m2	-	-	
		-			-			16
Total (Non-Resident	ial)					_	<u>.</u>	30
TOTAL		-,				614	77	721



## 4.3 Access and Internal Circulation

The proposed development scheme has been arranged with three access points:

- \* via Ross Street, the existing and historical access used by the Gas Company
- via a new access road to be constructed off King Street opposite McKye Street (King Street Access Road)
- \* direct driveway access off King Street for some of the residential units (six units in Block F) fronting King Street between Whatmore and McKye Street (King Street Driveway).

A fourth access road providing the site with direct access to and from Wollstonecraft (via Bridge End) which was included in the January 1990 DA 1014/89 is excluded from the current proposal (June 1989 DA) because:

- \* it is unnecessary to accommodate the traffic generated by the development
- \* it would encourage additional through traffic flows through Wollstonecraft and Waverton
- \* it would have an undesirable impact on the bushland bounding the western side of the site

Careful attention was paid in the design of the access arrangements to ensure that the traffic generated by the proposed development is equitably distributed between the Ross Street and King Street access points. By restricting access to the south-eastern side of the site, the potential for introducing new through traffic diversions into the suburb of Wollstonecraft and Waverton is avoided. Also, there is no provision for vehicles to move through the site between the Ross Street and King Street access points.

The internal road system serving the proposed development has a road reserve 15 metres wide accommodating an eight metre wide road carriageway and 3.5 metre wide reserves on either side.

## 4.4 Landscape Design Concept

The landscape design concept aims to integrate open space throughout the site and respond sympathetically to all existing site edges. The bay, with its associated deep gully and prominent ridges, encloses the site affording considerable potential to develop an interesting and luxuriant landscape theme. An extensive "green corridor" has been planned to maximise views of the harbour and town centre.

The central axis of the site runs generally northeast to southwest with the northwest ridgeline carrying a substantial area of natural bushland, dominated by Angophora costata and Eucalyptus sp. It is envisaged that proposed landscaping on the site will capitalise on this natural asset and continue the theme through much of the canopy, particularly along the site edges. Proposed landscaping in the central portion of the site will gradually change to a mixture of native and exotic/ornamental trees. Native Livistona australis, Cabbage Palm, will be utilised as the major accent planting on the site, emphasising landscape features and denoting building entry points. Together, the massed planting and avenues of trees will reduce the overall scale of the site, create shade, colour and interest. The proposed landscaping will offer a series of open and closed spaces throughout the site providing the user with a variety of opportunities and enhanced spatial quality.

The entry is visually emphasised by the siting of specimen size Moreton Bay Figs. Entering under this canopy the carriageway winds through a mixture of native vegetation and exotic avenue plantings of Jacaranda mimosifolia terminating at the Town Centre. On approach to the Town Centre, the planting scheme changes to a mixture of native and ornamental species indicating and reinforcing the "sense of arrival". The carriageway terminates with a large relocated Moreton Bay Fig as a focal point in a turnaround.

Three existing buildings form the architectural base for the Town Centre. The planting scheme within the Town Centre would be developed to reflect a more urban and architectural design layout. Avenue plantings of ornamentals are pulled back from the

central axis to reinforce a central hardsurface open space or street. The existing chimney located in this street is the lower termination point of the internal site axis. The upper termination point of this axis and origin of the connecting link is an architectural water feature in the main entrance court.

Water is being proposed as the design element connecting the upper regions of the site to the Town Centre. The 30 metre change in elevation provides excellent opportunities for interesting grade changes and focal elements changing in size and character. The conceptual progression begins with a strong architectural form in response to the proximity of residential units culminating in a large mid-level pool area. As the water feature continues, winding throughout the site, its character changes in response to increased areas of open space and landform manipulation. Travelling down a series of natural rapids, the water feature narrows, flows under a sandstone bridge and cascades down a series of weirs to a large shallow pool adjacent to the Town Centre. A series of pedestrian spaces and walkways are integrated with the water feature enabling free pedestrian movement throughout the site. Large expanses of open lawn would provide a secondary linkage system from mid-levels of the site to the foreshore promenade.

The Town Centre and the foreshore promenade are linked by an arbour of pergola feature covered by vibrant massed colours of Bougainvillea together with an avenue of Date Palms. The linkage is further reinforced with a large open lawn area or village green surrounded by a walkway and informal seating area of decomposed granite. This area serves as a large open space for the project as well as maintaining open uninterrupted views to the harbour and conversely framing the project from the harbour. The promenade area serves as a further point for seating and viewing the harbour area.

North of the "village green" the landform rises providing an excellent natural vantage point from where the harbour and site may be viewed. Informal seating and pathways would be developed to provide opportunities for passive recreation. Although a large portion of this area would be covered by native canopy species similar to the adjacent bushland reserve, provisions have been made for tennis courts. Perimeter planting around the courts would be dense to screen their location, although selective view corridors would be left open to the harbour.

The residential sites are integrated in the project through the thematic mixture of native and exotic planting, with the emphasis on colourful, fragrant plants in these areas. Individual courtyards will be landscaped to soften adjacent buildings. The design intends utilising a large amount of the existing site sandstone blocks for landscape walling and special features. It is also intended that sandstone would become a primary material in many of the paved pedestrian areas.

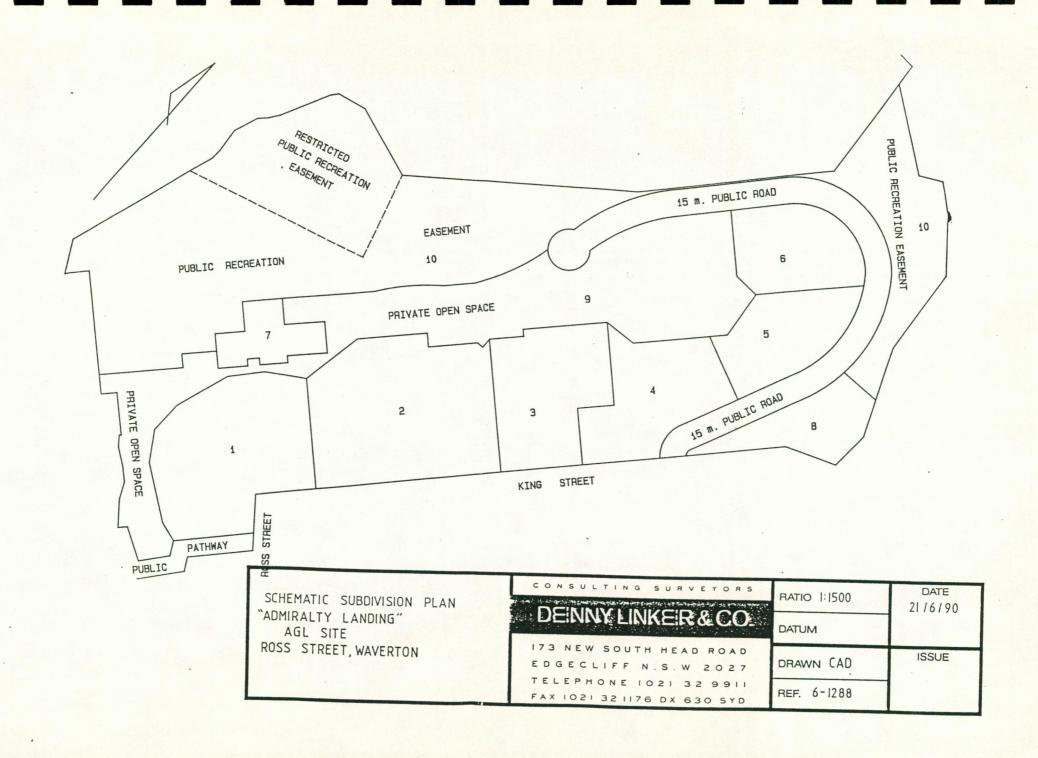
## 4.5 Subdivision Proposal

The subdivision proposal for the Oyster Cover Site prepared by Denny Linker & Company Consulting Surveyors, comprises:

- (1) Public housing lot: a portion of the site fronting King Street which is to be used for aged persons accommodation
- (2) Public road: the part of the site needed to accommodate a new public road to be constructed from King Street (near the intersection with McKye Street), sweeping towards the northern boundary of the site, across to the western boundary, and terminating in a cul-de-sac approximately midway along the north-western boundary of the site at about RL16m
- (3) Restricted public recreation space: the capped sector constructed during the site rehabilitation process will be subject to an easement for recreation in favour of North Sydney Council to provide public access under agreed conditions
- (4) **Private open space:** the land generally in the centre of the site and along part of the water frontage which will contain recreational and landscape facilities serving residents of the proposed development.
- (5) Development lots: approximately 7 or 8 development lots will be created to accommodate the proposed development and allow for the staged construction of buildings. Each lot is to be further subdivided under the Strata Titles Act to give separate title to the individual units and carspaces. Reciprocal rights of foot and carriageway will be required in order to allow for easy pedestrian and vehicular movement.

Prior to this subdivision proposal taking place it will be necessary to close the extension of King Street (from Ross Street to the Harbour foreshore), dedicate a new public pathway (from Ross Street to the Harbour foreshore), and consolidate the AGL titles into one allotment and Certificate of Title.

A schematic subdivision plan for the site prepared by Denny Linker & Company, Consulting Surveyors, is reproduced in the following pages.



## 5. MAIN ENVIRONMENTAL ISSUES

#### 5.1 Site Rehabilitation

The issue of site rehabilitation at the AGL Oyster Cove site has been the subject of intensive research and investigation over the past five years involving AGL staff and consultants, State Government Authorities (principally the State Pollution Control Commission and Department of Health), and overseas experts. The importance of the issue is recognised by North Sydney Council which included in the planning instrument controlling use and development of the site (LEP 1989) a clause that:

"16(3) The Council shall not consent to the carrying out of development on land to which this plan applies unless it is satisfied that the land has been made safe for the purpose for which it is to be used."

A rehabilitation strategy plan to satisfy the planning requirements for the safe and satisfactory redevelopment of the Oyster Cove Gas Works site for residential reuse has been prepared and is documented in a detailed study report<sup>2</sup>. That report details the investigation work undertaken by the consultants, describes the rehabilitation strategy proposed for the site, and presents the proposed rehabilitation plan in satisfaction of the requirements of LEP 1989.

A supplementary Statement of Environmental Effects has been prepared for site rehabilitation and major civil works<sup>3</sup>. Details of that work are set out in that Statement of Environmental Effects and in the JET Report.

Johnstone Environmental Technology Pty Ltd and Gibb Environmental Sciences "Rehabilitation Strategy and Remedial Works for Redevelopment of the Oyster Cove Disused Gas Works site for Residential Use. Proposed Redevelopment with all Housing Outside Capped Sector" May 1990 (Amendment A)

Project Planning Associates Pty Limited "Proposed Residential Development of the AGL Oyster Cove Site by the AGL Property Group - Site Rehabilitation and Major Civil Works. Statement of Environmental Effects" June 1990



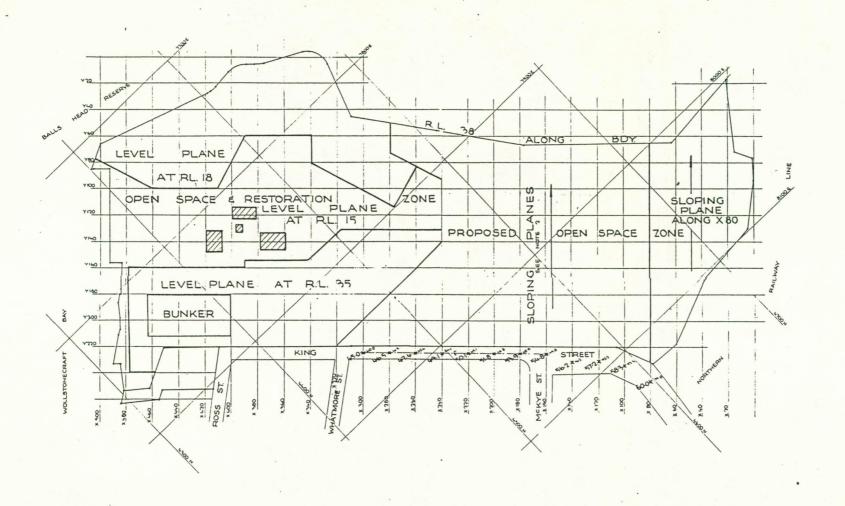
## 5.2 Building Height and Views

The potential for the proposed development to disrupt views from adjoining residential properties was another major issue canvassed during the extensive consultation process which preceded preparation of the current development proposal. Properties potentially affected include those along the south-eastern frontage of King Street and on the south-western side of Ivy Street, and the new residential development off Bridge End adjacent to the north-western part of the site.

The predominant views from residences on the south-eastern side of King Street are across the Oyster Cove site as any views of the harbour are restricted by the Bunker Building and the headland protrusion on the western side of Wollstonecraft Bay which blocks direct harbour views by its orientation. Those views across the Oyster Cove site have been dominated by industrial buildings and structures associated with the former gasworks, particularly the gasholders. The proposed development respects the views of King Street residences by restricting the height of the new buildings which front the north-western side of King Street (between Whatmore and McKye Streets) to 5 metres above the level of the centre line of King Street. That building height complies with the building height control planes prepared by Denny Linker & Co., Consulting Surveyors, to guide development of the site (see plan reproduced in following pages). Although Building F is a two-storey building with a flat roof, the scale of new development fronting King Street is generally representative of single storey residential development with a pitched roof structure which is typical of low scale residential dwellings throughout the Municipality.

Views from Ivy Street residences across the Oyster Cove site were similarly dominated by industrial buildings and structures associated with the former gasworks. The Bunker Building and headland protrusion on the western side of Wollstonecraft Bay once again restrict direct, foreground harbour views from the Ivy Street residences. The buildings in the proposed development have been arranged to retain "corridor" harbour views through the Oyster Cove site while the elevated position of the Ivy Street residences enables retention of background harbour views over the new buildings in the proposed development.

The current (June 1990) development application eliminates the residential buildings which were situated in the south-west part of the Oyster Cove site in earlier development proposals.



NOTE : PLEVELS ARE TO AUSTRALIAN HEIGHT DATUM

?) THE SLOPING PLANES ALONG THE 'X' GRIDS
ARE DEFINED BY THE LEVELS ABOVE THE
CENTRELINE OF KING ST TO RL "36 ALONG
THE NORTH WEST BOUNDARY AS SHOWN.

