

Concept Plan Application under Part 3A

Environmental Assessment Potts Hill Reservoirs Land

Prepared on behalf of

Landcom & Sydney Water Corporation

Cité Urban Strategies



June, 2008

Submission to Department of Planning

Concept Plan Application Under Part 3A

Environmental Assessment

Potts Hill Reservoirs Land
Brunker Road/ Cooper Road, Potts Hill

Prepared on behalf of
Landcom and Sydney Water Corporation

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Statement of Veracity

This Environmental Assessment has been prepared in accordance with the requirements of Part 3A of the Environmental Planning & Assessment Act, 1979. The information it contains has been prepared on the basis of assessments carried out by a range of specialist consultants, and information provided by the client/s. It has been prepared in good faith, and to the best of my knowledge, is neither false nor misleading.

Signed



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EXECUTIVE SUMMARY

Background and broad overview of proposals

Sydney Water Corporation (Sydney Water) has been investigating its operational land requirements at a site in Potts Hill that has been used for water storage and distribution since the 1880s (referred to in this report as the Potts Hill '**Reservoirs land**'). Those investigations identified that a portion of the property is no longer needed for Sydney Water's operational purposes, and could be investigated for alternative uses (referred to in this report as the '**redevelopment land**'). The remainder of the land is to be retained by Sydney Water for on-going water storage, treatment, management and distribution (referred to in this report as the Sydney Water '**retained land**').

Landcom entered into an agreement with Sydney Water to investigate suitable uses for the redevelopment land.

This Concept Plan Application and Environmental Assessment relates principally to the proposals for the redevelopment land, comprising 15.3 hectares suitable for employment/ business park uses, 19.8 hectares suitable for residential uses, and 4.9 hectares suitable for public open space.

The employment/ business park precinct has the potential to accommodate in the order of 800–900 jobs.

The concept planning for the residential precinct indicates that it has the capacity for around 410 dwellings, comprising around 230 predominantly detached dwellings, and two medium density sites that have the capacity for about 180 apartments or seniors housing.

This report addresses the proposals for the redevelopment land and its rezoning.

Recent history of planning action related to this application

In June 2007 Sydney Water and Landcom sought confirmation from the Minister for Planning that the proposals were consistent with Part 3A of the *Environmental Planning & Assessment Act* (EP&A) and that the redevelopment land could be considered as a State Significant Site under State Environmental Planning Policy (SEPP) (Major Projects) 2005 (Major Projects SEPP). The Minister approved consideration of the proposals under Part 3A and agreed to consider the Reservoirs land as a State Significant Site on 14 July 2007.

A Project Outline and Preliminary Assessment and a Planning Study in support of State Significant Site status were submitted to the Department of Planning in September 2007. The Department circulated the Project Outline and Preliminary Assessment to agencies for comment, and on that basis issued the Director-General's Requirements (D-GRs) for this Environmental Assessment on 2 October 2007.

Since the lodgement of those documents and the responses from the Department, the proposals have undergone some refinement, comprising an enlargement of the area proposed for employment/ business park in order to accommodate the proposed uses, a reconfiguration of the areas within the residential precinct proposed for open space following discussions with the Council, and further refinement of the mix of residential development (resulting in the identification of additional residential capacity).

Details of the site

The Reservoirs land includes 116 hectares, containing the Potts Hill Reservoirs and an adjacent parcel of land on Bagdad Street (0.7ha), illustrated on Figure ES 1, which also highlights the redevelopment land not required by Sydney Water for operational purposes, as well as the land to be retained by Sydney Water. The redevelopment land comprises 40 hectares, while the Sydney Water retained land amounts to the remaining 76 hectares (2/3rds of the site).

The retained land provides sufficient area for Sydney Water's current and potential future expansion of water supply, treatment and water management facilities.



A Conservation Management Plan (CMP) endorsed by the Heritage Council in 2005 contained a proposal for the reduction in the extent of the SHR boundary to reflect areas required for Sydney Water's ongoing operations on the site.

Action has been taken to revise the SHR boundary to reflect the operational land to be retained by Sydney Water, generally in accordance with the proposals contained in the endorsed 2005 CMP.

Technical investigations

Investigations into the redevelopment land have addressed the issues of European heritage, ecology (flora and fauna), environment (soil and groundwater contamination), geotechnical conditions, traffic and transport, social and community planning, servicing and utilities, and Indigenous archaeology. The findings of these investigations have been taken into account in the preparation of a concept plan for the redevelopment land, outlined in this Environmental Assessment.

Technical reports from these disciplines are included as appendices to this submission.

Overview of the land use concept for the redevelopment land

The concept plan for the redevelopment land is illustrated on Figure ES 2, which shows the residential/ open space precinct in the western part of the site (including the Bagdad Street land), and the employment/ business park precinct in the eastern part of the site.

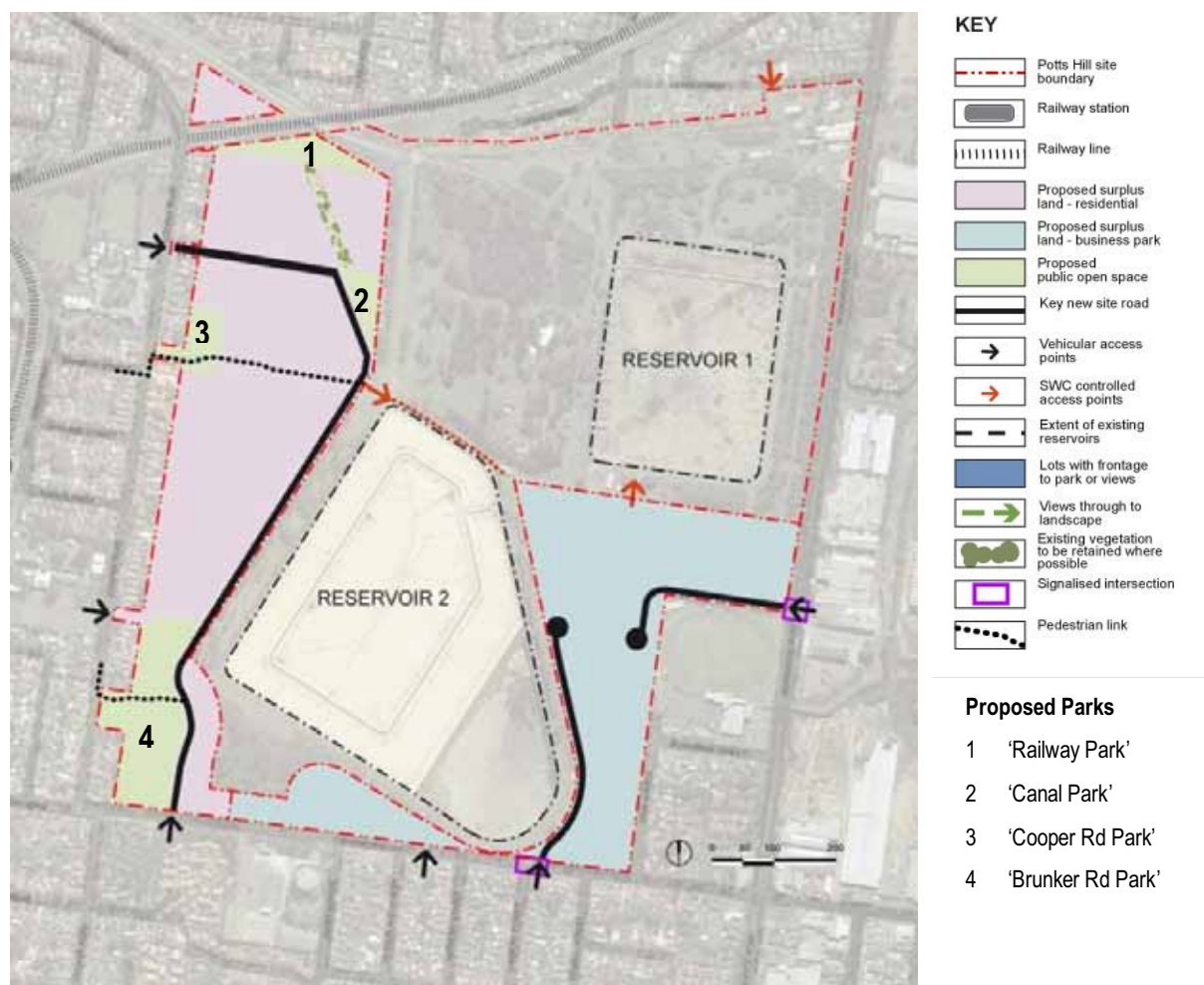


Figure ES 2 – Potts Hill Reservoirs site, land use concept

Proposed uses within the employment/ business park precinct

A number of proposed uses have emerged for the employment/ business park precinct, and the needs of these uses have informed the planning parameters sought:

- Sydney Water identified a 5 hectare site that would be retained for a new field headquarters complex to accommodate Sydney Water operations currently distributed across the Potts Hill site and at other locations. It will accommodate around 450 employees in a mix of office accommodation, warehouse and workshop buildings, open storage, car parking and landscape areas.
- The NSW Police Force has expressed an interest in relocating a number of key business units currently located within the Green Square Town Centre (Zetland) to Potts Hill. Relocation is required by 2010. Police require around 3 hectares of land. The new facility will accommodate around 400 employees. Installations will comprise a number of low-rise office-style buildings, garages and workshops up to two storeys, hard stand/ open storage areas, and parking and landscape areas. It will also need to accommodate one or two 30m communications antennae, and an emergency helicopter landing pad for occasional use. The helipad will be sited to ensure that there are no unacceptable impacts on nearby residents.
- TransGrid have requested a parcel of about 2.4 hectares on Rookwood Road for an electricity substation. It will be a long, low rise building of about two storeys with landscaping around its perimeter.
- In addition, EnergyAustralia is also interested in acquiring around 2 hectares on Brunner Road for a works depot, which will employ about 50 people. It will comprise offices, workshops/ garage up to two storeys, and car parking and landscape areas. This site is in the location of existing SWC administration buildings.

Agency and community consultation by Sydney Water and Landcom

Throughout the preparation of the proposals for the redevelopment land at Potts Hill, regular discussions have been held with senior officers of Bankstown Council, and Councillors have been briefed.

Briefings have also been held with the NSW Heritage Council since 2006. A request will be made to the Council to revise the boundary of the reservoirs site that appears on the State Heritage Register (SHR), in accordance with the principles of the CMP endorsed by the Heritage Council in 2005.

Discussions have been held with the Department of Environment and Climate Change (DECC) in respect of a package of biodiversity-related measures consistent with 'biodiversity certification' under the *Threatened Species Conservation Act 1995*.

Consultation has occurred with the Roads and Traffic Authority (RTA) and the Ministry of Transport (MoT) on the transport-related effects of the proposals, and suitable impact mitigation measures.

As part of the social sustainability assessment for the proposals, a number of government and non-government organisations have been consulted, including Health, Education, employment agencies, and community service agencies.

Consultation has commenced with the local community through newsletters informing them of the assessments undertaken and of the proposals, as well as an information booth at the Birrong shops in conjunction with a Bankstown Council 'road show'.

Sydney Water has also made Potts Hill available for tours as part of Bankstown City Council's Heritage Week.

Outcomes sought from this application

The following specific outcomes are sought, outlined in further detail in this submission:

Redevelopment land

- Approval as a State Significant Site in accordance with the provisions of State Environmental Planning Policy (Major Projects) 2005;
- Rezoning from its present Special Uses (Bankstown LEP) and Residential 2(a) zoning to a combination of Business Park, Residential, and Public Recreation, in accordance with the new 'LEP Template' zone designations;
- Planning provisions for the site embodied within a draft amendment to the State Environmental Planning Policy (Major Projects) 2005, by inclusion of the redevelopment land in Schedule 3 of the SEPP. The planning provisions include permissible uses, development parameters, and development guidelines for complying development;
- Approval of the future application and approvals regime, also to be reflected in the amendment to Schedule 3 of the Major Projects SEPP;
- Concept plan application for the employment land, and the residential land, including approval of the key development parameters relating to maximum development density and building height;
- Adoption of proposed design guidelines for residential development (excluding residential flat buildings and housing for seniors or the disabled) as controls for complying development;
- Approval of a draft statement of commitments outlining the package of proposed impact mitigation measures.

Retained land

- Approval of the use of the disused Reservoir 1 for the storage of inert fill, and/ or storage of stormwater or recycled water, in lieu of approval under Section 60 of the Heritage Act; and
- Approval of the package of biodiversity measures (in lieu of biodiversity certification under the Threatened Species Conservation Act) in recognition that the net results of the package mean that development of the redevelopment land will not have any significant environmental impact on vegetation communities and species.

Conclusions

The proposals for the Potts Hill Reservoirs land incorporate a balance between the need to retain land for Sydney Water's on-going water storage, treatment, management and distribution operations, and the need for appropriate management of its land assets. Sydney Water has determined that the retained land is adequate for its current and future needs.

The proposals for the redevelopment land have been developed through a rigorous assessment of all relevant environmental, social and planning issues.

The proposals for the employment/ business park precinct reflect a significant level of coordination between government agencies in identifying suitable employment uses that will bolster the employment opportunities in the local area.

The residential precinct is suitable for a range of dwelling types that take advantage of its physical attributes, views, and its proximity to employment areas, rail and bus services, schools and other essential services. A substantial area of vegetated land, and part of an existing park-like area have been identified for dedication to Bankstown Council as part of four public open space areas. The residential precinct and its open space will make a significant contribution to the amenity of the local area.

The residential development will integrate well with the surrounding area and provide a range of new housing options for the community.

While the redevelopment proposals will result in the modification of the landscape and landform, the loss of some vegetation, additional traffic on local roads, and additional demands on community services and facilities, suitable management measures through funding and works have been identified (outlined in a draft Statement of Commitments) to address these potential impacts.

In summary, the redevelopment proposals are not expected to result in any unacceptable or unmanageable environmental or social impacts. Indeed, the residential and employment outcomes will make sound use of the site. These uses are consistent with the Government's and the Council's objectives of making better use of existing infrastructure in established areas. Furthermore, the proposals will assist both Bankstown Council and the NSW Government in achieving the employment and housing targets under the metropolitan strategy for Sydney, and the sub-regional strategy for the West Central Sub-Region.

Appropriate impact management measures are available and will be implemented to address any issues to ensure that the proposals make a positive contribution to the local area.

On the basis of the information contained in this Environmental Assessment, the Minister is requested to approve the proposals for the redevelopment land under the provisions of Section 75J of the EP&A Act, and to amend Schedule 3 of the Major Projects SEPP with the planning provisions for the redevelopment land outlined in this submission.

1 INTRODUCTION

This section of the report provides the background to the project, outlines the contents of the submission, the issues raised by the Department in respect of a preliminary outline of the proposals, an overview of site characteristics, list of investigations carried out, consultation, alternatives considered, and consistency with relevant plans, policies and strategies.

1.1 Background

This submission relates to land at Potts Hill that is part of Sydney Water's ownership associated with the Potts Hill Reservoirs - land which accommodates a range of water storage, distribution and management facilities (referred to throughout this report as the Potts Hill **'Reservoirs land'**). A location plan is provided at Figure 1.

It comprises a request for inclusion of the land suitable for redevelopment (referred to throughout this report as the Potts Hill **'redevelopment land'**) as a State Significant Site under State Environmental Planning Policy (Major Projects) 2005 (Major Projects SEPP), along with appropriate new planning provisions.

It also comprises a Concept Plan Application and Environmental Assessment under Part 3A of the *Environmental Planning & Assessment Act* in accordance with the guidelines for Part 3A Applications for the redevelopment land.

The proposals for the redevelopment land comprise a combination of residential, employment/ business park, and public open space uses.

The remaining part of the Reservoirs land which will be retained by Sydney Water for on-going water storage, treatment, management and distribution is referred to throughout this report as the Sydney Water **'retained land'**.

The Reservoirs land, redevelopment land, and retained land are shown on Figure 2.

The steps leading up to this application include the following:

- Sydney Water and Landcom requested authorisation from the Minister for Planning that the proposals for the redevelopment land were consistent with Part 3A of the *Environmental Planning & Assessment Act* (EP&A) and that the redevelopment land could be considered as a State Significant Site under the Major Projects SEPP in June 2007;
- Ministerial approval (Declaration under clause 6 of the Major Projects SEPP) for consideration of the redevelopment proposals under Part 3A was issued on 14 July 2007, along with agreement to consider the Reservoirs land as a State Significant Site;
- A Project Outline and Preliminary Assessment, and a Planning Report in Support of State Significant Site status were submitted to the Department of Planning in September, 2007; and
- The Director-General's Environmental Assessment Requirements (D-GRs) for the Environmental Assessment were issued by the Department of Planning on 2 October 2007.