DEVELOPMENT CONTROL
PLAN
SHOWING HEIGHT CONTROL
PLANES
(VICT MOTION ROOMS, VENTS CHIMNEYS)

TINET AMENDED A ISSUE

RATIO I: 1000 DATE IN/1/87 SSUE

DRAWN DL/HL REF 10/884 A

DENNY LINKER & CO
CONSULTING SURVEYORS
173 New South Head Road
Edgecliff 2027 32 9811

- \* during the equinox overshadowing is once again of a minor nature and restricted to the early morning period when shadows are cast over part of the open space area in the north-western part of the site and over part of the waterfront promenade
- \* during mid winter overshadowing effects are more pronounced in the early morning although large parts of the public open space areas, including "The Green" on the Harbour Foreshore, remain relatively free of shadow effect. Only minor overshadowing occurs during midday. However, during the afternoon the steep topography of the adjacent public reserve casts a shadow across much of the open space areas within the proposed development
- \* during "typical" winter days overshadowing is reduced with large parts of the public open space areas free of shadow during the morning and midday periods until the shadow cast by the adjacent public open space reserve begins to extend across the site during mid afternoon.

The overshadowing effect of the proposed development also needs to be viewed in the context of shadow effects on the site cast by former and existing buildings, in particular the Bunker Building and the large storage tanks (which have now been dismantled). The extensive overshadowing cast by those structures during mid summer, mid winter and the equinox is shown on the drawings prepared by Henry Pollack and Associates which are also presented in Appendix B.

In summary, the overshadowing of internal open space areas is acceptable because it is restricted to relatively small parts of the site for relatively short periods of the year. The steep topography on either side of the site results in a similar shadow effect, and that condition is exacerbated by shadows cast by former and existing large structures on the site such as the Bunker Building and the storage tanks.

# 5.4 Heritage Issues

The Oyster Cove site is typical of many waterfront industrial sites developed around Port Jackson from initial settlement to the post World War II era. The Oyster Cove plant was planned in 1912 as a carbonising plant and has been used for the last 70 years for the

purposes of gas production, storage, distribution and associated service facilities by the North Shore Gas Company Limited.

Coal was transported to the site by water transport which was the primary determinant of the location of the plant on the harbour waterfront. The industrial process involved:

- \* the flow of coal from ship to coal crusher to coal storage and from storage to retorts
- \* the flow of gas from the retorts to the gas holder and then to the reticulation system; and
- \* the flow of coke (the residual material) to on-site storage to be distributed as a fuel.

The plant ceased gas production from coal in 1969 but continued in operation based on petroleum products and later reconstituting natural gas until conversion work was completed. Over the life of the plant, annual average coal consumption was about 80000 tons per annum and average annual gas production was about 12500 million cubic feet.

One of the first major structures to be initiated on the Oyster Cove site was the coal store (Bunker Building). The massive bulk in the lower levels of this building is made up of filled masonry quarried on the site as part of the levelling operation. This was followed by the retorts, exhauster, boiler and governor houses, carburetted water gas and sulphate plants, tar yard, workshops including those for boilermakers and blacksmiths, carpenters and painters shops, laboratories and the original large floating gasholder. Improvements and extensions at the Oyster Cove site continued for most of this century and included the waterless gasholder (1931), an increased number of retorts, new carburetted water gas and boiler plants, laboratories and workshops. The third major retort house was erected in 1942 and extended in the 1950s and the new carburetted water gas plant completed in 1956.

Although redevelopment proposals for the site have been in train since the beginning of the 1980s, the site was only classified by the National Trust of Australia (NSW) as recently as March 1987. The reasons for listing are given as follows:

"The Oyster Cove Gasworks demonstrates the layout of a major gas making plant in successive stages of technology, from World War 1 to the present. Several components of the site (included in this listing) remain in reasonable condition. The waterless gasholder (1931) is particularly significant as although gasholders were a relatively common service facility, examples of the waterless type are rare. It is also unusual for the two types of gasholder to be present on a single site."

The structures listed by the National Trust listing are the carburetted water gas plant, chimney, boiler house, exhauster house, sulphate plant, floating gas holder, waterless gas holder, floating gas holder and coal bunker.

## 5.4.1 Local Environmental Plan: Listed Buildings

North Sydney LEP 1989 also incorporates a list of Heritage Items, including a number of buildings and structures on the Oyster Cove Site, which require evaluation and assessment prior to any development. The structures identified were the Bunker Building, the Boiler House, the Sulphate Plant, the Chimney, the Carburetted Water Gas Plant, the Exhauster House and the Governor, Calorimeter Laboratory and Booster Compressor. North Sydney LEP, 1989 makes provision for development, including demolition, of those buildings, subject to Council consent. Such development consent cannot be given unless Council has taken into consideration the extent to which the carrying out of such development would affect the cultural significance of the item and any stylistic or horticultural features of its setting. Prior to determining a development application, Council must also take into consideration the following matters:

- (a) the significance of the item as a heritage item
- (b) the extent to which the proposal would affect the cultural significance of the item and its site
- (c) whether any stylistic, horticultural or archaeological features of the item or its site should be retained

- (d) whether the item constitutes a danger to the users or occupiers of that item or to the public
- (e) in the case of a building or work whether the permanent conservation of the building or work is considered necessary
- (f) in the case of a building or work the probability of the building or work being incapable of reasonable or economic use

The retention of the boiler house, sulphate plant, carburetted water gas plant, exhauster house and chimney with appropriate re-use activities is not unreasonable in a predominantly residential based development. Although the above structures generally need extensive renovation, they have a scale and character that would be sympathetic with a residential environment. With appropriate adaptive uses, the structures can promote a focus for the adjoining residential development and generate a valuable community centre for the development. As the buildings are primarily grouped and concentrated towards the centre of the site, they provide an appropriate reminder of the site's original use.

However, the requirement to retain the Bunker Building is inappropriate as discussed in the following.

# 5.4.2 Bunker Building

The Bunker Building, circa 1916, is a substantial brick and sandstone structure approximately 33m wide and 66m long on the low section of the site adjoining the foreshore. The building rises to some 36m above the ground at that point and consists of massive brick perimeter walls founded on sandstone foundation walls on rock. The building originally comprised a large open space approximately 9m high with open steel trusses and floor made up of hoppers which discharged into vaulted tunnels. These hoppers have been filled and a concrete floor poured over the fill. Internal, full height crosswalls provide stability to the north and south perimeter walls and also support the steel roof trusses. A series of arched highlight windows provide light and ventilation.

Although the building is structurally sound in the context of its former use, there are a number of reasons why it cannot be retained as part of the proposed development. Those reasons are set out in a detailed submission to Council prepared by Henry Pollack and Associates<sup>4</sup> and are summarised in the following:

# i) No Economic Viable Use for Building

Residential and retirement living proposals have proved to be not economically viable for either private or public development because of the excessive cost of renovations.

# ii) Unsuitable Planning Yield

The building does not permit an efficient number of residential units for the site area it occupies. An internal courtyard would be necessary to provide light and air, and this would cause noise, privacy problems and a poor living environment. As well, the layout of units would be constrained by the existing orientation of the four walls and at least 30% of units would not enjoy sunlight.

#### iii) Aesthetic Considerations

While the building is a sound brick and sandstone structure, it is completely out of character with the surrounding and proposed environs. Any re-use of the building which incorporates multiple wall penetrations for windows would change its external appearance and consequently take away any historical value of the building.

# iv) Conservation/Heritage Merit

The Bunker Building is no longer an integral part of a much larger complex - it is now only a residual element, a partial remnant of a complex process. Conservation of the Bunker Building is not necessary because there are other better ways of imparting an understanding of the gasmaking industrial process rather than would be

Henry Pollack and Associates "Bunker Building Heritage Issue - Oyster Cove" June 1990

achieved with conservation of this structure. Essentially, the structure does not have regional, metropolitan or state significance and has only limited significance as a representative item of a particular industrial process.

The proposed development replaces the Bunker Building with a residential apartment building constructed to a lower height than the existing structure and following the contours of the natural landscape pre-1916. The existing Bunker Building severely restricts the design possibilities of linking the community centre and the waterfront. Its demolition presents the opportunity to open up the community centre precinct to the waterfront, thus consolidating public open space and providing a transition from the expansiveness of the waterfront to the enclose of the community centre precinct.

Additionally, removal of the Bunker Building will result in less obstruction of views. Since demolition of the gasholders, the Bunker Building is the major element in any vista from within the site and from surrounding streets such as Bridge End, Ivy Street and Tryon Avenue. It dominates the site at the most critical part of the waterfront and restricts water views to Oyster Cove itself rather than the main harbour. By replacing the Bunker Building with a lower building cut away at the corner of the site, vistas from within the site would be expanded allowing those properties that overlook the site to see a broader expanse of Sydney Harbour over the lowered building.

In summary, the Bunker Building is not an item of such significance that warrants conservation, The structure would not enhance any new residential development of the site and makes no desirable contribution to the existing waterfront and residential area. The Bunker Building is only a partial element of the former complex, industrial process and is neither representative of or a recognisable component of that industrial process. Although the National Trust has "classified" the building it acknowledges that practical issues may prevent its retention.' The Heritage Council has also acknowledged in Correspondence (see Appendix C) that the Bunker Building can be demolished, requiring that it should be fully recorded in those circumstances.

See correspondence from National Trust dated 8 June 1988 included in Appendix C

Expert opinions as to the significance of the Bunker Building, its context in a residential redevelopment and other relevant heritage items are included in Appendix C to this report. Both opinions favour allowing demolition of the Bunker Building.

# 5.5 Parking

The proposal development makes provision for a total of 721 parking spaces allocated as shown in Table 4.2. That provision is consistent with the requirements specified in draft Development Control Plan No 6 - the Oyster Cove Gas Works Plan, which specifies the following **minimum** rates for particular uses:

- one car space per residential building of one or two bedrooms
- two car spaces per residential building of three or more bedrooms
- visitor space at provision of two car spaces for the first five units and one for each five dwellings or part thereof thereafter
- aged persons housing carparking at a minimum rate of one car space per ten units plus two staff per building complex
- a minimum of one car space per 50m2 for gross retail and commercial floorarea, including professional consulting rooms

#### 5.6 Traffic

The traffic implications of the proposed development are addressed in detail in a separate traffic and parking assessment report<sup>6</sup>. The Traffic and Parking Assessment study found that:

\* the proposed development has a projected traffic generation potential of approximately 1000 vehicle trips per day and 100 vehicle trips per hour during peak periods. That

Project Planning Associates Pty Ltd "Proposed Residential Development of the Oyster Cove site by the AGL Property Group. Traffic and Parking Assessment" June 1990

is less than one-third the projected traffic generation potential of the initial 1984 development concept (2700 vehicle trips per day and 320 vehicle trips per hour during peak periods). It is a relatively minor traffic generation potential for such a large site

- \* the projected additional traffic demand on the intersections on the road system serving the site is minor and the proposed development will not have any significant effect in terms of road network capacity
- \* the projected additional traffic demand on the local street system in the vicinity is likewise minor and will not result in any traffic-related environmental implications.

The conclusion of the report that the current (June 1990) development proposal will have no significant traffic implications in terms of either road network capacity or traffic-related environmental effects is supported by two previous traffic studies<sup>7</sup> which were independently commissioned by North Sydney Council to examine the traffic implications of the much larger 1984 development concept for the Oyster Cove site. Both studies concluded that the road system serving the site could adequately and satisfactorily accommodate the traffic generated by the 1984 development concept, and that an additional access road serving the site off Bridge End (Wollstonecraft) is unnecessary, could encourage through traffic diversion through Waverton and Wollstonecraft, and should therefore not be provided.

Colston and Budd Pty Limited "Milsons Point to Wollstonecraft Traffic Study" 1984

Ove Arup Transportation Planning "Proposed Redevelopment of the North SHore Gas Company Site - Oyster Cove. Traffic Impact and Access Study" 1986

#### 6. SUMMARY STATEMENT OF ENVIRONMENTAL EFFECTS

The principal environmental issues associated with the proposed development have been canvassed in the foregoing report. For convenience, a summary assessment of environmental effects required under s77(3)(c) of the Act is presented below under the Heads of Consideration of s90.

# a) Planning Instruments

The proposed development is governed by the provisions of North Sydney Local Environmental Plan 1989 (relevant extracts reproduced in Appendix A). The site is zoned part Residential 2(e) and part Open Space 6(e) by that Plan. The proposed development is permitted by the Plan.

LEP 1989 incorporates development controls which are specific to the Oyster Cove site (Clauses 16 and 17 - see Appendix A) concerning site rehabilitation, the number of residential bedrooms (including aged persons accommodation) permitted on the site, and the scale of non-residential uses permitted in heritage items (buildings) retained on the site as part of the proposed development. Under the Plan the Oyster Cove site is not affected by a Foreshore Building line. As discussed in Chapter 5.4, several existing buildings are on the site are included in the list of Heritage Items incorporated in LEP 1989.

The site rehabilitation strategy proposed by the site preparation development application is designed to make the site safe and suitable for residential development by removal or burial of gasmaking byproduct affected soil so that no possible hazard is posed to people who live or work on the site when redevelopment is completed, thereby satisfying the requirements of LEP 1989 concerning site rehabilitation.

The proposed development incorporates a total of 830 bedrooms, significantly less than the 900 bedrooms permitted by LEP 1989. It also includes 40 x one-bedroom aged persons units as permitted by LEP 1989. The floorspace of the non-residential uses proposed for the "heritage" buildings to be retained as part of the development is also consistent with the requirements of LEP 1989.

Finally, it is proposed to demolish the Bunker Building, which is listed as a Heritage Item by LEP 1989, as part of the residential development. However, Clause 37 of the Plan makes provision for Council to consent to the demolition of the Bunker Building. Justification for demolition of the Bunker Building is set out in Chapter 5.4 of this report.

DRAFT Development Control Plan No 6 was prepared specifically to control development of the Oyster Cove site and although never adopted by Council has served as the basis for identifying broad development guidelines for the site. It specifies a number of development standards concerning landscaped area, average dwelling size, maximum number of bedrooms, carparking provision, building control planes, conservation, roadways and contribution for roads, landscaping, rehabilitation and on-site treatment, and marina and boating facilities. The proposed development generally conforms with those standards except for relatively minor non-compliance with the height control planes and amendments to the buildings required to be conserved. Those variations are considered acceptable as discussed in the foregoing.

As pointed out earlier in this report, DRAFT DCP No 6 is repealed by DRAFT DCP No 1 which has also not yet been adopted by Council. The Residential 2(e) Zone, which applies to the Oyster Cove site, is excluded from the Residential part of DRAFT DCP No 1 (PART 2). In these circumstances it can be concluded that the Oyster Cove site is not subject to the provisions of any Council development control plan.

# b) Environmental Impact

The former industrial activity on the site and associated site works have substantially altered the existing site environment, reducing the potential impact of the proposed development.

The site consists largely of fill material over bedrock or, at the lower levels, within the original bay. The depth of fill on the site varies considerably.

There is very little vegetation within the site boundaries with the exception of some remnant native vegetation with weed invasion on the eastern and northern boundaries, and some minor local landscaping to existing buildings. Flanking the site to the west are tracts of significant

vegetation which is largely indigenous. Minor weed invasion has occurred and changes in the nature of drainage have caused a change in the distribution and balance of species in the gully area.

Vegetation in the vicinity of the site has been broadly investigated and classified (Appendix D). The areas adjoining the site are generally closed woodland with canopy height 6-8 metres and a density of 70% average, with small areas of open forest (height 12 metres, density 30%) and shrub land (height 3 metres, density 60%), and a zone which comprises a dense layer of prostrate climbers.

The proposed development will modify the harbour foreshore with:

- \* construction of a foreshore promenade formed by renovation of the existing concrete wharf and installation of a timber "boardwalk"
- \* establishment of a major passive open space area on most of the reclaimed Oyster Cove.

These measures will improve the existing environment of the site and introduce a significant public benefit.

# c) Effect on Landscape and Scenic Quality

A comprehensive landscape plan prepared by LDI International, Landscape Architects is incorporated in the project Site Plan (see Chapter 4.4). The proposed development will eliminate the unsightly environment created by the former gasworks, and replace it with attractively designed residential accommodation. The new buildings are grouped around the southern and eastern perimeter of the site adjacent to the steep valley walls, with open space areas extending through the centre and to the harbour foreshore to enhance views to and from the site.

The proposed development will be a substantial improvement in terms of landscape and scenic quality.

# d) Social and Economic Effect

The proposed development is a predominantly residential development which makes adequate provision for public open space and incorporates a neighbourhood community centre with recreational, commercial and community facilities. Accordingly, the proposed development should not have a major impact on local services and no adverse social or economic impact is envisaged.

# e) Character, Scale etc

The proposed development is predominantly residential, consistent with the established landuse pattern in the area. The scale of the development is commensurate with a large waterfront site. Potential building bulk effects have been minimised by locating the residential apartment buildings around the perimeter of the site adjacent to the valley walls and by the large public open space areas which extend through the centre of the site.

# f) Size and Shape of Land

The proposed development site has a large area of more than 8 hectares which is capable of accommodating the development proposed. The development concept integrates well with the benched valley form of the site.

#### g) Natural Hazards

None are apparent.

# h) Relationship to Adjoining Development

The current development proposal evolved from an initial development concept submitted to North Sydney Council in mid 1984. That initial concept was the subject of extensive public scrutiny and comment which led to the progressive elimination of most of its non-residential features. The current proposal is a predominantly residential development at a much reduced scale than the original proposal and is consistent with the surrounding landuse.

Because of the site's valley form the proposed development is effectively segregated from adjoining development. The main issue in this respect concerns the potential to disrupt views from adjoining properties. Great care has been taken to minimise any such effect in the proposed development (see Chapter 5.2).

# i,j) Traffic and Parking

The traffic and parking implications of the proposed development are addressed in a separate report which concluded that:

- \* the off-street parking provision incorporated in the proposed development is adequate to satisfy expected demand
- \* the proposed development has a projected traffic generation potential of approximately 1000 vehicle trips per day and 100 vehicle trips per hour during peak periods. That is less than one-third of the projected traffic generation potential of the initial development concept. The projected additional traffic demand on the street system will not cause any unacceptable problems in terms of either road network capacity or traffic-related environmental effects.

#### k) Public Transport

The site is well served by public transport enjoying convenient access to rail and bus services. It is located within 250-500 metres walking distance of Waverton Railway Station and most buildings have direct access to King Street, eliminating the need for pedestrians to use the relatively steep access road serving the development. The development will therefore have the advantage of easy access to the North Shore Railway Line, part of the major rail network serving the Sydney Metropolitan Area.

The existing 267 bus service runs along Carr Street, Crows Nest Road and Bay Road in the vicinity of the site. It is a long established service running between Chatswood Railway Station and McMahons Point, via Northbridge, Crows Nest and Waverton at half hourly intervals during the afternoon peak period and hourly intervals at other times.

# 1) Utility Services

# Drainage

An original State Rail Authority survey drawing of the site dating back to the last century indicates that two creeks entered the site from the north, one in the northern corner of the site and the second from the north-east. The creeks converged approximately 50 metres inside the site before discharging into the Harbour. Earlier this century and in conjunction with the construction of the railway line, the creeks were piped under the railway line discharging via headwalls back into the creek system. Later, as the site was developed, the creek was replaced by an underground culvert system, generally following the line of the old creek bed. That culvert system continues to drain the site and surrounding areas.

The existing culvert will be used to drain part of the proposed development. Because it passes through the part of the site proposed as the Capped Sector by the site rehabilitation strategy, some of the drainage work will have to be undertaken as part of the civil works associated with the site rehabilitation.

# Water Supply

The Oyster Cove site is serviced by a 100mm diameter potable water main which runs along King Street. This water main also has fire hydrants spaced along its length for firefighting purposes. a single, existing 100mm diameter water supply enters the site from a main located at the corner of Ross and King Street and supplies the site via the Bunker Building.

Preliminary discussions with the Water Board have established that this 100mm supply would be insufficient for the anticipated water demand of the proposed development scheme. Provision of a single larger supply line to the development would prove difficult as the nearest, existing 200mm diameter supply is at the corner of McKye and Carr Streets, a significant distance from the proposed development.

An alternative would be to provide an additional 100mm supply main from the existing system at the location of the new access road from King Street. The Water Board have indicated that this arrangement would be feasible.

#### Sewerage

The Oyster Cove site is currently serviced by a 725mm x 525mm Oviform Sectional Concrete Sewer which runs from the extreme northern point of the site, along the railway embankment and then along King Street. This particular sewer is very deep and would require further investigation by the Water Board to establish future connection points. It is understood that the sewer has ample capacity to accept discharge from the new development although this will have to be confirmed by the Water Board.

There is a secondary 255mm diameter sewer in King Street at a higher level than the main Oviform sewer. This secondary sewer accepts discharge of foul water from dwellings in King Street and discharges into the main Oviform sewer in King Street. The existing foul water discharge from the Oyster Cove site is minimal. There are two existing sewer connections comprising one 100mm diameter connection from the Bunker Building which discharges via a boundary trap to a 150mm diameter sewer connection, and a further connection from the gatehouse which also accepts discharge from a 40mm diameter rising main, emanating from the existing boiler house.

It is anticipated that a new network of foul water sewers would be required to handle the foul water discharge of the proposed development. The new sewer network would be likely to incorporate a pumping station, with a rising main connecting into the existing Oviform sub-main sewer in King Street.

#### **Power**

The existing electricity supply system serving the Oyster Cove site comprises an old substation near the Ross Street entrance with overhead and underground cables to various parts of the site. This existing supply is inadequate for the proposed development scheme and present indications are that it will be demolished.

It is anticipated that the power demand of the proposed development will be supplied from several substations located in different parts of the site. The number of substations is determined by the grouping of the residential units and the construction programme for the

project. each substation would typically consist of a single transformer of suitable capacity which could be housed in either an outdoor kiosk surrounded by screen or shrubs or an indoor chamber incorporated in one of the buildings. High voltage cables to the substation will be buried underground and located generally along roadways. The point of supply for the site is most likely to be from the existing Ross Street entrance.

Low voltage mains will connect each substation to the buildings in its area. The cables will be buried underground and located along roadways or in public areas where possible Each separate building will be provided with an incoming supply cable which will connect to a main switch board controlling distribution within the building.

# **Telephones**

Preliminary enquiries of Telecom indicate that there will be no major difficulties in providing sufficient lines into the site. The incoming cables would enter from Ross Street and possibly King Street, depending on site requirements.

Main cabling around the site would be underground on public roads wherever possible Leadin cabling would probably be brought underground to a main frame in one building of each group which would be linked to frames in others in that group by tie-cables. The number of frames involved and their size will depend on staging and site layout.

#### m) Site Landscaping

Refer Item (c) above.

#### m1) Soil Erosion

The main potential for large scale soil erosion will occur during the site rehabilitation and major earthworks phase of the development. That work is the subject of a supplementary Statement of Environmental Effects<sup>8</sup> and the issue of soil erosion is addressed in that report.

Project Planning Associates Pty Ltd "Proposed Residential Development of the AGL Oyster Cove Site by AGL Property Group - Site Rehabilitation and Major Civil Works:Statement of Environmental Effects" June 1990

Implementation of the landscape plan prepared for the proposed development will minimise soil erosion on completion of the development.

#### n) Representations

Not applicable at this stage.

# o) Amenity of the Neighbourhood

The proposed development of the Oyster Cove Site has been the subject of extensive public consultation over the past seven years. Representations made during the course of that consultation process resulted in the preparation of LEP 1989 which ensures that development of the site is predominantly residential, and DRAFT Development Control Plan No 6 which provides development standards aimed at ensuring that the amenity of adjoining residential areas is not seriously affected. The proposed development is permitted by LEP 1989 and conforms generally with the development standards set out in the DRAFT No 6.

# p) Submissions

Not applicable at this stage.

## p1) Planning Instrument Heads of Consideration

The main issue included in the Planning Instrument which is not specifically covered by s90 of the Act concerns site rehabilitation. A comprehensive site rehabilitation strategy has been prepared in satisfaction of specific matters raised in LEP 1989 (see Chapter 5.1).

#### q) Circumstances of the Case

The circumstances of the case are as follows:

\* the Oyster Cove site is now surplus to the requirements of AGL

- \* an initial development concept was submitted to Council in mid 1983 to develop the site. That proposal was the subject of extensive public discussion which led to the elimination of non-residential uses from the scheme
- \* the current development proposal is at a reduced scale to the initial scheme
- \* the proposed development is permitted by LEP 1989 which governs landuse and development on the site. It generally complies with development standards specified by DRAFT DCP No 6 which was compiled to ensure that development of the site did not seriously affect the amenity of local residents
- \* the proposal will replace a former industrial use with a more compatible use of the site without any serious effect on the amenity of neighbouring residents.

#### r) The Public Interest

The proposed residential development of the Oyster Cove site is consistent with several of the general aims and objectives of North Sydney Local Environmental Plan 1989, in particularly the objectives:

- (a) to maintain and increase the availability of land for residential use in North Sydney and to prevent the further alienation of residential areas;
- (b) to maintain and increase the present population of the municipality by retaining residentially zoned land for residential purposes, by restricting the expansion of other uses into residential zones and encouraging residential use of buildings in non-residential zones, especially those buildings in the commercial zones;

The wider public interest of North Sydney Municipal Council and the Sydney Metropolitan Area, the latter in terms of the Department of Planning's "Urban Consolidation Policy", will therefore benefit by the proposed development.

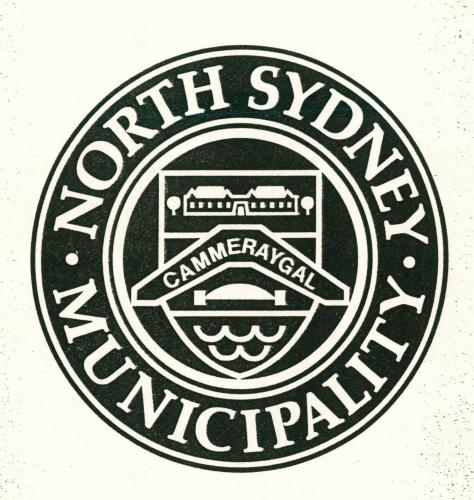
# s) Access for the Disabled

Access for the disabled can be accommodated in the proposed development.

APPENDIX A

NORTH SYDNEY LOCAL ENVIRONMENTAL PLAN NO 1989 (EXTRACTS)
AND DRAFT DEVELOPMENT CONTROL PLAN NO 6

PROJECT PLANNING ASSOCIATES PTY LTD Suite 8, 'The Village' 45 Burns Bay Road LANE COVE 2066 Ph: 427 2366 Fax: 428 1832



# LOCAL ENVIRONMENTAL PLAN 1989

GAZETTED 3 NOVEMBER, 1989
AS AMENDED

- (b) to provide opportunities for the establishment and retention of retail facilities and related services to serve the needs of the surrounding residential areas;
- (c) to prohibit development for the purposes of commercial premises in order to encourage the retention of neighbourhood shops; and
- (d) to permit a form of development which is compatible with the scale and character of the surrounding residential area.
- Without Development Consent

Dwelling-houses; home occupations.

2. Only With Development Consent

Advertisements and advertising structures; art and craft galleries; attached dwellings; barbers' shops and beauty salons; boarding-houses; boot and shoe repairing; child care centres; dressmaking; drainage; dry-cleaning or dyeing agencies; dwellings; educational establishments; framing; hairdressing salons; home industries; hospitals; infill development; lending libraries; open space; photographic studios; places of assembly; places of public worship; post offices; professional consulting real estate agencies; refreshment rooms; rooms; residential flat buildings; roads; self-service coinoperated laundries; service stations; shops; tailoring; take-away food shops; totalizator agency board offices; trade or craft workshops; utility installations, other than gasholders or generating works.

#### 3. Prohibited

Any purpose other than a purpose included in item 1 or 2.

# ZONE No. 2(e) (OYSTER COVE GASWORKS SITE (RESIDENTIAL))

# Objectives of Zone

The particular objectives of this zone are -

- (a) to encourage the redevelopment of the land to which this plan applies for residential and community purposes;
- (b) to ensure those areas of the site known to be contaminated are so treated and rehabilitated that the site becomes safe for residential and community purposes;

- (c) to allow development to occur without undue effect on existing residential development; and
- (d) to allow non-residential uses which are compatible with the residential character of medium density development comprising attached dwellings.
- 1. Without Development Consent

Home occupations.

2. Only With Development Consent

Attached dwellings; boarding-houses; car-parking; child care centres; dwelling-houses; educational establishments; home industries; hospitals; marinas; professional consulting rooms; places of assembly; places of public worship; public buildings; recreation facilities; refreshment rooms; residential flat buildings; serviced apartments; utility installations other than gasholders or generating works, but including service tunnels.

#### 3. Prohibited

Any purpose other than a purpose included in item 1 or 2.

# ZONE No. 3(a) (COMMERCIAL "A")

## Objectives of Zone

The particular objectives of this zone are -

- (a) to maintain the role of the Central Business District of North Sydney as the focus of commercial development within the Municipality, and as an integral part of the dominant Regional Centre in the Sydney Region by maintaining the floor space ratios contained in previous environmental planning instruments;
- (b) to allow for a diverse range of retail activities and entertainment opportunities within the commercial zones;
- (c) to prevent any expansion of commercial zones at the expense of residential zones;
- (d) to encourage residential development on land within the zone especially in North Sydney and St. Leonards;
- (e) to improve, by civic design and landscape proposals, the amenity of commercial areas in the Municipality;

## ZONE No. 6(d) (BUSHLAND)

#### 1. Without Development Consent

Works (other than buildings) for the purposes of landscaping, gardening or bushfire hazard control.

#### 2. Only With Development Consent

Removal of vegetation.

#### 3. Prohibited

Any purpose other than a purpose included in item 1 or 2.

# ZONE No. 6(e) - (OYSTER COVE GAS WORKS SITE (OPEN SPACE))

#### Objectives of Zone

The particular objectives of this zone are -

- (a) to encourage the redevelopment of the land to which this plan applies for open space purposes;
- (b) to ensure that those areas of the site known to be contaminated are so treated and rehabilitated that the site becomes safe for open space purposes; and
- (c) to allow development to occur without undue effect on existing residential development.