Since the lodgement of the Project Outline and Preliminary Assessment and the issue of the D-GRs, the proposals have undergone some refinement, comprising an enlargement of the area proposed for employment/ business park in order to accommodate the proposed uses, a reconfiguration of the areas proposed for public open space, following discussions with the Council, and further refinement of the mix of residential development resulting in the identification of additional residential capacity.

These changes are outlined in this report.

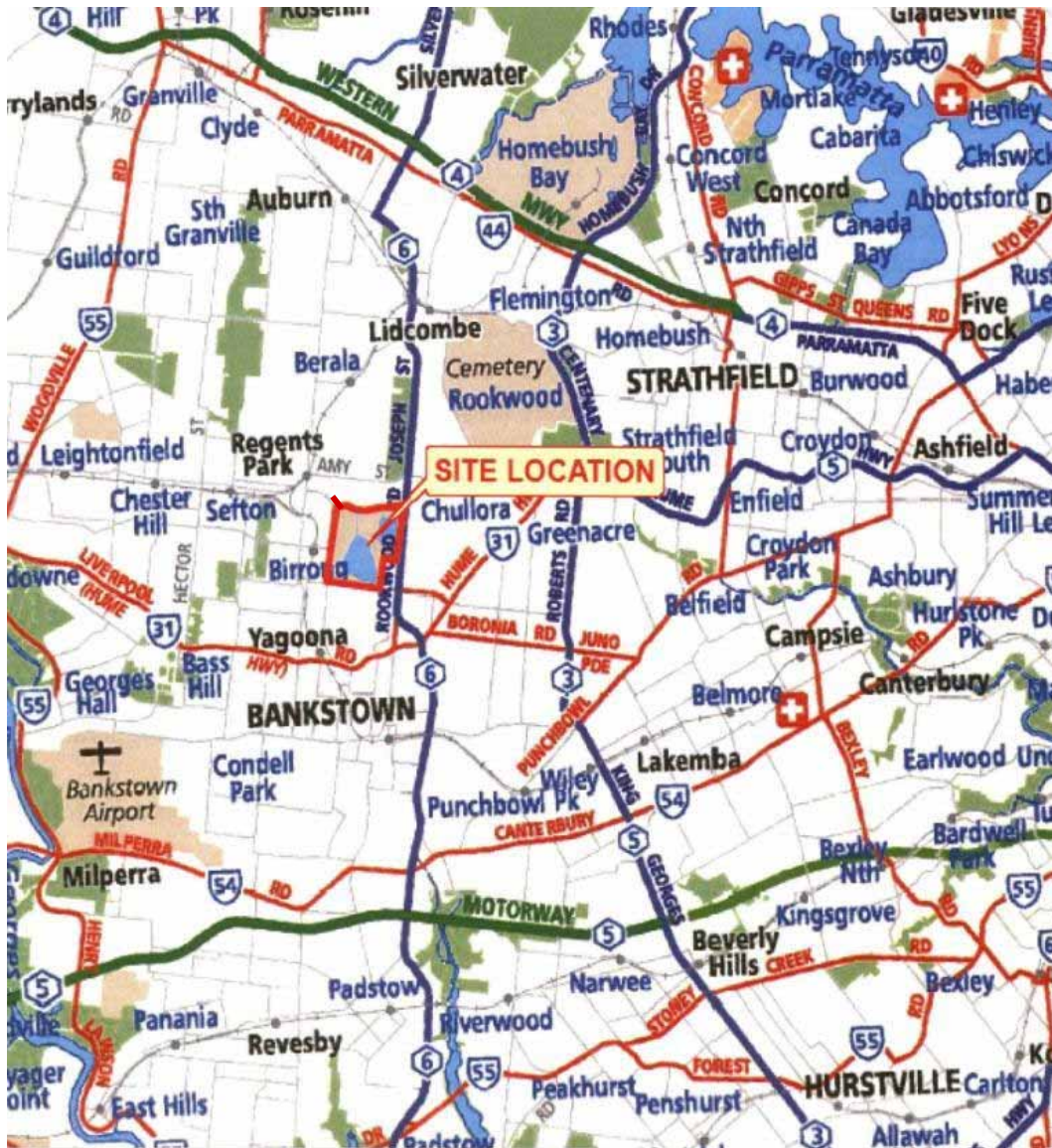


Figure 1 – The location of the Potts Hill Reservoirs land

1.2 Project objectives

Sydney Water and Landcom have agreed that the development and delivery of the Potts Hill project must be carried out in a manner which:

- (a) minimises conflicts between Sydney Water's operations on the Retained Land and the future land uses of the Surplus Land;
- (b) provides a balance between economic, social and environmental objectives;
- (c) is commercially sound, responsive to the market and utilises the land efficiently;
- (d) integrates new development into the existing locality, taking account of local transport, services infrastructure and social infrastructure;
- (e) provides for the demographic needs of the local area by providing a range of housing choice;
- (f) is designed, implemented maintained and controlled to achieve a natural and built environment of excellence;

- (g) strives to deliver ecologically sustainable development;
- (h) incorporates innovations in all aspects of the design, construction and delivery processes, with particular emphases on the landscape, water management and utilities; and
- (i) respects and responds to the natural environment of Potts Hill and its surrounds.

1.3 What this submission comprises

This submission consists of the following, in accordance with the D-GRs:

- An executive summary;
- A cross-reference table identifying the issues raised in the D-GRs and identifying the relevant section of this submission that deals with those issues;
- A description of the land that is the subject of this application;
- An outline of the proposed project;
- Details of agencies that Sydney Water and Landcom have consulted over the course of developing the proposal;
- The investigation process undertaken, including the disciplines involved, and the technical assessments carried out;
- Alternative developments considered for the land;
- A detailed site analysis;
- The key issues that emerged from site investigations;
- An outline of the proposals for the land and proposed impact amelioration measures;
- An assessment of the likely environmental impacts arising from the proposals;
- A draft statement of commitments addressing the proposed impact mitigation measures and other requirements for future applications; and
- Draft amendment to Schedule 3 of the Major Projects SEPP, reflecting the preferred outcomes for the site.