#### 1. Without Development Consent

Nil.

#### 2. Only With Development Consent

Marinas; recreation areas; recreation facilities; refreshment rooms; roads; utility installations other than gasholders and generating works.

#### 3. Prohibited

Any purpose other than a purpose included in Item 2.

## Objectives of Reservations

The general objectives of Zones Nos. 9(a), 9(b), 9(c) and 9(d) are -

(a) to increase the provision and improve the quality of open space throughout the Municipality and to permit those activities which would enhance the public recreational value of that open space;

# Controls in Zones Nos. 2(e) and 6(e)

- 16. (1) This clause applies to land at King Street,
  Waverton, known as the Oyster Cove Gasworks site or
  The AGL Site, Waverton, being the land in Zones
  Nos. 2(e) and 6(e).
  - (2) A person shall not, on land to which this clause applies -
    - (a) disturb or excavate any land for any purpose;
    - (b) carry out any land filling;
    - (c) clear trees or other vegetation from the land;
    - (d) carry out any work; or
    - (e) alter the landscape or carry out any landscaping,

except with the consent of the Council.

- (3) The Council shall not consent to the carrying out of development on land to which this clause applies unless it is satisfied that the land has been made safe for the purpose for which it is to be used.
- (4) The Council shall not consent to the carrying out of development on land to which this clause applies if as a result of that consent there would exist on the land to which this clause applies more than 900 bedrooms.
- (5) Nothing in subclause (4) prevents the Council from consenting to developments for the purpose of housing for aged or disabled persons (within the meaning of State Environmental Planning Policy No. 5) provided there are no more than 40 selfcontained dwellings on the land to which this clause applies.

#### Buildings at Ross Street

- 17. (1) This clause applies to those buildings listed in Schedule 2 under the heading "Ross Street".
  - (2) A person may, with the consent of the Council, use a building or part of a building and its immediate curtilage for the purpose of commercial premises, art exhibitions, craft workshops, refreshment rooms or shops.
  - (3) Subclause (2) does not apply to the Chimney or the Bunker building.

- (4) The Council shall not consent to an application for the use of an area in a building for the purpose of commercial premises if the area concerned in the application exceeds 200 sq. metres, or for the purpose of shops if the area concerned in the application exceeds 300 sq. metres.
- (5) In this clause, "craft workshop" means a place where art works or craft works are created or manufactured, exhibited and sold.

# DIVISION 3 - Controls in Commercial Zone

#### Floor Space Ratios

- 18. (1) This clause applies to land in Zone No. 3(a), except the land described in Column 1 of the Table to Clause 20.
  - (2) For the purposes of this clause the land to which this clause applies shall be divided into the areas shown in Column 1 of the Table to this clause, such areas being identified on sheet 2 of the map.
  - (3) A building shall not be erected in an area specified in Column 1 of the Table to this clause if the floor space ratio for all purposes other than residential would exceed the ratio shown opposite that area in Column 2 of the Table.
  - (4) A building shall not be erected in an area specified in Column 1 of the Table to this clause if the floor space ratio of the building to be used for commercial premises exceeds the ratio shown opposite that area in Column 3 of the Table.

- (4) Where a building is to be used in accordance with a consent referred to in subclause (2) -
  - (a) the net floor space to be so used shall not exceed 100 sq. metres; and
  - (b) the gross floor space to be so used shall not be increased, except by any minor additions approved in terms of the consent.

#### PART 4 - HERITAGE PROVISIONS

#### **Objectives**

- 35. The aims and objectives of this plan insofar as it relates to conservation are -
  - (a) to control the demolition of heritage items and buildings and works within conservation areas and to develop guidelines to ensure that any alterations and additions to heritage items and buildings and works within conservation areas are in scale and character;
  - (b) to ensure that consent is not given to the carrying out of development in the vicinity of a heritage item unless an assessment has been made of the effect which the carrying out of that development would have on the cultural significance of the heritage item and its site;
  - (c) to ensure that new developments in conservation areas are designed taking account of the surrounding scale and character of development;
  - (d) to ensure the increased use of structurally sound buildings by encouraging infill development;
  - (e) to ensure that aboriginal sites are preserved; and
  - (f) to ensure that natural bushland, landmark trees, the foreshores and open space are maintained and effectively managed.

#### Interpretation

36. (1) In this Part -

"alter", in relation to a heritage item or to a building or work within a conservation area, means -

- (a) the making of structural changes to the outside of the heritage item, building or work; or
- (b) the making of non-structural changes to the detail, fabric, finish or appearance of the outside of the heritage item, building or work not including the maintenance of the existing detail, fabric, finish or appearance of the outside of the heritage item, building or work;
- "conservation area" means the land edged blue and marked "Conservation Area" on the map;
- "demolition", in relation to a heritage item or to a building or work within a conservation area, means the damaging, defacing, destruction, pulling down or removal of the heritage item, building or work, in whole or in part;
- "heritage item" means a building, work, relic, tree
  or place of heritage significance to the
  Municipality of North Sydney -
  - (a) situated on land coloured orange on the map marked "Heritage Conservation"; or
  - (b) listed in Schedule 2.
- "relic" means any deposit, object or material
   evidence relating to the settlement (including
   aboriginal habitation) of the area of the
   Municipality of North Sydney which is 50 or more
   years old.
- (2) In the event of any inconsistency between the provisions of this Part and other provisions of this plan (including the provision of Part 2) then to the extent of any inconsistency the provisions of this Part shall prevail.

#### Heritage Items

- 37. (1) A person shall not, in respect of a building, work, relic, tree or place that is a heritage item -
  - (a) demolish or alter the building or work;
  - (b) damage or move the relic, including excavation for the purpose of exposing the relic;
  - (c) damage or despoil the place or tree;

- (d) erect a building on or subdivide land on which the building, work or relic is situated or that comprises the place; or
- (e) damage any tree on land on which the building, work or relic is situated or on the land which comprises the place;

except with the consent of the Council.

- (2) The Council shall not grant consent to a development application under subclause (1) unless it has taken into consideration the extent to which the carrying out of the proposed development would affect the cultural significance of the item and any stylistic or horticultural features of its setting.
- (3) An applicant for consent under this clause may be required to satisfy the Council as to the following matters:
  - (a) the significance of the item as a heritage item;
  - (b) the extent to which the proposal would affect the cultural significance of the item and its site;
  - (c) whether any stylistic, horticultural or archaeological features of the item or its site should be retained;
  - (d) whether the item constitutes a danger to the users or occupiers of that item or to the public;
  - (e) in the case of a building or work whether the permanent conservation of the building or work is considered necessary; and
  - (f) in the case of a building or work the probability of the building or work being incapable of reasonable or economic use.
- (4) The Council shall, in determining an application under this clause, take into consideration the matters listed in subclause (3).

# Development in the Vicinity of Heritage Items

38. The Council shall not grant consent to an application to carry out development on land in the vicinity of a heritage item unless it has made an assessment of the effect the carrying out of that development will have on the heritage significance of that item and its setting.

#### Conservation Areas

- 39. (1) A person shall not, in respect of a conservation area -
  - (a) demolish or alter a building or work within the area;
  - (b) damage or move a relic, including excavation for the purpose of exposing or removing a relic, within the area;
  - (c) damage or despoil a place within the area; or
  - (d) erect a building on or subdivide land within the area;

except with the consent of the Council.

- (2) The Council shall not grant consent to an application under subclause (1) unless it has taken into consideration the extent to which the carrying out of the proposed development would affect the heritage significance of the conservation area.
- (3) An applicant for consent under this clause may be required to satisfy the Council as to the following matters:
  - (a) in the case of a proposed building or work the general form of the building and roof in relation to existing development in the vicinity within the conservation area;
  - (b) in the case of a proposed building or work the style, size, proportion and the position of the openings for doors and windows;
  - (c) in the case of a proposed building or work whether the colour, texture, style, size and type of finish of the materials to be used on the exterior of the building are compatible with the materials used in the existing buildings on the site and in the conservation area;
  - (d) whether any stylistic, horticultural or archaeological features of the building or work or its site should be retained;
  - (e) whether there is a danger to the users or occupiers of the building or to the public; and
  - (f) whether, in the case of an application for demolition "infill development" is a reasonable alternative.

# Development in the Vicinity of Aboriginal Relics

40. Where the Council receives an application to carry out development on land within the vicinity of an Aboriginal relic, the Council shall not grant consent to that application until 14 days after the Council has notified the Director of National Parks and Wildlife of its intention to do so.

# Heritage Advertisements and Notifications

41. Where a person makes a development application to demolish a building or work that is a heritage item, the Council shall not grant consent to that application until 28 days after the Council has notified the Secretary of the Heritage Council for its intention to do so.

#### PART 5 - PARTICULAR PROVISIONS

## The Civic Centre

- 42. (1) This clause applies to the land generally bounded by Miller, McLaren, West and Ridge Streets, North Sydney, and known as "the Civic Centre", zoned as "Special Uses Civic Centre" on the map.
  - (2) Nothing in this plan prevents a person, with the consent of the Council, from carrying out development on the land to which this clause applies for the following purposes:

car-parking; child care centres; commercial premises; dwelling-houses; educational establishments; hotels; places of assembly; place of public worship; public buildings; refreshment rooms; residential buildings; shops; transport terminals.

- (3) A person shall not carry out development on the land to which this plan applies for the purposes of commercial premises and shops without the concurrence of the Director.
- (4) In deciding whether to grant concurrence under subclause (3), the Director shall consider the capacity of the North Sydney sub-regional centre to accommodate the proposed development.

# Development of Certain Land - St. Leonards Park

43. (1) This clause applies to land known as St. Leonards Park, North Sydney and the roadway along Miller Street adjacent to Oval No. 1.

#### SCHEDULE 2 - HERITAGE ITEMS

(C1. 5(1))

Aboriginal Carvings As identified by the National Parks and Wildlife Service

Adderstone Avenue 3, 5, 9

Alexander Street 101

Alfred Street 4 (Olympic Pool), 48 (Camden House formerly Camden Villa),

100 (Chinese Christian Church)

Allister Street 2 (Cremorne Hall)

Amherst Street 3 (Tarella)

Ancrum Street 2, 8-10, 34-38, 58, 3-9, 23-31,

39-43, 59-61

Anzac Avenue War Memorial

Atchison Street 104, rear 114 (barn)

Aubin Street 44 (Clarence), 46 (Grafton)

Baden Road 2, 6-8

Balfour Street 22, 15

Ball's Head Bay Coal Loader, Quarantine Station

Ball's Head Road 39

Bank Street 18, 22-26, 38, 42-78, 96-104, 1-5, 9-15, 27, 29, 51-55, 59, 61-63,

67-73, 85, 89-91

Bannerman Street 8 (Dalkeith), 11

Bay Road Waverton Railway Station

Bayview Street 11 (Ildemere), 11A (boatshed), 25-33

Bellevue Street 143 (Substation), 135

Cnr Bellevue Street Cammeray Public School

and Palmer Street

Ben Boyd Road

14 (Cordon Bleu Private Hotel),
56 (Mount Edgecumbe), Plaques
Commemorating Ben Boyd (Neutral
Bay), 107, Neutral Bay Public

School, 189

Ross Street

The following buildings or structures being part of the North Shore Gas Co Ltd Oyster Cove Gasworks:

- The Bunker Building, c. 1916 (including engine and generator rooms)
- The Boiler House, c. 1914 - The Sulphate Plant, c. 1914
- The Chimney
- The Carburetted Water Gas Plant, c. 1915
- The Exhauster House, c. 1914
   The Governor, Calorimeter Laboratory and Booster

Compressor.

Shellcove Road

2, 4, 8, 36 (Roun), 42, 52, 60A, 66, 70-78, 84, 13, 27, 29 (Keynsham), 31A (Brent Knowle), 33 (Aisla), 37, 39 (Gundamaine), 49 (The Cobbles), 55 (Honda), 71, 73

Shirley Road

8, 22, 24, 26, 36, 40, 42, 46 (Ben Ledi), 62, 96, 122, 7, 9, 25, 99 (Fire Station), Berry Island Reserve

Cnr Shirley Road and Nicholson Street

Uniting Church

Cnr Shirley Road and Sinclair Street

Fire Station

Spofforth Street

10, 14

Spruson Street

16

St Leonards Park

Nos. 1 and 2 Ovals (Grandstands), War Memorial

Telopea Street

2, 1 (former Station Master's Cottage), 3, 11

The Boulevarde

5, 49

Thomas Street

4-6, 10-16, 20-22, 26-60, 15-19, 27-39

Thrupp Street

20

Tunks Park

Aqueduct

Tunks Street

2

#### MUNICIPALITY OF MORTH SYDNEY

# DEVELOPMENT CONTROL PLAN NO. 6 FOR THE REGULATION OF THE REHABILITATION AND THE REDEVELOPMENT OF THE A.G.L. GAS WORKS SITE, WAVERTON - THE OYSTER COVE GASWORKS PLAN

#### INTRODUCTION

A Draft Local Environmental Plan has been Certified and exhibited for the land known as 2 King Street, Waverton, or the Oyster Cove Gas Works, or the A.G.L. Bite, Waverton. The aim of this Plan is -

- (a) To rezone the land from its present zoning as Waterfront Industrial such as to prohibit its further use for the production and storage of gas.
- (b) To rezone the land primarily for residential community use and open space purposes, with some ancillary small-scale retail uses, refreshment rooms, local service uses, access to the waterfront, and some small-scale marine activities related to the residential usage.
- (c) To ensure those areas of the site known to be contaminated to a lesser or greater degree are so treated and rehabilitated that the site becomes usable for the purposes referred to above.
- (d) To ensure monitoring procedures are set in place to ensure that the site is suitable for the above uses, and to ensure that no redevelopment is carried out on the site that could be to the datriment of persons living on or visiting the site.
- (e) To ensure that such treatment and rehabilitation of the contamination is completed prior to the carrying out of any redevelopment for the purposes referred to above.
- (f) To provide for the retention of specific buildings and structures identified as of historic and/or architectural significance.
- (g) To provide for a minimum of 30% of the site to be contiguous open space in one parcel, to provide public pedestrian links to adjacent public lands and through the site but with its prime location to be at the waterfront.
- (h) To allow development to occour without undue environmental affectation to existing residential development.

When gazetted the Plan shall be known as "North Sydney Local Environmental Plan No. " or "The Oyster Cove Gas Works Site Plan".

The Council considers it necessary to apply additional standards to the subject site in order to ensure that redevelopment of the site is in sympathy with the aims and objectives of the Local Environmental Plan, having regard to the scale and character of the surrounding residential and open space development.

#### CITATION

This Plan shall be dited as "North Sydney Development Control Plan No.6 - Cyster Cove".