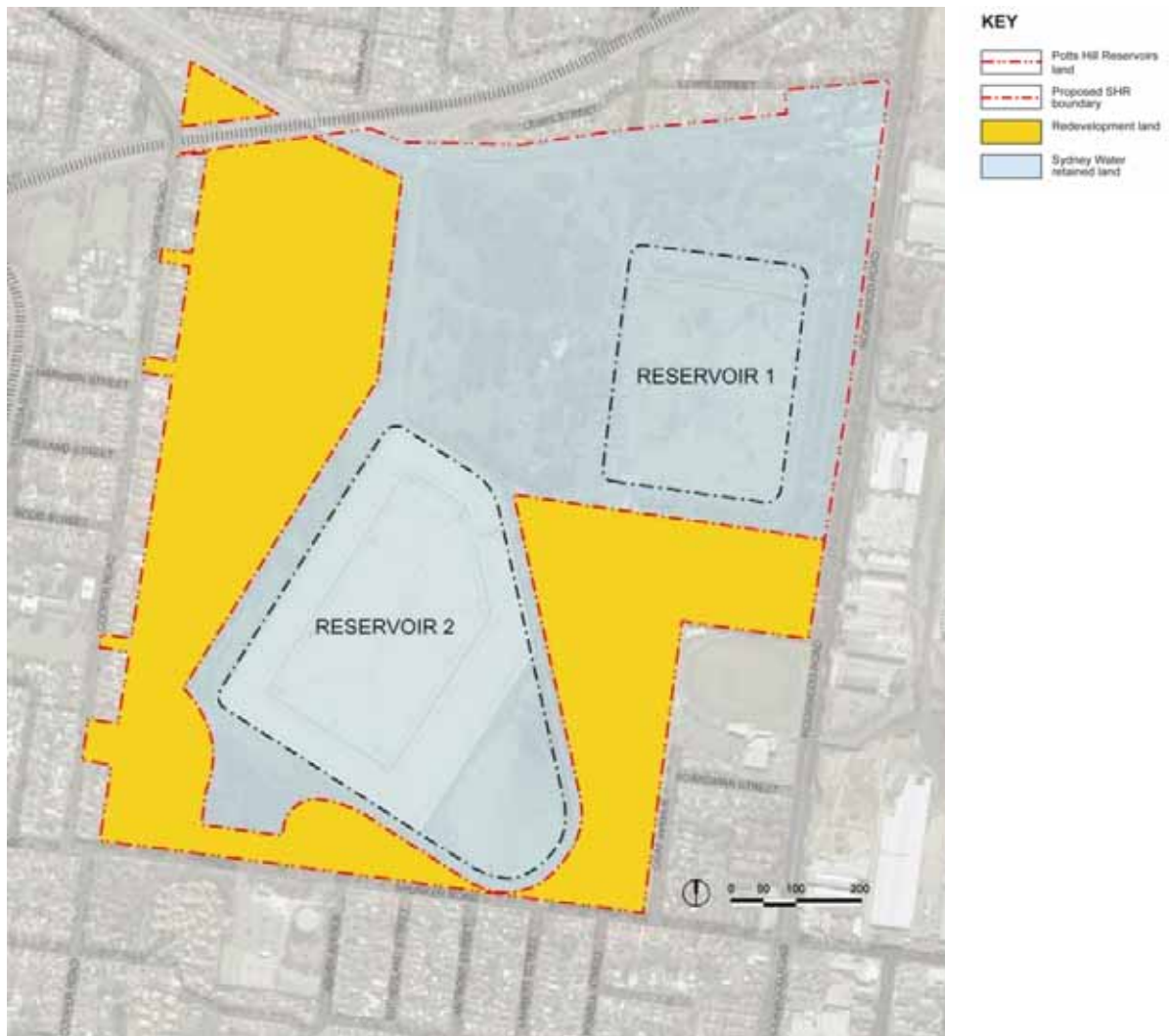


Figure 2 – The Potts Hill ‘Reservoirs land’, ‘redevelopment land’ and Sydney Water ‘retained land’

1.4 Issues raised in the Director-General’s requirements

The issues raised in the D-GRs are summarised in Table 1 with the relevant sections of this report, and appendices.

A full copy of the D-GRs is also located at Appendix A.

TABLE 1 – DIRECTOR-GENERAL'S REQUIREMENTS

| SUMMARY OF ISSUE RAISED | RELEVANT SECTION OF THIS REPORT AND APPENDIX |
|---|--|
| Heritage | |
| Detail national, state and local heritage significance of the site – Aboriginal – including places listed on the national heritage list and protected under the EPBC Act | Section 2.10 and Appendix E |
| Detail national, state and local heritage significance of the site – non-Aboriginal – including places listed on the national heritage list and protected under the EPBC Act | Sections 2.3, 3.11, 4.1 and Appendix L |
| Heritage assessment, heritage impact statement and Conservation Management Plan should be prepared in accordance with NSW Heritage Office guidelines | Sections 2.3, 3.11, 4.1 and Appendix L |
| Assess the impacts of the application on the area and any significant components of the site | Sections 2.3, 3.11, 4.1 and Appendix L |
| Urban design and built form | |
| Demonstrate that the type, bulk, scale, size and design quality on the site respond to the location (and the location's wider context) and its character and function appropriately | Section 2, 3.1, 3.2, 3.4, 3.9, 3.10, 4.6, and Appendix G, H, I and K |
| Outline the existing and proposed footprints, GFA, heights, materials, colours, and footprints as well as landscaping. | Section 2, 3.1, 3.2, 3.4, 3.9, 3.10, 4.6, and Appendix G, H, I and K |
| Public open space | |
| Provision of publicly accessible open space | Section 3.3 and Appendix G, H and O |
| Long-term management and maintenance of any areas of open space | Section 3.3 and Appendix G, H and O |
| Long-term management and maintenance of any areas of conservation | Section 3.12, Appendix B and Appendix O |
| Ownership and control, management and maintenance of funding public access revegetation and rehabilitation works | Section 3.12, Appendix B and Appendix O |
| Biodiversity | |
| Impacts on Endangered Ecological Communities, threatened species and their habitat as listed under the NSW Threatened Species Conservation Act and the EPBC Act | Sections 2.4, 3.12, 4.3 and Appendix B |
| Visual impact | |
| Address the visual impact of the project in the context of adjoining development | Section 4.6 |
| Impact on any heritage items (on-site or in the vicinity) | Sections 2.3, 3.11, 4.1 and Appendix L |
| Impact of the development as viewed from publicly accessible areas | Section 4.6 |
| Traffic | |
| Detailed traffic impact study in accordance with the <i>RTA Guide to Traffic Generating Developments</i> | Sections 2.9, 3.5, 4.5, Appendix D and Appendix O |
| Address peak volumes, existing and proposed traffic volumes | Sections 2.9, 3.5, 4.5, Appendix D and Appendix O |

| SUMMARY OF ISSUE RAISED | RELEVANT SECTION OF THIS REPORT AND APPENDIX |
|--|---|
| Identify suitable treatments to ameliorate any traffic and safety impacts associated with the development, such as identification of pedestrian movements and appropriate treatments | Sections 2.9, 3.5, 4.5, Appendix D and Appendix O |
| Demonstrate compliance with relevant Council and RTA traffic and car parking codes | Sections 3.5, 4.5, Appendix D and Appendix O |
| Utilities infrastructure | |
| Existing capacity, constraints and requirements of the development for sewerage, water, waste disposal, wastewater treatment, recycled water, gas, electricity, telephone and sewerage in consultation with relevant agencies | Sections 2.11, 3.18, 3.19, 4.8, Appendix F and Appendix O |
| Impacts on water quality and drainage | Sections 2.11, 3.18, 3.19, 4.8, Appendix F and Appendix O |
| Potential on-site and offsite impacts on the quality of surface water and groundwater. | Sections 2.11, 3.18, 3.19, 4.8, Appendix F and Appendix O |
| Ecologically sustainable development | |
| Demonstrate how the development will commit to ESD principles in design, construction and ongoing operation phases | Sections 2.11, 3.18, 3.19, 4.8, Appendix F and Appendix O |
| Energy savings action plan | |
| (1) Demonstrate that the development is capable of achieving the requirements of BASIX and what (if any) commitments will be made on other environmental rating tools such as Greenstar and the Australian Building Rating Scheme. | Sections 3.18, 3.19, 4.8, Appendix N and Appendix O |
| (2) Prepare an energy savings action plan in accordance with the requirements of the DWE and the <i>Guidelines for Energy Savings Action Plans</i> , DEUS 2005. | Sections 3.18, 3.19, 4.8, Appendix N and Appendix O |
| Development staging | |
| Development staging should be clearly addressed and justified in detail | Section 3.14 |
| Infrastructure staging | Section 3.14 |
| Annual targets for housing and job production linked to infrastructure provision | Section 3.14 |

1.5 Site description, location and context

The Reservoirs land is located in Sydney's middle ring suburbs, approximately 16km west of the Sydney CBD, 9km south-east of Parramatta and 2.5km north of Bankstown. It is located in Potts Hill within the Bankstown and Auburn local government areas (LGAs).

It consists of a large parcel bounded by Rookwood Road to the east; Brunker Road to the south; residential dwellings and Cooper Road to the west; Graf Avenue and a greyhound racing club to the south-east; water supply pipeline and the Southern Sydney Freight Rail line to the north, as well as a smaller adjacent parcel on Bagdad Street - a triangular parcel of land approximately 0.7 hectares in size - located north-west of the large parcel with frontage to Bagdad Street.

Rookwood Road, and the Hume Highway (around 1 kilometre to the south) provide arterial road connections to the metropolitan road network.

Birrong rail station is located within 400m walking distance of the subject land.

The Reservoirs land is approximately 116 hectares, and contains one operating reservoir (Reservoir 2), one reservoir (Reservoir 1) decommissioned in 2000, major water supply infrastructure including pumps, pipe work, and associated works depots, administration buildings, technical services, and storage and maintenance facilities. It plays a key role in supplying water for

metropolitan Sydney. Some areas contain remnant vegetation and vegetation regrowth, as well as cultural plantings. The original landform on much of the site was altered during the construction of the two reservoirs.

The Reservoirs land (except the Bagdad Street parcel) is listed on the NSW State Heritage Register, with a number of buildings and other infrastructure elements having state and local significance. It is also listed as a heritage item in Bankstown Local Environmental Plan (LEP) 2001. The water pipeline is listed as a heritage item under Auburn LEP 2000.

The Bagdad Street parcel is presently unoccupied.

Surrounding land uses include residential, industrial, schools and recreation as shown on Figure 3.



Figure 3 – Potts Hill Reservoirs land in its context highlighting key transport and land uses

The subject land comprises the lots listed in Table 2, and shown on Figure 4.

TABLE 2 – DESCRIPTION OF SYDNEY WATER'S POTTS HILL RESERVOIRS LAND PROPOSED USES

| LOT | DP | AREA (HA) | DESCRIPTION | PROPOSED USE |
|--------------|--------|----------------|---|---|
| Lot 2 | 456502 | 10.2 | Elongated lot down western side of Potts Hill Reservoirs land | Part Residential/ Part Public Recreation |
| Lot 2 | 225818 | 104.7 | Large lot covering majority of Potts Hill Reservoirs land | Part Business Park/ Part Residential/ Part Public Recreation |
| Lot 11 | 16924 | 0.0607 | Lot on Cooper Road | Residential |
| Lot 23 | 16924 | 0.1113 | Lot on Cooper Road | Public Recreation |
| Lot 55 | 16924 | 0.09169 | Lot on Cooper Road | Residential |
| Lot 64 | 16924 | 0.05944 | Lot on Cooper Road | Public Recreation |
| Lot 65 | 16924 | 0.06197 | Lot on Cooper Road | Public Recreation |
| Lot 66 | 16924 | 0.08347 | Lot on Cooper Road | Public Recreation |
| Lot 67 | 16924 | 0.08347 | Lot on Cooper Road | Public Recreation |
| Pt Lot 1 | 610303 | 0.702 | Lot on Bagdad Street – Draft DP prepared | Residential |
| TOTAL | | 116.154 | | |

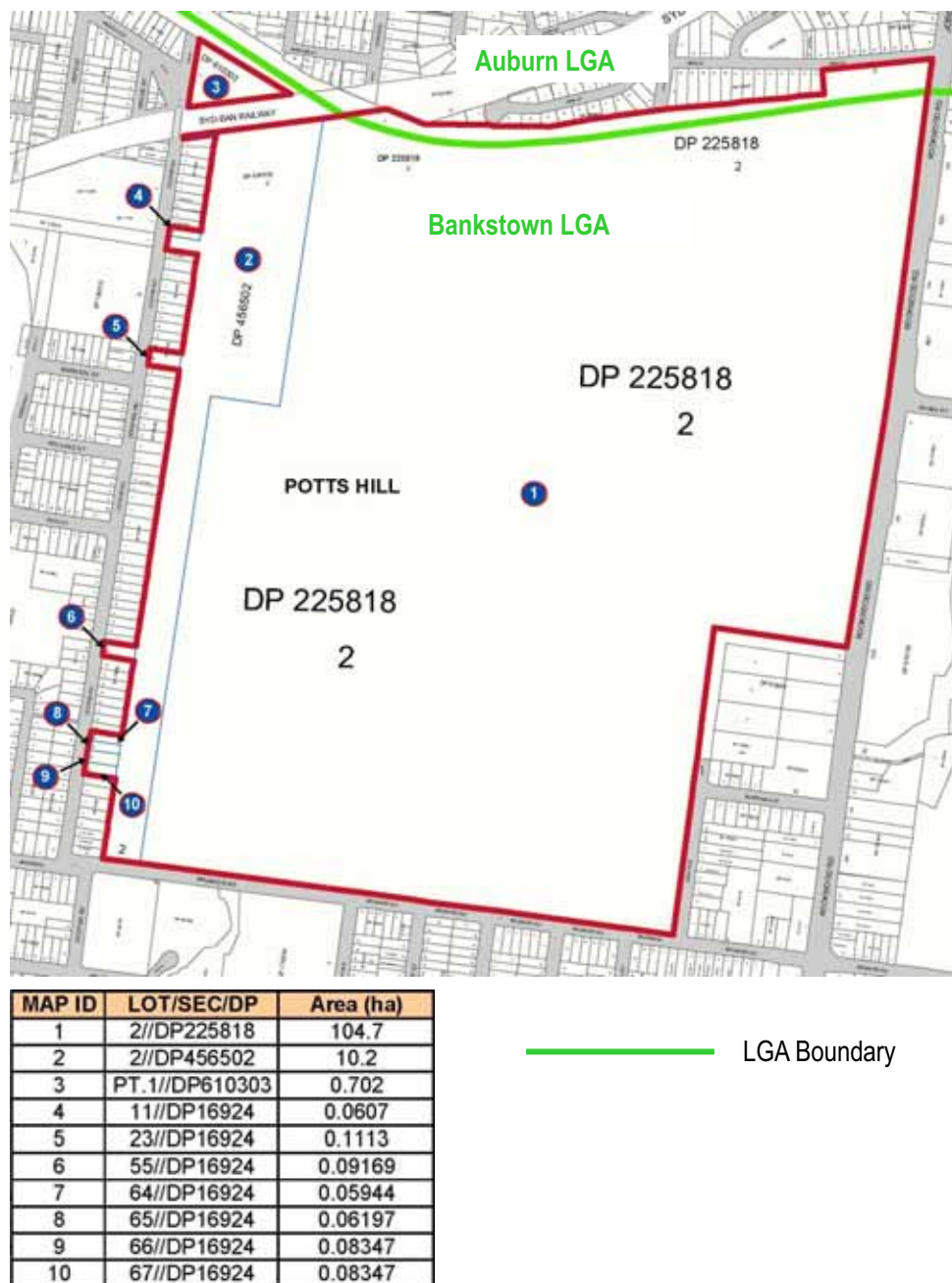


Figure 4 – Cadastral plan of the Reservoirs land and subject lots

1.6 Investigations undertaken for this application

A series of assessments has been undertaken to assist in identifying key issues and potential risks to the redevelopment of Potts Hill, as well as to inform the proposals for the site, its potential impacts and to identify suitable mitigation measures. These studies have included the investigation of:

- European heritage;
- Indigenous archaeology;
- Ecology (flora and fauna);

- Geotechnical engineering;
- Environmental (soil and ground water contamination);
- Services and utilities (water, sewer, power, stormwater, etc);
- Water and energy efficiency and sustainability initiatives;
- Traffic and transport;
- Social planning and community sustainability;
- Urban design;
- Landscape and visuals; and
- Planning.

Copies of technical reports for these disciplines are included in the Appendices.

1.7 Agency and community consultation

Throughout the preparation of these proposals the following agency and community consultation has been carried out by Landcom and Sydney Water:

- Regular discussions with senior officers of Bankstown Council, and briefing of Councillors;
- Briefings of the NSW Heritage Council on the proposals since 2006;
- Discussions with the Department of Environment and Climate Change (DECC) in respect of a package of biodiversity-related measures for the reservoirs site consistent with the *Threatened Species Conservation Act 1995*;
- Discussions with the Roads & Traffic Authority (RTA) and the Ministry of Transport;
- As part of the social sustainability assessment for the proposals, a number of government and non-government agencies have been consulted through discussions and a workshop including Health, Education, employment agencies, community service agencies; and
- Consultation with the local community through newsletters informing them of the assessments undertaken and of the proposals, as well as an information booth at the Birrong shops in conjunction with a Bankstown City Council 'road show'.

In addition, as part of a communication and consultation strategy for Potts Hill, Landcom and Sydney Water have conducted the following:

- Survey of local residents regarding the proposal and consultation with a local environmental group;
- Letters to MPs and Government Departments were attached to a copy of the newsletter;
- A newspaper advertisement announcing the project;
- Issuing of a project media release on 20 July, 2007; and
- Establishment of a Project '1800' number providing information for the community.

1.8 Alternatives considered for the redevelopment land

Alternative uses have been considered for the redevelopment land as outlined in Table 3.

TABLE 3 – ALTERNATIVE USES CONSIDERED FOR THE REDEVELOPMENT LAND

| AREA | ALTERNATIVE USE CONSIDERED | RATIONALE FOR PROPOSED LAND USE |
|------------------|----------------------------|---|
| Western precinct | Employment uses | Employment uses were found to generate negative amenity impacts on surrounding residents, when compared with residential development. Principal causes include changed traffic conditions; higher truck movements on local roads; increased road safety concerns for residents and students; two schools in close proximity with students using local roads; potential noise and other impacts from extended operating hours. |
| Eastern Precinct | Residential uses | A site for Sydney Water field headquarters and other government and utilities purposes emerged during the investigation period. These uses were considered a superior use of the land to residential use due to past activities on the site, proximity to transport services, the ability to achieve valuable employment outcomes, consistency with past use of the land, and compatibility with surrounding uses. |

1.9 Consistency with state and local plans, policies and strategies

A Planning Report in Support of State Significant Status for the Potts Hill site was submitted to the Department of Planning with the Project Outline and Preliminary Assessment in September 2007. That report outlined the consistency of the proposals with Part 3A of the *Planning & Assessment Act*, *State Environmental Planning Policy (SEPP) (Major Projects) 2005*, and the *Metropolitan Strategy for Sydney – City of Cities* (December 2005).