#### OBJECTIVES

The Plan has the following objectives:

- (1) To ensure that rehabilitation and redevelopment is carried out in an orderly manner without adversely affecting the scale and character of the locality which is used residentially or for open space.
- (2) To ensure that new development has a sympathetic and harmonious relationship with the site.
- (3) To ensure that development minimises any adverse affect on adjoining properties, especially in regard to loss of views, privacy, loss of sunlight, and overshadowing.
- (4) To ensure that development standards in this plan for the redevelopment of the subject land reflect the aims and objectives of the development standards adopted in the Draft Local Environmental Plan for the whole of the Municipality, certified by the Director on 3rd December, 1982, and as further amended by the Council in the document "The North Sydney Plan 1986" adopted by Council on 15th December, 1986.

#### LAND TO WHICH PLAN APPLIES

This Plan applies to land situated in the Municipality of North Sydney having frontages to Ross and King Streets, Waverton, known variously as No.2 King Street, the Cyster Cove Gas Works Site, or the A.G.L. Gas Works Site, Waverton, as shown edged heavy black on the map marked "North Sydney Local Environmental Plan No. "deposited in the Office of the Council of the Municipality of North Sydney.

This Plan contains detail provisions to supplement the provisions of the "North Sydney Local Environmental Plan No. ". (The Oyster Cove Gasworks Plan).

#### 1. Landscaped Area

- (a) A person shall not carry out development on land to which Zone 2(g) as shown in the North Sydney Local Environmental Plan No. for the purposes of residential development unless 60% of the land on which it is proposed to erect the building remains as landscaped area.
- (b) In this clause, landscaped area mmans that part of the site area at or within 500 mm of finished ground level and not occupied above that level by building or structures, and which part is predominantly landscaped by way of planting, gardens, lawns, shrubs or trees, and is available for the use and enjoyment of the occupants of the residential development erected on the site, and shall not include any area set aside for driveways or parking.

#### 2. Maximum Dwalling Size

The Council shall not consent to the erection of a dwelling on land within Zone 2(g) as shown in North Sydney Local Environmental Plan No. where the gross floor area of the dwelling exceeds an average of 135 sq.m. - averaged over all dwellings proposed to be erected on the site.

#### 3. Maximum Number of Bedrooms

The Council shall not consent to the development of land, the subject of this Plan, where the number of bedrooms exceeds 900, except as provided for in clause 4.

# 4. Increase in Maximum Number of Bedrooms

Should the owner for the time being agree to the dedication of the Bunker Building to the Council, then the Council may agree to a 15% increase in the number of bedrooms, such numbers being exclusive of those bedrooms in the Bunker Building.

#### 5. Carparking Provision

Council shall not consent to any development or use of any existing development on any site within the land to which this Plan applies unless the carpark is provided at the following rate as a minimum:

1 car space per residential building of 1 or 2 bedrooms;
2 car spaces per residential building of 3 or more bedrooms;
Visitor space at provision of 2 car spaces for the first five units,
and 1 for each five dwellings or part thereof thereafter;
Aged persons' housing carparking at a minimum rate of 1 car space
per 10 units plus 2 staff per building complex;
A minimum of 1 car space per 50 sq.m. for gross retail and commercial
floor area, including professional consulting rooms;
Carparking for recreational facilities shall be provided at the rate
of 1 car space per 10 marina barths (maximum).

#### 6. Height Control Planes

The Council shall not consent to any development or use of any existing development on the site within the land to which this Plan applies if any structure or part thereof exceeds the height control planes adopted as Map 2 to this Control Plan unless the Council is satisfied that non compliance with the Height Control Plan would have no adverse environmental affects in terms of views, privacy, sunlight and overshadowing.

#### 7. Conservation

(i) A person shall not in respect of a building or work that is identified in Schedule 1 of the Plan and Map 1 to this Control Plan ~

(a) damage, demolish, or despoil any such building or work; or
 (b) carry out any development in relation to such building or work;

except with the consent of the Council.

- (ii) The Council shall require that all the buildings identified in schedule 1 be restored to its satisfaction and shall be reused for those users permissible only with development consent. The Council may require the dedication of any building which is to be used solely for public purposes.
- (iii) The Council shall not grant consent referred to in Schedule (1) in respect of a building listed in Schedule 1 unless it has made an assessment of -
  - (a) the significance of the building or structure as an item of environmental heritage in the Municipality of North Sydney; and
  - (b) the extent to which the carrying out of development in accordance with the consent would affect the historic, scientific, cultural, social, archaeological, architectural, natural, or aesthetic significance of the buildings on its site;

and is satisfied that such a consent would not be contrary to that significance.

# 8. Roadways and Contributions for Roads, Landscaping etc

- (i) The Council shall not grant consent to any development which proposes vehicular access through county open space, bushland generally to the west of the subject sits.
- (ii) The Council shall not grant consent to any radevalopment -
  - (a) which provides for vehicular access off Ross Street other than for the Bunker Building and the land immediately adjacent to the north.
  - (b) which does not provide for vehicular access off King Street and or Bridge End in the vicinity of McKye Street.
- (iii) As a condition of consent for redevelopment of any individual building or group of buildings on any part of the land to which this Plan applies, the Council shall require the provision of roadways and a public footpath system to service the redevelopment and to provide access to the waterfront and the open space both on the subject site and adjoining public lands.
- (iv) For the purpose of assessing these requirements, all roads shall have a minimum width of 6 metres with at least one footpath, 1.5 metres, complete with kerb and guttering, and where such

a road provides a general public access it shall be constructed to standards required by the Land Commission of New South Wales (the Department of Housing of New South Wales).

- (v) As a condition of any consent for the redevelopment of any individual site or group of buildings on land forming part of this land to which this Plan applies, and in consideration of the change of zoning for waterfront industrial to residential/ open space the Council shall require that the cost of street planting and general landscaping of the publicly accessible areas and open space shall be provided by the developer at no cost to the Council.
- (vi) As a condition of any consent for the redevelopment of any individual site or group of buildings on land forming part of the land to which this Plan applies, the Council shall require the landscaping of the individual sites.
- (vii) As a condition of any consent for the redevelopment of the land to which this Plan applies, and in consideration of the change of zoning from waterfront industrial to residential/open space the Council shall require the submission of, and after approval, the construction of a pedestrian network through the site to link up all surrounding public streets and open space to each other through this site.

# 9. Rehabilitation and On-Site Treatment

(1) Prior to the Council granting consent for any redevelopment of the land to which this Plan applies, the Council shall require for its submission and approval a Rehabilitation Strategy Plan, which shall also require the approval of the State Pollution Control Commission of New South Wales.

Such a Plan shall set out the overall strategy for -

- (i) the rehabilitation of contaminated material, including its treatement on-site, or its reburial on site, or its removal from the site, or its sealing in position by approved means, or any combination of the above.
- (ii) the timing schedule,
- (iii) safety measures for workers on site and adjoining residents,
- (iv) schedule of operating procedures,
- (v) fencing of the site,
- (vi) the staging schedule for "make safe" rehabilitation,
- (vii) procedures under redevelopment if further rehabilitation is required,
- (viii) post-development management and monitoring procedures,

- (ix) the certification of other statutory authorities including the State Department of Health, the M.W.D.A., the Department of Industrial Relations.
- (x) any other relevant matter.
- (2) PRIOR to granting consent for any redevelopment of the land to which this Plan applies, the Council shall require that the land is rehabilitated to a make safe stage in accordance with the Rehabilitation Strategy Plan to the approval of the State Pollution Control Commission of New South Wales and the New South Wales Department of Health, and is certified to that effect.

where contaminated material has been recommended, and permission granted, for its removal from the site, such removal shall be to the satisfaction of those statutory authorities having control in the matter and shall be to a dump approved by the Metropolitan Waste Disposal Authority of New South Wales, and shall be carried out in a manner recommended by the Consultants and to the requirements imposed by Council in any development consent.

The Council shall not grant consent to any redevelopment of any part of this site unless it is satisfied that the works below finished ground level have been designed to resist any adverse affect from any residual contamination of the site.

#### 10. The Marina and Boating Facilities

The Council shall not consent to the erection of structures or the use of any part of the land to which this Plan applies for the purposes of marinas, boat storage, boat launching, if the total number of boats proposed to be stored, either on the water or on land, exceeds a maximum of 60 boats, or if the spaces are not used by residents of the development on the site: that maximum number excludes any dinghy or small sailboat storage above high water level.

Such an application for a marina shall allow for appropriate servicing of water and electricity to the boats to be stored, and also for pump-out facilities and garbage and other waste material, storage and removal.

The Council shall not consent to any works or any application for works to be carried out by way of servicing either the boats, hull and superstructure, or motors, masts, etc.

#### FORESHORE BUILDING LINE

10. (1) In this clause, "foreshore building line" means a broken red line shown on the map and identified by the letters "FSBL" in relation to lands on the foreshore.

- (2) Subject to this clause, development of land between a foreshore building line and Port Jackson is prohibited except development for public purposes.
- (3) Land between the foreshore building line and Fort Jackson may be developed only with the consent of Council for the purposes of structures not exceeding about one metre in height above ground level measured at the appointed day or for development for public purposes.
- (4) Nothing in this Plan shall prevent the Council from requiring the dedication of foreshore land for open space purposes as a condition of development of the site.

#### PAYMENT TOWARDS PROVISION OR IMPROVEMENT OF AMENITIES OR SERVICES

11. If, as a consequence of carrying out development in accordance with this Plan (as in force at the time the development is sought to be carried out) this Plan identifies a likely increased need for public amenities and public services as specified in the table to this clause, the Council may stipulate in any consent that a dedication or contribution under Section 94(1) of the Act, or both, may be required as a condition of any consent to development.

Map 1 - Items of Conservation subject to Clause 7 (attached)

Map 2 - Height Control Plane Map (attached)

#### SCHEDULE 1

The Bunker Building, c. 1916

The Boiler House, c. 1914.

The Sulphate Plant, c. 1914.

The Chimney.

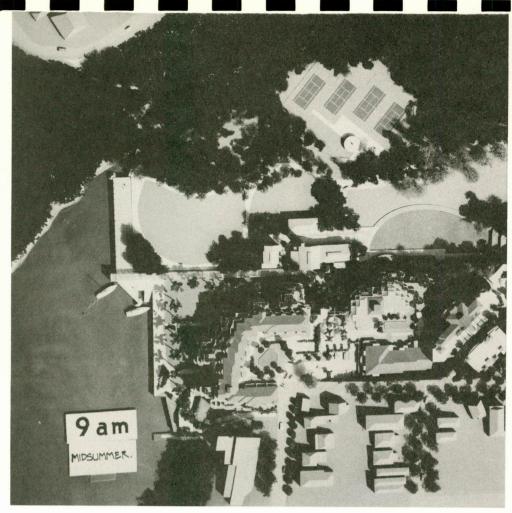
The Carburetted Water Gas Plant, c. 1915.

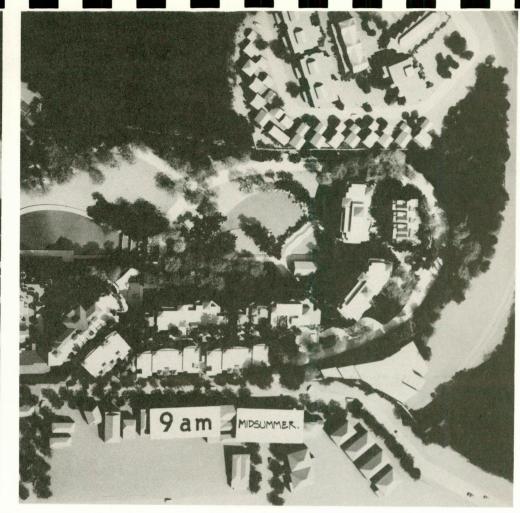
The Exhauster House, c. 1914.

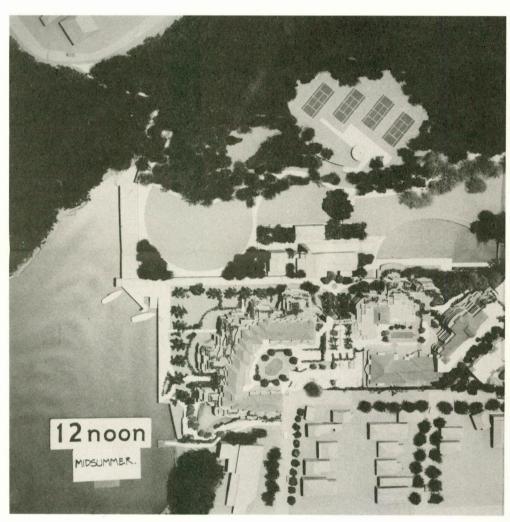
TPQ1507/JSB:PM (5)

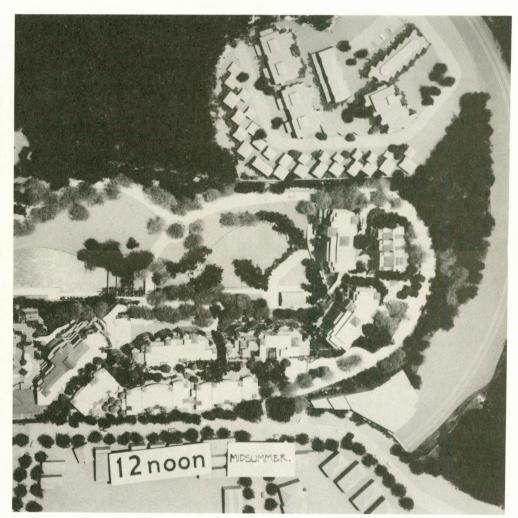
APPENDIX B

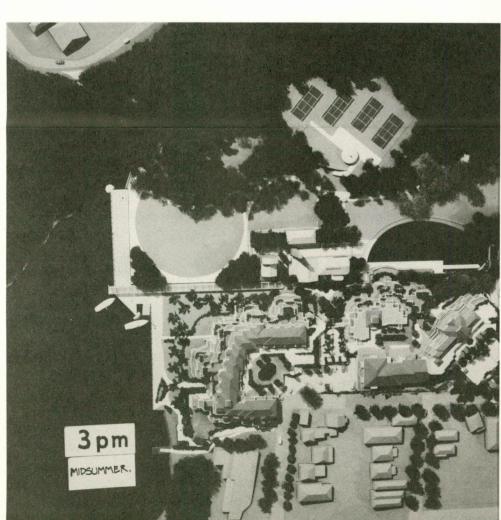
SHADOW ILLUSTRATIONS AND DIAGRAMS

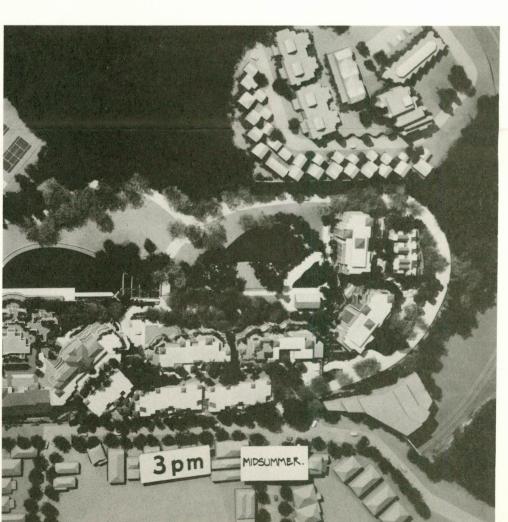


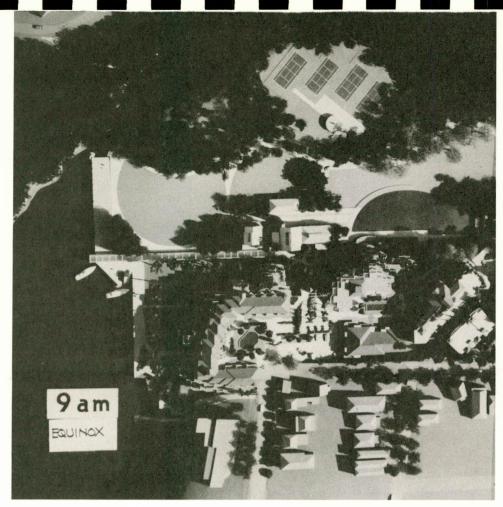


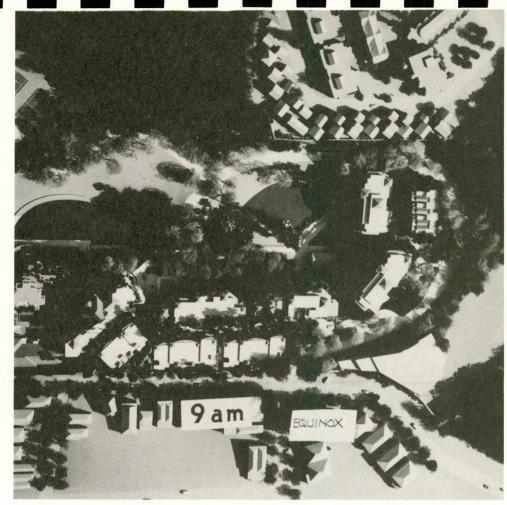


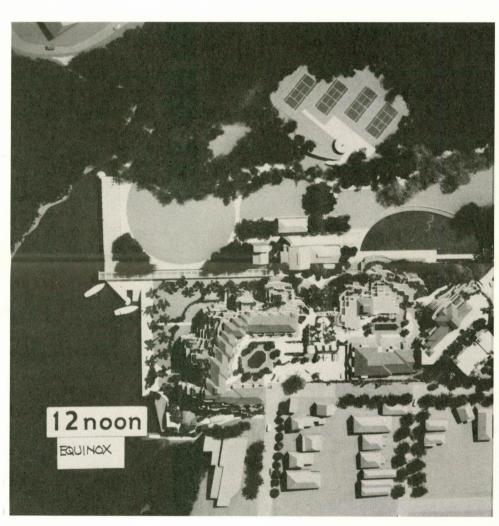


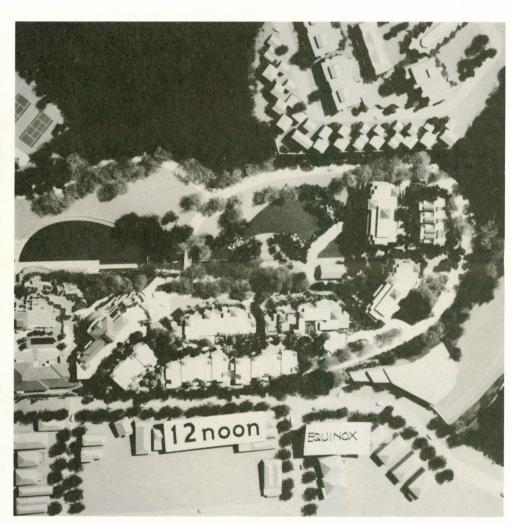


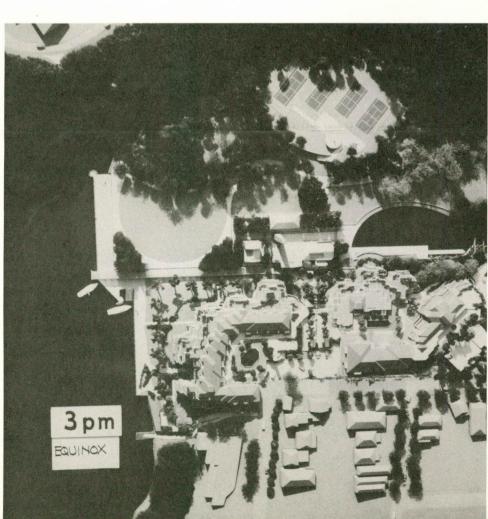






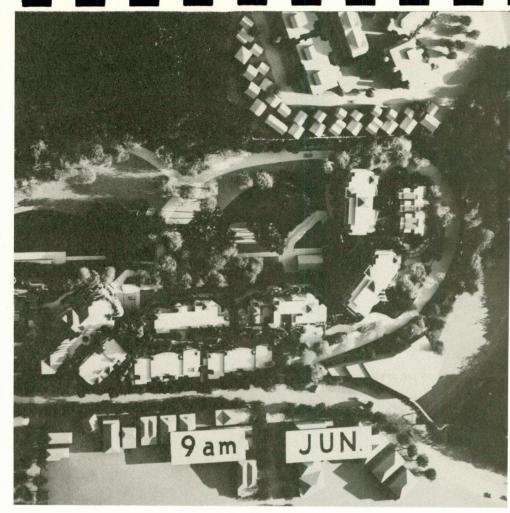


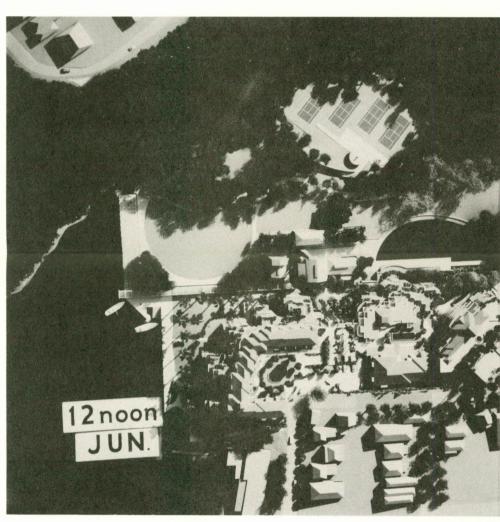


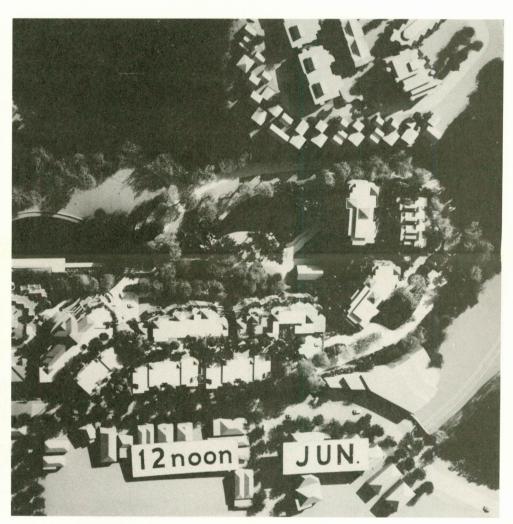


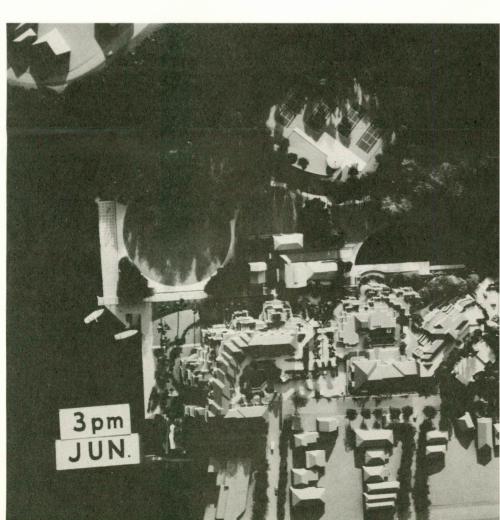




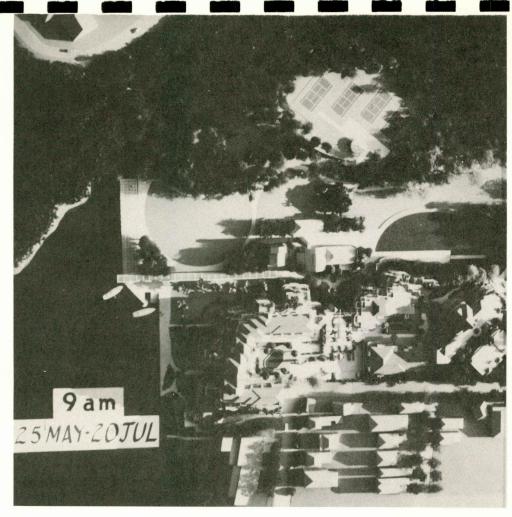


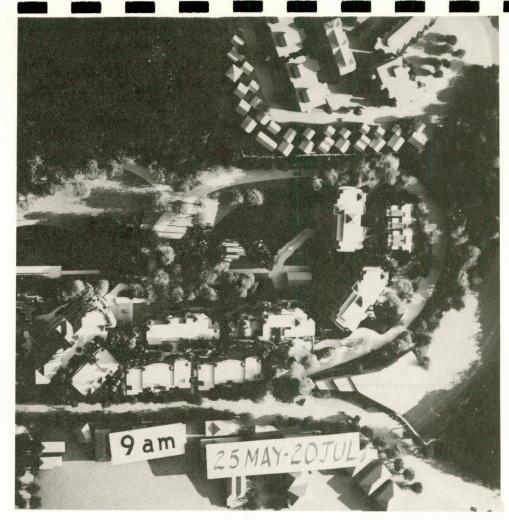


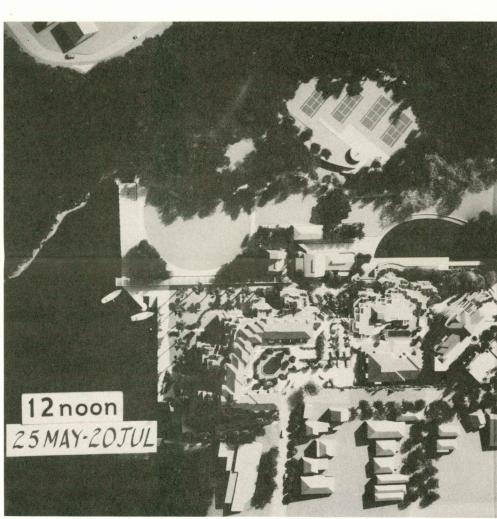


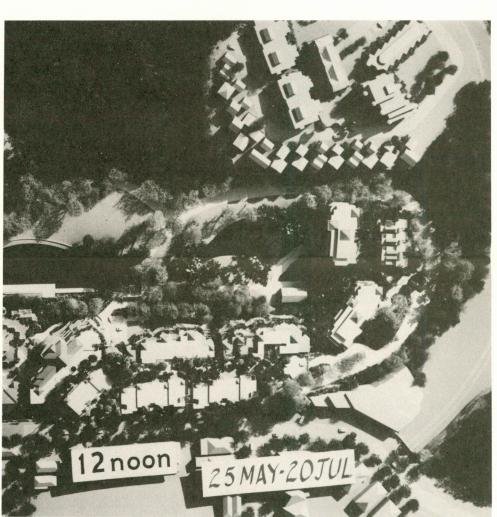


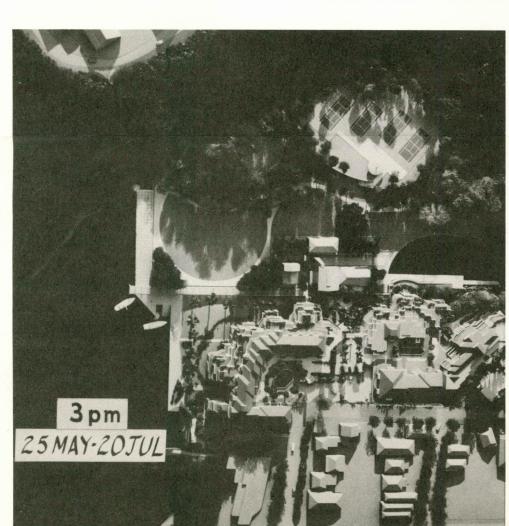


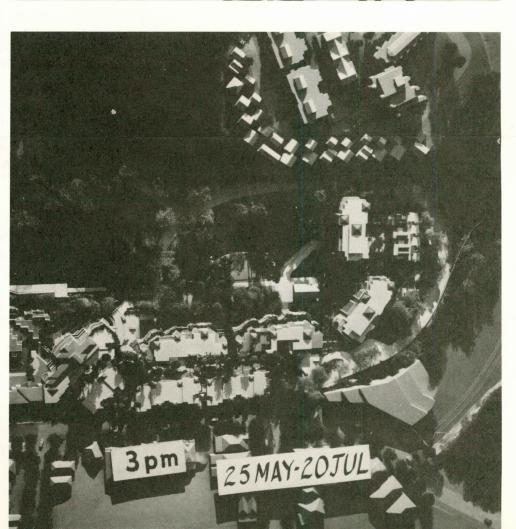


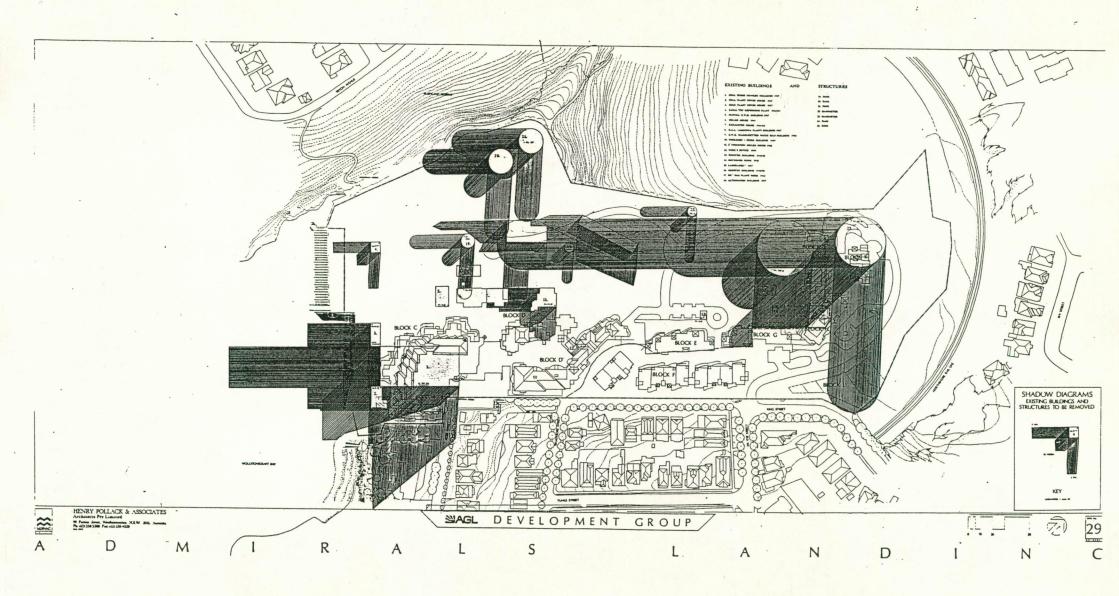


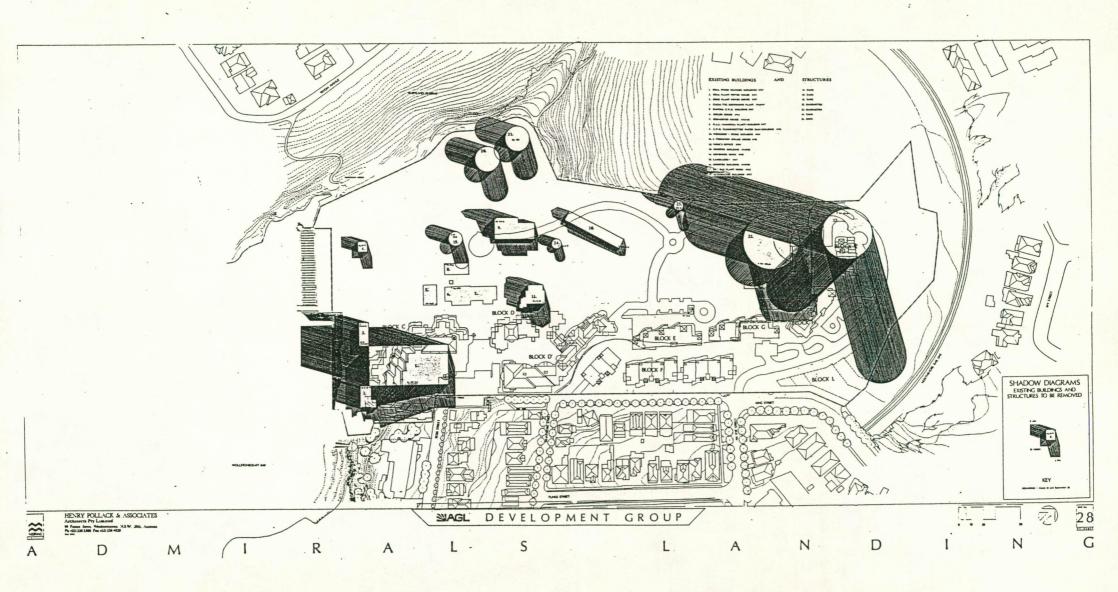


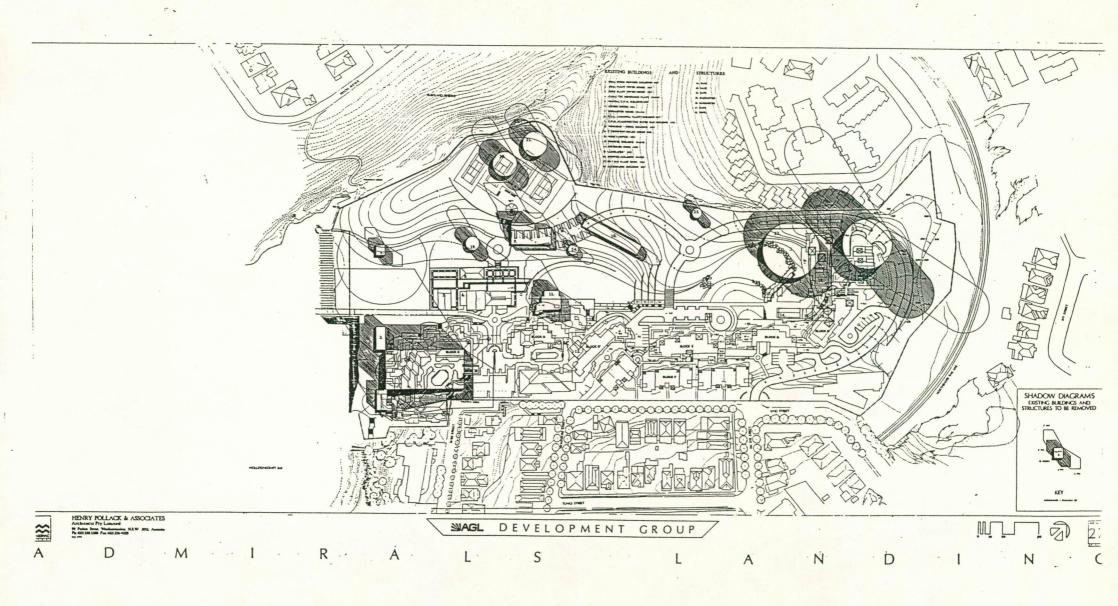












APPENDIX C

OPINIONS ON HERITAGE ISSUES ASSOCIATED
WITH THE BUNKER BUILDING

The National Trust of Australia (New South Wales)



Des

# NATIONAL TRUST

CC. B. Vote R. Smyti

Observatory Hill Sydney NSW 2000

GPO Box 518 Sydney NSW 2001

Telephone (02) 258 0123 Fax (02) 251 1110

Telex TRUST AA74260

RM/06

Your reference: P404/2/3 Pt 6

Doc Nos 200,1100 & 1300

8th June, 1988

Mr R D Kempshall North Sydney Municipal Council PO Box 12 NORTH SYDNEY NSW 2059

Dear Mr Kempshall,

Re: Gas Company Site - King Street, Waverton

Further to our previous correspondence relating to the abovementioned site, I write to advise that representatives from the Trust recently inspected the site, in the company of representatives from MIRVAC Pty Ltd, at their request.

Discussions on site centred around the items being considered for retention in MIRVAC's proposed redevelopment plan. The Company is most unwilling to consider retention of the large coal bunker structure. This clearly is a very significant element of the site but the Trust acknowledges that practical issues may prevent its retention.

It is the Trust's understanding that the Company intends to keep a substantial part of the calorifier building adjacent to the floating gas holder, and the small precinct of early twentieth century buildings clustered aroung the chimney at the southern end of the site. MIRVAC representatives indicated that the carburretered water gas plant, chimney, boiler house and exhauster house would be retained, but that structural problems might affect the retention of the sulphate plant building. The Trust believes that the sulphate plant building is an integral component of the precinct, and that it should remain regardless of the amount of work required to stabilize it and remove toxic material. The removal of this building would not only result in the loss of a re-usable space but would also lessen the impact of the heritage character of the historic precinct to be kept.

The Trust urges Council to ensure that <u>all</u> the early buildings in the chimney/boiler house precinct are retained in the proposed redevelopment.

The Trust also advised the developers that special care would need to be taken to maintain the viability of the natural bushland to the north of the site, and to minimise any adverse impact of the development on the natural vegetation on the perimeter of this open space.

Yours sincerely,

C H PRATTEN

Environment Director

Copy for information: Mirvac Pty Ltd - Mr Dick Smyth



# Department of Environment and Planning



The Town Clerk, P.O. Box 12, NORTH SYDNEY 2060 26 Remington Centre 175 Liverpool Street, Sydney 2000 Box 3927 G.P.O. Sydney 2001 DX. 15 Sydney

Telephone: (02) 266 7111 Ext. Telex: DEP NSW 176826 Fax No.: 266 7599

Contact:

Our reference:

HC33137

Your reference:

JSB(TP) P404/2/3 pt.6

Dear Sir,

#### A.G.L. SITE - WAVERTON

I refer to your letter of 25 September 1987 and to subsequent discussions with Mr. Burns of your Council regarding the bunker building on the abovementioned site.

- 2. It is confirmed the Heritage Council has considered the matter and concluded the bunker building to be a significant industrial archaeological item. Further, it should be fully recorded if it is to be demolished with a copy of the records/documentation being lodged with the Mitchell Library.
- 3. In reaching its conclusions, the Heritage Council considered the significance of the items within the context of other potential uses of more relevance to the 1980s.

Yours faithfully,

POV R. POWER

Manager

Heritage and Conservation Branch

BUNKER BUILDING

OPINION FROM ERIC DANIELS,

EMERITUS PROFESSOR OF ARCHITECTURE, SEPTEMBER 1987

#### BUNKER BUILDING AT OYSTER COVE

#### HERITAGE ISSUE

#### 1. Introduction

This statement refers to the possible development of the Oyster Cove Gas Works site at Wollstonecraft Bay and specifically to the future of the existing Bunker Building in such a development.

North Sydney Local Environmental Plan No. 75 provides, inter alia, that:

"the Bunker Building shall not be demolished"

without the consent of Council, and that Council shall not grant consent unless it has made an assessment of -

"the significance of the building ... as an item of environmental heritage in the Municipality of North Sydney."

This statement argues that the Bunker Building should be demolished .

# North Sydney Council

The provisions of the North Sydney LEP 75 for the site which allow for the making safe of the site from the pollution caused by the Gas Works activities over the years, and for residential development with associated commercial, public amenity activities and open public space are sensible and sensitive to the residential and foreshore land uses of the area.

The requirement of the LEP for the retention with appropriate re-use activities for the Boiler House, Sulphate Plant, Carburetted Water Gas Plant, Exhauster House and Chimney is not unreasonable. These structures have a scale and character (though they need extensive renovation) that would be sympathetic with a residential environment. With appropriate community uses they could promote a focus for the residential development and generate a valuable social centre. These buildings are grouped and concentrated towards the centre of the site and would provide a fitting memory of the site's original use when the development is completed.

The Bunker Building does not fit these considerations and possibilities.

## 3. The Bunker Building as Existing

The building is a large, rectangular brick structure approximately 33 metres wide and 66 metres long. It is supported on a high sandstone base so that the parapet coping rises to about 36 metres above the level of the site.