Consistency with other relevant legislation, plans, policies and strategies are discussed below.

Contaminated Land Management Act

Future remediation works to be the subject of applications for consent where necessary will fully address the Contaminated Land Management Act.

SEPP 65 – Design Quality of Residential Flat Development

The proposals outlined in this Concept Plan Application do not seek approval for residential flat buildings, although it seeks a rezoning of land to allow for residential flat buildings. Future applications for development consent for residential flat buildings will fully address the requirements of SEPP 65.

Draft SEPP 66 – Integrating Land Use and Transport

The proposed rezoning of the Potts Hill Reservoirs land for a combination of residential, open space and employment/ business park uses, on a site close to public transport and existing services and facilities, and the potential to create a permeable street system for the residential area which allows for cycle and pedestrian travel, are consistent with the aims and objectives of this draft SEPP, which are listed below.

'This Policy aims to ensure that urban structure, building forms, land use locations, development designs, subdivision and street layouts help achieve the following planning objectives:

- (a) improving accessibility to housing, employment and services by walking, cycling, and public transport,*
- (b) improving the choice of transport and reducing dependence solely on cars for travel purposes,*
- (c) moderating growth in the demand for travel and the distances travelled, especially by car,*
- (d) supporting the efficient and viable operation of public transport services,*
- (e) providing for the efficient movement of freight.'*

SEPP 55 – Remediation of Land

Future remediation works, to be the subject of applications for consent, where necessary will fully address the requirements of SEPP 55.

SEPP 19 – Bushland in Urban Areas

The ecological assessment and package of biodiversity measures proposed for the Sydney Water retained land addresses the principles and objectives of SEPP 19. The proposals will result in a net improvement in the biodiversity of the Potts Hill site.

SEPP (Building Sustainability Index: BASIX) 2004

All dwellings will be capable of meeting the design and sustainability parameters established under BASIX. These parameters will be addressed in subsequent Project Applications or development applications, as relevant.

SEPP (Infrastructure) 2007 – Schedule 3 Traffic generating development

The aims of Schedule 3 of the SEPP are to ensure that the RTA is made aware of, and is given an opportunity to make representations in respect of development referred to in that part of the SEPP.

As part of any future Part 3A Project Application, or an application under Part 4 of the EP& A Act, the RTA will be consulted in accordance with legislative requirements. The RTA has been consulted on the Project Outline and Preliminary Assessment for Potts Hill, and discussions have taken place in the development of this Concept Plan Application.

SEPP (Housing for Seniors or People with a Disability) 2004

The residential component of the Potts Hill site is suitable for and has the potential to meet the needs of housing for seniors and people with a disability. Should any future development applications be prepared under Part 4 of the Act, then it will be required to comply with this SEPP.

Bankstown Local Environmental Plan 2001

The proposals seek to amend the provisions of Bankstown LEP 2001 related to the zoning and permissible land use to enable appropriate redevelopment to occur.

Auburn Local Environmental Plan 2000

While part of the Reservoirs land falls within the Auburn LEP, there are no redevelopment proposals on that portion of the site relevant to this Environmental Assessment report.

Draft West Central Sub-Regional Strategy

The draft West Central Sub-Regional Strategy has set a target of 95,500 additional dwellings for the five LGAs it contains, including 22,000 for Bankstown.

In addition the Strategy sets a target for additional employment of 61,000 new jobs, of which Bankstown is projected to provide 6,000.

The proposals for the redevelopment land are consistent with the principles of the draft Strategy in that it will:

- make better use of land resources in an established urban area;
- take advantage of public transport and other essential services and facilities;
- provide for a wide range of dwelling types giving housing choice to a community with changing demographics; and
- create significant and meaningful employment opportunities for the local community.

2 SITE ANALYSIS AND KEY ISSUES

2.1 Introduction

This section outlines the key characteristics of the Reservoirs land, the nature of surrounding uses, and the issues associated with development of the redevelopment land.

2.2 Site characteristics

The Reservoirs land has been used for water infrastructure and associated purposes since the late 1800s, with the construction of a water pipeline (1886-1888), followed by Reservoir 1 (1886), and Reservoir 2 (1922).

A series of aerial photographs between 1930 and 1986 (see Figure 5 – Figure 9) illustrates the variety of uses accommodated over time, and the development of the surrounding area, as well as the evolution of the vegetation, including original areas of tree coverage and subsequent cultural planting, regrowth and regeneration.



Figure 5 – Aerial photograph, Potts Hill 1930



Figure 6 – Aerial photograph, Potts Hill 1951



Figure 7 – Aerial photograph, Potts Hill 1961



Figure 8 – Aerial photograph, Potts Hill 1970



Figure 9 – Aerial photograph, Potts Hill 1986

2.2.1 Topography and slope

The Potts Hill Reservoirs land is located on a north-south ridgeline between Birrong and Chullora that reaches a maximum height of RL 66m, at a point between Reservoir 1 and Reservoir 2, as shown on Figure 10.

The lowest point on the site is at RL 42m at a number of locations along Cooper Road.

As a result of site modification from the construction of the reservoirs, steep embankments have been created on the eastern and western edges of the site (east and west of Reservoir 2). The gradient of the embankments exceeds one in three in some areas.

The topography of the remaining areas is gently undulating.

The Bagdad St site is gently undulating, with a fall from the pipeline southwards to the freight rail line. None of these characteristics represents a constraint to development.

Due to its elevation above the surrounding areas, views to the Sydney CBD skyline are available from the eastern embankment (near Graf Avenue), and views over western Sydney to the Blue Mountains are available from the top of the western embankment.



Figure 10 – Topography

2.2.2 Landscape character, existing improvements, and views

The site contains a number of buildings and above ground infrastructure. Some areas of the site are dominated by administrative and industrial-style buildings, some of which have heritage value (discussed in Section 2.3). The main built areas are located in the south-east, north-west and north-east corners of the site. There is also a range of infrastructure below ground including tunnels, pipes, and cabling, etc.

The redevelopment land will be cleared of buildings to enable new development to take place. None of these has heritage value.

Site photographs illustrating existing improvements, vegetation areas and views are at Figure 11- Figure 22.



Figure 11 – Potts Hill Reservoirs land from Rookwood Road



Figure 12 – View of Sydney Water administration buildings and car park from Brunner Road



Figure 13 – Existing 'park-like' cultural planting area in north-west of the redevelopment land



Figure 14 – Reservoir 2 from western embankment



Figure 15 – Western embankment looking north from the southern part of the Reservoirs land



Figure 16 – View west from the western embankment towards the Blue Mountains



Figure 17 – Existing maintenance and storage buildings on the western side of the Potts Hill site



Figure 18 – Existing maintenance and storage buildings on the western side of the Potts Hill site



Figure 19 – Storage buildings and hard stand on the Brunker Road frontage



Figure 20 – Buildings and cleared land in the eastern part of Potts Hill site looking south



Figure 21 – Cleared flat area west of Reservoir 2



Figure 22 – Embankment west of Reservoir 2 looking east

The landscape character of the Reservoirs land is illustrated on Figure 23. The key features are:

- The two reservoirs;
- Views to the Sydney CBD from the elevated eastern embankment near Graf Avenue;
- Views to the Blue Mountains from the elevated western embankment; and
- Existing vegetation, comprising original native trees, cultural planting, and exotic planting, shrubs and grasses.