The building originally comprised a large open space approximately nine metres high with open steel trusses and floor made up of hoppers that discharged into vaulted tunnels. These hoppers have been filled and a flat concrete floor poured over the fill. There are a series of arched highlight windows to the open space and an exposed steel truss roof with corrugated steel roofing.

The building is structurally sound; it is massive, imposing and when viewed from the lower level of the site, rises like a fortress.

#### 4. Possible Re-use

Without increasing the bulk of the building three floors of accommodation could be provided. That would mean that only one floor would have windows. (These windows would be the existing highlight windows of the open space). Additional windows would certainly be necessary if the use of the new spaces were to be residential; and would be highly desirable if the re-use were to be commercial.

Such an addition would change the appearance of the building so that is would no longer be the same as the existing Bunker Building. Any historical value of the building would consequently be lost.

Re-use of the building using artificial light and ventilation would seem a possibility but it would be extremely problematical that any activity that would be satisfactory with an artificial climate would be viable in this location at Waverton.

## 5. External Appearance

From any view of the site the Bunker Building is a huge, bulky, fortress-like structure. It has a sheer cliff-like base of sandstone surmounted by a dark brick wall that is punctuated with small arched openings. The building is out of scale with neighbours. From the level of the site near water level the Bunker Building is large and massive; it dwarfs the other existing buildings of the Gas Works site. The Bunker Building gives an overbearing and unfriendly character to the site of the development and is quite out of sympathy with the adjoining residential area. It casts undesirable shadows over the waterfront in the winter when sunshine would be an asset.

#### 6. Summary

The development of the Gas Works site at Oyster Bay for primarily residential purpose is a most appropriate development for this prime harbourside location.

The existing buildings of the Gas Works should be retained, renovated and incorporated in the development to provide a community and social centre for the new complex.

The site must be made safe for residents and visitors from any deleterious pollution that is residue from the working of the site as a Gas Works.

The Bunker Building on the site should be demolished. The building is a sound and imposing brick and sandstone structure but is completely out of scale and character with the area at present. Any re-use of the building would change its external appearance and consequently take away any historical value of the building.

The Building would not enhance any new residential development of the site, and makes no desirable contribution to the existing waterfront and residential area.

The Bunker Building should be demolished.

ERIC DANIELS

Emeritus Professor of Architecture September, 1987 BUNKER BUILDING

OPINION FROM JOHN TOON,

PROFESSOR OF TOWN AND COUNTRY PLANNING, SEPTEMBER 1987

Report on the Heritage value of the Coal Store North Shore Gas Co., Oyster Cove, North Sydney

This report is prepared for Mirvac Pty Limited who, with AGL, have formed a development consortium to redevelop the now disused North Shore Gas Company plant at Oyster Cove.

The site, which is some 8.4 ha in area, is typical of the many waterfront industrial sites developed around Port Jackson from initial settlement to about the 1950's. Many industrial activities relied upon water transport to carry imports/exports to/from their plants and this was frequently the primary locational determinant.

The Oyster Cove plant was planned in 1912 as a coal carbonising plant. Coal was converted into gas that was distributed through the North Shore area for domestic heating, lighting and cooking and for street lighting. Coal was transported to the site by ship which was the primary determinant of the location of the plant on the waterfront. The industrial process was structured around the flow of coal from ship to coal crusher to coal storage, from storage to retorts; gas was piped from the retorts to the gas holder and then to the reticulation system; and coke (the residual material) to on-site storage to be distributed as a fuel. The plant ceased gas production from coal in 1969 but continued in operation based on petroleum products and later reconstituting natural gas until conversion work was completed. There is no longer any need for the plant which is now totally disused. Over the life of the plant annual average coal consumption was about 80,000 tons per annum and average annual gas production was about 12,500 million cubic feet.

The location of the major elements within the site would have been determined by the technology of material flow. The initial wharf appears to have been located in deeper water immediately adjacent to the coal storage building (the concrete wharf and apron to the west was built around 1950 in association with the adoption of the coal transporter/conveyor technology of feeding coal to the storage). Coal was transferred by two conveyor feed systems; the spillage marks from these conveyors are still clearly visible on the south wall of the store. The conveyors entered the store through the two central openings (there were originally

intended to be four conveyors hence the four openings) and traversed the length of the store depositing coal over the bunkers. Coal was fed continuously into the retorts from the bunkers via the twelve shutes on the west side of the store. The retorts were located in a retort house (which no longer exists) aligned along the entire west side, and beyond, of the store extending vertically to the sill-line of the small arched windows to the bunkers and extending some 30 m west of the store. This system was still in operation in the 1950's but about that time the gravity feed system of coal delivery to the retorts was modernised in conjunction with the adoption of new gas making technology.

It would appear that from about 1950 the coal storage has been becoming redundant and it is understood that the coal bunkers have been filled-in with concrete since that time.

The lower and partly reclaimed level area adjacent to the storage housed the retorts which were fed directly from the coal store and sundry associated buildings. Gas from the retorts was piped to the gas holders located on the higher part of the site from which the gas was reticulated to the North Shore area. The coke which was disgorged continuously from the base of the retorts was transferred by Telfer track (an overhead railway system) to coke stockpiles located on the west side of the lower level. There it would most probably have been bagged and carted away. It was used as a domestic fuel.