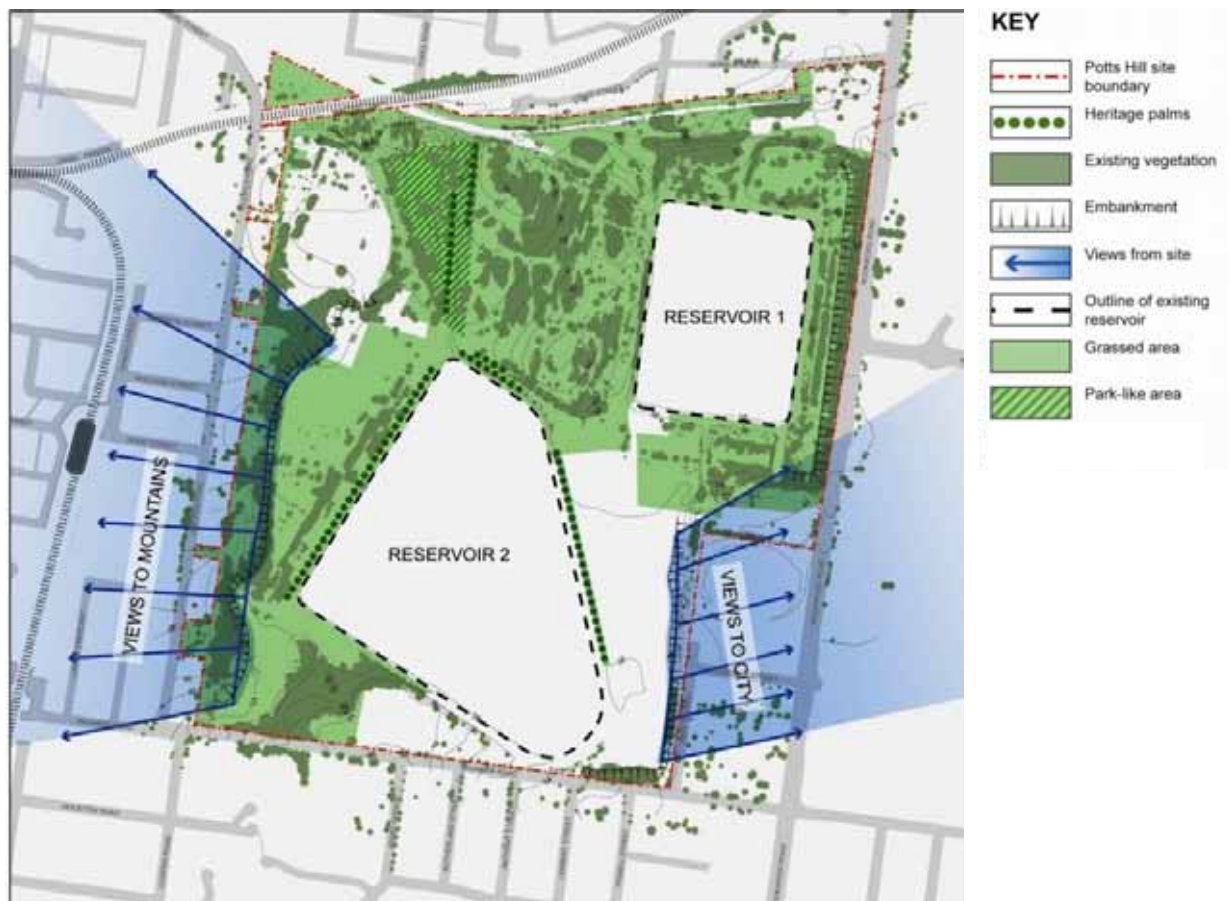


Figure 23 – Landscape character and views

2.2.3 Hydrology

The changes to the landform through the filling of the site as a consequence of the construction of the reservoirs and construction of buildings, parking areas and hard stand areas, has modified the original natural local hydrology.

Minor drainage lines and a range of catchments exist in the western part of the redevelopment land.

The redevelopment will respect the current hydrology and implement best practice drainage management, the details of which are outlined in Section 3.

2.2.4 Character areas of the redevelopment land

Given the topography of the site, vegetation and surrounding activities, distinct character areas have been identified within the redevelopment land, as illustrated on Figure 24. These character areas reflect these components and provide cues for development, and are integral to the redevelopment proposals.

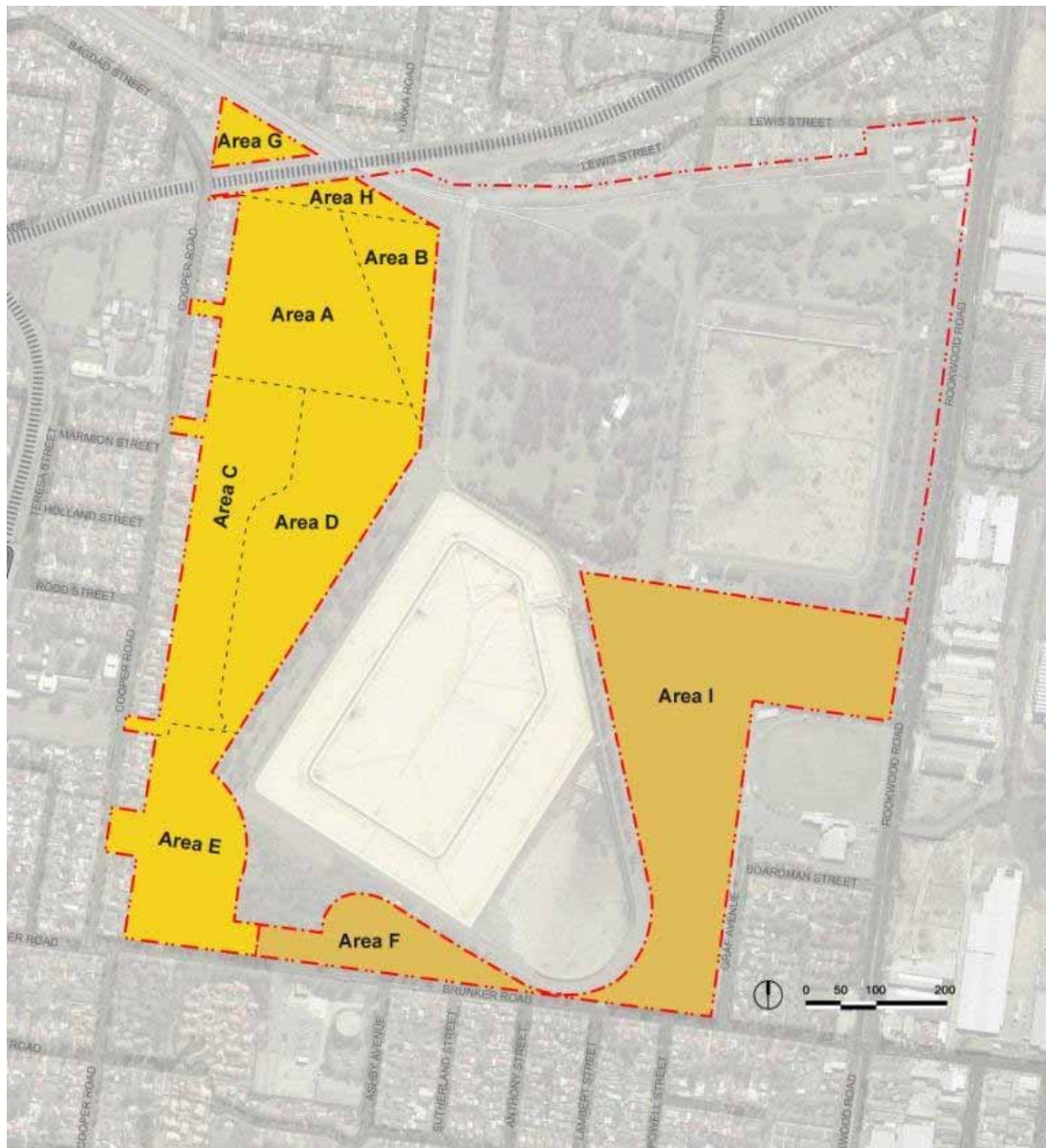


Figure 24 – ‘Character areas’ identified from site analysis for the redevelopment land

A brief description of the particular features of each of the ‘character areas’ within the redevelopment land and their suitability for development are provided below.