The coal storage is a substantial building some 64 m long, 32 m wide and standing some 35 m above the level partially reclaimed area. The lower 20 m is built of sandstone blocks hewn from the site when the site was being prepared for construction of the plant. The northern portion of the store appears to sit on the lower levels of the natural sandstone bluff that defines the eastern part of the site; this bluff has been quarried to provide stone for constructing the store. The upper part of the store, that is the top 13 metres, is built of brick; the high parapet hides a lightweight steel-framed roof. Presumably the logic of this structure is that the massed sandstone base has the necessary strength to support the stockpiled coal on the 'floor' (actually in the bunkers)

and that the lightweight upper structure simply provides controlled conditions for storing coal, cover for the internal conveyor distribution system and acceptable working conditions for the workers feeding coal into the bunkers and the shutes that feed the retorts.

The base stonework on the south face is severely eroded due to the effects of intense air pollution (domestic gas-making coal has a high sulphur content), rain and possibly airborne salt. This crumbling is also evident in the stone dressings of the boiler house, sulphate plant and exhauster house indicating a high level of pollution in these structures. All these buildings have been exposed to high levels of pollution and the elements. In contrast the stone base of the west wall of the coal store does not show the same level of erosion because it was for most of its life an internal wall of the retort house. Nevertheless the lower part of the northern end of this wall does show signs of decay due to the effects of natural drainage from the sandstone bluff behind the face wall. The condition of the upper brickwork is good. Overall the coal store is structurally sound.

The changes to the gas making process moving first to naptha and later to natural gas, together with changes in the technologies of both manufacture and transporting of materials has brought about many significant changes to the physical arrangements on site. Progressively the store has become redundant and its associated activities have been substantially amended or removed. The consequence is that the coal store no longer reads as an integral part of a much larger complex – it is a residual element that impresses more by its bulk than by its comprehensibility. It is only a partial remnant of a complex process.

#### Assessment

The coal store was originally an integral part of an industrial process (the making of gas) the most important elements of which are no longer either in place or, as far as is known, in existence. Whilst the bulkiest component of the industrial complex that once occupied this site the absence of the other components renders virtually useless the coal store as either representative of or even a recognisable component of the

original industrial process. It is, of course, conceivable that the original gas works could be reconstituted in some way to represent the original industrial process. However it is easy and in many ways more effective to represent such processes by models, diagrams, flow charts or such like; it is not necessary to retain the coal store to demonstrate the particular process.

The sheer bulk of the coal store is impressive; the visual impact might be regarded as being sufficient to warrant conservation. Of itself this would be insufficient reason, in my view, to conserve the coal store. Were the architectural or engineering design qualities exceptional there may be greater argument for conservation but there is no suggestion on the part of any authority that this particular building has such qualities. In my view it has qualities that are attractive but not of such distinction or distinctiveness to warrant conservation on visual or aesthetic grounds.

Most gasworks had coal stores of some form or other but this kind is relatively uncommon. However the example at Neutral Bay, which is now used by the Royal Australian Navy as an ammunition store (an excellent use), is believed to be a comparable example in a better state of repair (it had a shorter active life), is architecturally superior and, being in Government hands, has both current utility and greater potential for conservation should that be deemed desirable. Like the subject example it is similarly devoid of the contextual industrial framework of which it was an integral part.

This review indicates that the coal store is not an item of such significance that it warrants conservation.

The conservation of the coal store is not necessary because there are other, and superior, ways of imparting understanding of the industrial process of which it was a part than could be achieved with conservation of this item.

The conservation of the coal store is not necessary because it is not of such visual, architectural, engineering or aesthetic significance to require

conservation. In this respect the visual significance is limited to the views from the locality and the views from the harbour. The item does not have regional or metropolitan significance (it is, for instance, almost unknown compared with the Wool Stores of Ultimo; it is only about a third of the size of the A.M.L. and F. Wool Store) and the impact is largely regarded as negative in the locality although that is not a view that this writer necessarily shares.

The economic effects of conservation of the coal store are three-fold.

Firstly, the coal store is not well suited to other uses and I understand that it is a matter of specialist concern that the stone walls and particularly the south wall, may harbour residual poisons as do the stone retaining walls that separate the upper from the lower protion of the site. If that be so the uses to which the store could be put would be severely limited. Alternatively, replacement of much of the stone could overcome such concerns only at very considerable cost.

Secondly, the configuration of the coal store does not lend itself without considerable adaption to other uses. Setting aside Council concerns over certain uses such as commercial office space, such uses would have to be highly compromised (on such a favourably located site) by, for instance, being designed to look inward to an atrium when logic clearly indicates that the superb panaromic harbour views over Balls Head Bay offered by the site of the coal store should be turned to advantage. The coal store does not have an obvious economic use although it can be converted to other uses at a sub-optimal level.

Thirdly, conservation of the coal store would adversely affect the conversion of the old North Shore Gas Co. site to residential uses. Specifically, the location of the coal store at the critical interface between the site and the harbour severely diminishes the potential of the site as a residential precinct. It is possible to conceptualise a number of design solutions that are compatible with conservation of the coal store. Some of these might, for example, replicate the original abutting components such as the crusher house on the south wall and the

retort house on the west wall. Such solutions would be compatible with conservation of the coal store and would reduce the visual impact of bulk that is the dominant characteristic of the coal store in its present condition. However if it is the latter characteristic that is sought to be conserved, that is the physical bulk of building, then a degree of isolation of the item is required that is not, in my opinion, appropriate, nor is it an adequate reason for conservation. The latter approach would have the most severe impact on the future utility of the site as a residential development.

The economic grounds for the conservation of the coal store lack any conviction or persuasion; the direct and indirect costs appear to far outweigh some rather vague benefits.

#### Conclusion

The conservation of the coal store at Oyster Cove is not necessary as it is not an item of State significance and has only limited significance as a representative item of a particular industrial process. It is not linked to any technologically significant event, an event of social significance or a significant personality.

The economic implications fo conserving the coal store are substantially negative; a positive economic assessment requires that the conservation intent be so compromised as to question the value of such conservation.

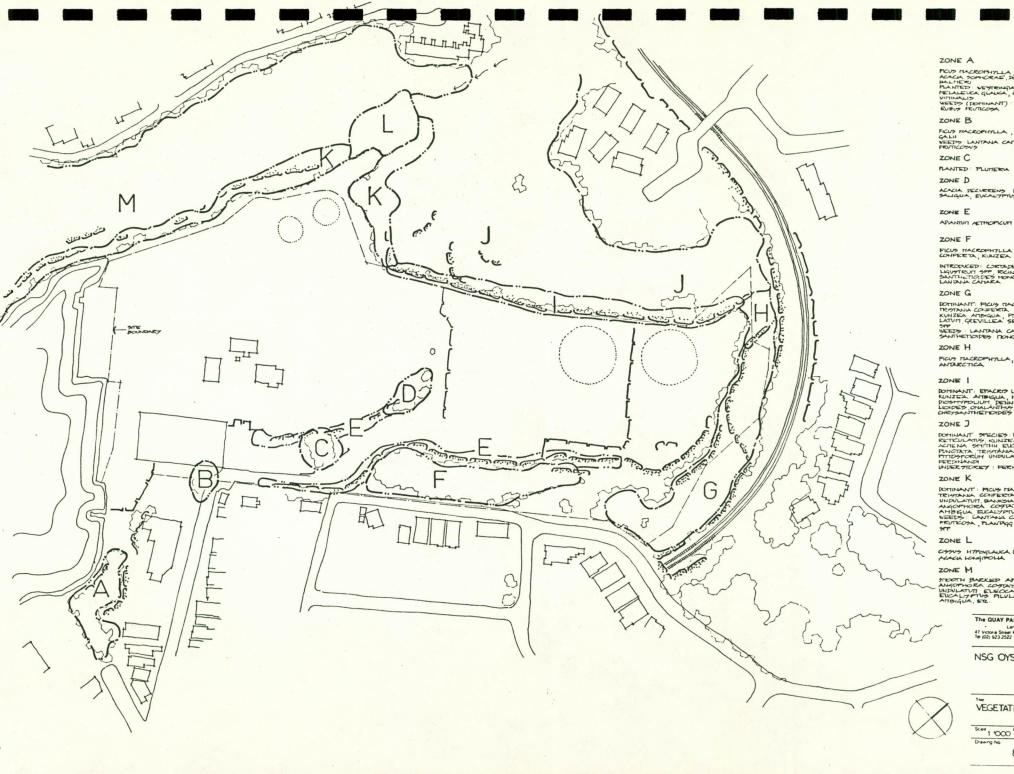
The conservation of the coal store is not necessary.

John Toon

9 September 1987

APPENDIX D

**EXISTING SITE VEGETATION** 



PRUD THACROPHYLLA, FRUD RUBIGIODA
ACACH DOPHORAE, IDENANTHED
ACACH DOPHORAE
ACACH
AC

FICUS MACROPHYLLA, ERTTHRINA CRITIC GALII VEEDS LANTANA CATARA RUBUS FRUTICOSNS

PLANTED PLUMERA ACUTIFOLIA

ACACIA DECUREENS EUCALTITUS

FICUS HACROPHTLLA, TRISTANIA CONFERTA, KUNZEA ATBIGUA

INTRODUCED: CORTADERIA SELLOMA LIGUSTRUITI SPP. RICHUS SPP. CHEY-SANTHETIO DES HONOLIMERA LANDAN CATARE

DOMINANT: FIGUS MACROPHYLLA MESTANIA CONFERTA KUNZEA ATDIGGIA, PITTOSPORUM UNDU-LATUM CREVILLEA SERICEA, PUTENNEA STEP VIELDS: LANTANA CATARA CHRY-SAMMETOSPES MONOLIFERA

FICUS MACROPHYLLA, DICKYONIA

DOMINANT: EPACRO LONGIPLORA KUNJETA AMBIGUA, HELICHRYSUM POSTATPOLIUM DENNYSTAEDTIA PANA-LICIDES CHALANTHIS TOPULFOLIUM CHCYSANTHEMODES MONOLIFIERA

DOMINANT PIECIES ELECCARTUS RETICULATUS KINIZEA ARBIQUA ACTIENA STATHH ELECALISTUS PUNCTATA TEISTANIA CONFECTA PUNCTATA TEISTANIA CONFECTA PUTTOS PORTUNES UN UNIVERSITUS PECCHIDION FECCIONALIS

POPINANT: PICUS HACROPHYLLA
TEMPANA CONFERTA, PITTOSPORUH
UNDULATUI, BANSON, INTERFEDULA
ANGOPHORA COSTATA, SUNZEA
ANGOPHORA COSTATA, SUNZEA
MINETEDIA
MINET

CISSUS HTPOGLAUCA (DOMINAUT)

STEATH BACKED AFFLE ASS.

ANGOPHORA COSTATA PITTOPORUM
UNDULATUM ELECCARADA RETT.

EUCALTYFTUS PILVLARIS, KUNZEA
AMBIGUA, ETZ.

The QUAY PARTNERSHIP Pty Ltd Landscape Architects
47 Victoria Street McMahons Point 2060
Tei (02) 923 2522

NSG OYSTER COVE

VEGETATION SURVEY

Scare 1 1000 Dave JUNE 183

838.5

#### ZONE A : HORACE STREET TO WATERFRONT

With the exception of some planted native trees and shrubs near Horace Street the vegetation cover is a dense layer of native shrubs and low trees with climbers and weeds to a considerable portion, and scattered figs. Cleaning from adjoining sites has resulted in invasion of introduced plants. The area requires extensive cleaning and reinstatement work to achieve a pleasant effect. The area has good potential for lookouts, sitting areas etc., using the natural sandstone outcrops, species include

Ficus macrophylla Ficus rubiginosa Acacia sophorae Doryanthes palmeri

Planted: Westringia fruticosa Melaleuca glauca Callistemon Viminalis etc.,

#### ZONE B : ACCESS TO EXISTING JETTY

Introduced trees with extensive weeds to understorey species include :

Erthyrina crista galii Rubus fruticosa Lantana

## ZONE C : BUILDING FOREGROUND 1

Decorative exotic planting currently maintained by the site occupants species include:

Plumeria acutifolia

#### ZONE D : BUILDING FOREGROUND 2

Decorative native planting currently maintained by the site occupants species include:

Acacia decurrens Eucalyptus saligna Eu. pilularis

# ZONE E : CLIFF EDGE ADJACENT TO ROSS STREET

Relative undisturbed community on the original cliff surface, with some pioneering plants in crevices.

## ZONE F : CLIFF TOP ADJACENT TO KING STREET

Dominated by weeds encouraged by dumping of rubbish. Some remnants of the indigenous vegetation exist, and are being suppressed by the weeds. Species include:

- Native : Kunzea ambigua

Tristania conferta Ficus macrophylla

Introduced : Ligustrum spp

Cortaderia sel·loana

Ricinus spp Rubus fruticosus

Chrysanthemoides monolifera

## ZONE G : RAILWAY EMBANKMENT

Some valuable individual native species (e.g. figs) are generally dominated by introduced shrubs and luxuriant weed over, especially at the fringe. The more exposed sandy soils contain heath type vegetation. Species include

Ficus rubiginosa
Ficus macrophylla
Tristania Conferta
Pittosporum undulatum
Kunzea ambigua
Grevillea Sericea
Pultenaea spp

## ZONE H : GULLEY/DRAIN

Small area developing the characteristics of swamp vegetation due to drainage conditions, including a small but well established group of Dicksonia antar.

# ZONE I : WEST CLIFF EDGE

Inhabited by simple vegetation comprising shrubs and heath plants. Species include:

Epacris longiflora, Kunzea ambigua Dennstaedtia davalioides Helichrysum diosmyfolium Chrysanthemoides monolifera

# ZONE J : NORTH WEST SLOPES

General absense of large trees or diverse species indicates man's interference. Moist vegetation towards watercourse has understorey of ferns. Species include:

Kunzea ambigua
Eleocarpus reticulatus
Acmena smithii
Tristania conferta
Pittosporum undulatum
Glochidion ferdinandi
Eucalyptus punctata
Understorey: ferns and grasses

#### ZONE K : WEST WATERFRONT

Abrupt changes in level and sandstone outcrops results in a richness of species composition. There are also some significant fig trees. Where the stormwater pipes has been constructed there is evidence of weed invasion. Species include:

Ficus macrophylla
Tristania conferta
Pittosporum undulatum
Banksia integrifolia
Eucalyptus pillularis
Angophora costata
Kunzea ambigua

Weeds : Lantana

Rubus fruticosus Tussilago spp Taraxacum

## ZONE L : BASE OF GULLEY

Area dominated almost entirely by Cissus hyperglauca, with some wattles (Acacia longifolia) near the watercourse.

# ZONE M : WESTERN SLOPES

Smooth barked Apple association invaded by lantana and blackberries on the road embankment. Species include:

Angophora costata
Pittosporum undulatum
Acmena smithii
Elaeocarpus reticulatus
Kunzea ambigua
Epacris longifolia
etc.,