CHARACTER AREAS WITHIN POTTS HILL REDEVELOPMENT LAND

- A** Located in the north-west corner, this land falls gradually to the north-west and south-west towards Cooper Road; a small spur runs east-west through the centre; potential views are available to the Blue Mountains from the highest point; east-facing land looks over a row of peppercorn trees to be retained.
- Access to this area will be the main entrance to the residential precinct, via an existing driveway off Cooper Road; views along the entry will be terminated at a proposed park to the east adjacent to the water canal.
-
- B** This area is an elevated, enclosed, 'park-like' area framed by the covered water canal and row of Canary Island palms to the east, a row of peppercorn trees to the west; and a low-lying relatively heavily-vegetated area to the north.
- The elevation and enclosure of this area by trees makes it suitable for higher density development. The peppercorn trees on the western boundary are to be retained and included in the development parcel; it is a high amenity site with views to the west, east and north.
-
- C** Located to the rear of existing Cooper Road residences, this land falls steeply from east to west, from the top of the western embankment to the Cooper Road lots; subject to stabilisation works, the vegetated embankment is to be retained and incorporated into future lots as far as possible; land at the top of the embankment has extensive views to the Blue Mountains.
- This site is proposed to be bounded by areas of open space to the north and to the south; it will be high amenity area due to open spaces; open spaces will need to incorporate stormwater management functions. Special planning and design of this area is needed to ensure a satisfactory amenity outcome for the dwellings on Cooper Road.
-
- D** Located west of Reservoir 2 on top of the embankment; relatively flat elevated land with views to Blue Mountains to the west, views to ecological corridor and Reservoir 2 to the east, and views over vegetated land to north-east.
- High amenity area suitable for dwellings due to available views.
-
- E** Flat to undulating land in the south-western corner of the site, with scattered vegetation and modified landform due to fill; suitable for open space on the west and a band of residential on the east.
- Elevated component proposed for higher density residential, benefiting from views over proposed park to the west to the Blue Mountains, and over proposed ecological corridor to the east. Access available off Brunker Road, in the vicinity of an existing driveway.
-
- F** Irregular shaped parcel located on hilltop midway along Brunker Road; potential views west to the Blue Mountains and district views to south and east; relatively flat with gentle fall to the east. Currently occupied by SWC administration buildings and car park, and open storage land, etc.
- Suitable for continued employment use; vehicular access available off Brunker Road in vicinity of existing driveway.
-
- G** Triangular area on Bagdad Street; separated from the main site by the freight line; adjacent to the water pipeline; mix of cleared land and scrub vegetation close to freight line, which is also low-lying.
- Suitable for low density residential similar to adjoining development.
-
- H** Triangular site that falls away to north towards the freight rail line; steep in parts; most of site is heavily vegetated, including trees and species of ecological value; currently performs a minor drainage function; suitable as a natural area.
- Proposed as one of the public open spaces suitable for dedication to Council.
-
- I** Partly elevated site east of Reservoir 2, with views east to Sydney CBD; southern part currently developed with a mix of administration buildings; generally flat land except for steeply sloping embankment on the eastern side parallel with Graf Avenue; land is suitable for employment/ business park uses; frontage to Rookwood Road and Brunker Road.
- Land suitable for employment/ business park uses given previous history, access to Brunker and Rookwood Roads, and preferred location for Sydney Water Field Headquarters; embankment to be stabilised and landscape screening provided.
-

2.3 European heritage

The majority of the Potts Hill Reservoirs land (excluding the Bagdad Street parcel) is listed on the State Heritage Register (SHR). The current boundary is shown in pink on Figure 25. It contains a number of items of heritage significance shown on Figure 26. The site is also listed as a heritage item in Bankstown LEP 2001, and the water pipeline on the northern boundary is listed as a heritage item in Auburn LEP 2000.

A Conservation Management Plan (CMP) prepared for Potts Hill was endorsed by the Heritage Council in April 2005. In addition to a range of heritage management measures for the site, the CMP canvassed a reduction in the SHR boundary (referred to as the “Minimum Lot Area (MLA)”) based on the area required in the long term for Sydney Water’s operations, as illustrated on Figure 27.

It should be noted that the original listing of the site was defined by its ownership. The proposed boundary adjustment (shown on Figure 25) now reflects Sydney Water’s long-term operational requirements.

A request has been made to the Heritage Council to amend the SHR boundary in line with the proposals set out in this submission.



Figure 25 – Existing and proposed State Heritage Register boundaries



Figure 26 – Items of heritage significance, Potts Hill Reservoirs land

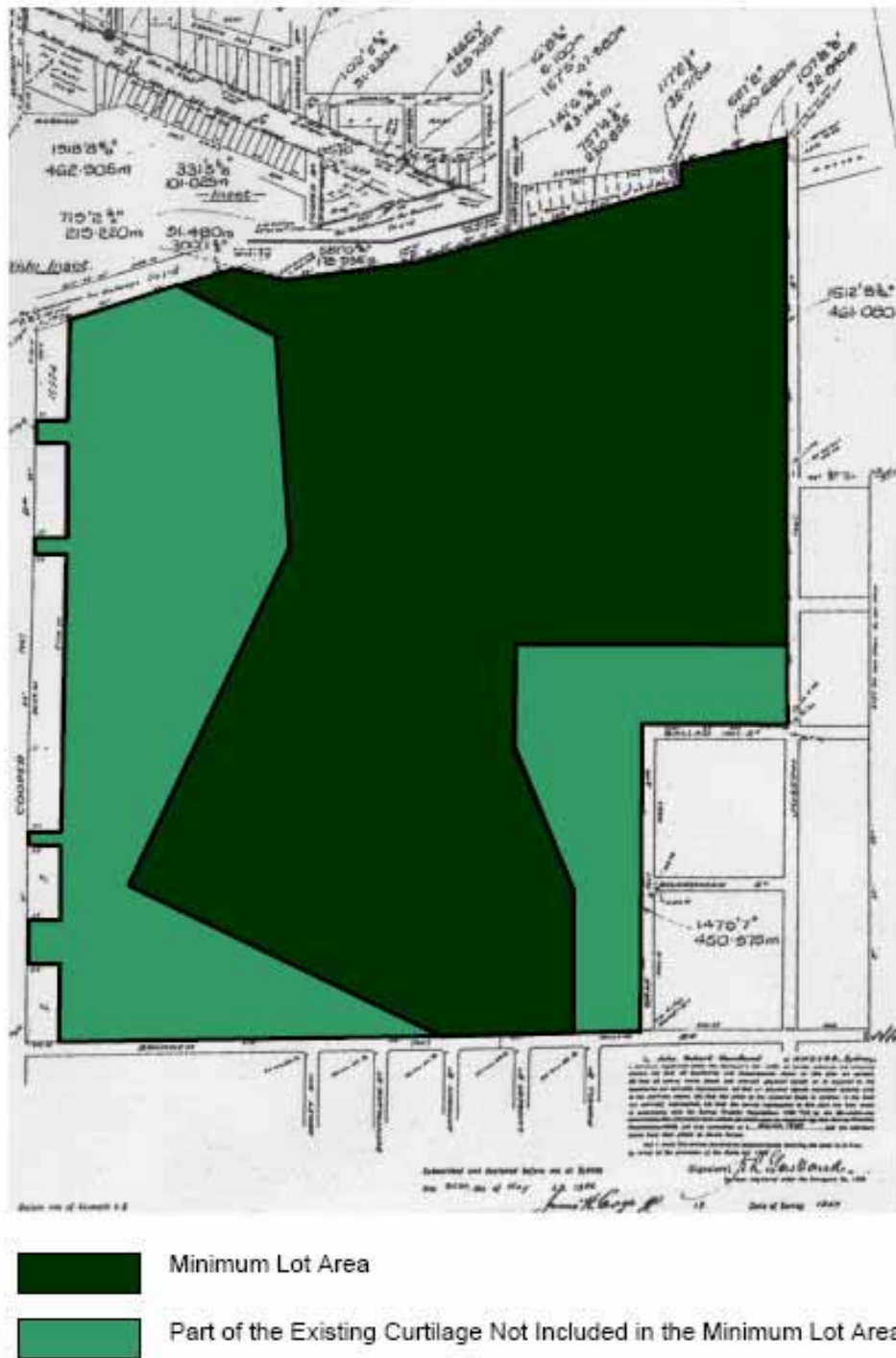


Figure 6-5 Curtilage and Minimum Lot of Potts Hill Reservoirs Site

Figure 27 – Reduced State Heritage Register boundary recommended in 2005 Potts Hill CMP

A further heritage assessment carried out by heritage consultants, Tanner Architects, identified that a former railway siding associated with the construction of Reservoir 2 should also be accorded heritage significance. It is identified as the white line on Figure 26, east of the existing warehouse/storage buildings off Cooper Road. The proposals for the railway siding which is now identified by a row of peppercorn trees are outlined in Section 3 of this report.

With the exception of Items 41 and 42 - small buildings located adjacent to the eastern boundary of Reservoir 2, which will be incorporated into the proposed site for the Sydney Water field headquarters - the redevelopment land does not contain any above ground items of heritage significance. The underground City Tunnel south of Reservoir 1 (Item 45 on Figure 26) is partially within the proposed employment/ business park precinct, and extends westwards out from Potts Hill to inner Sydney.

2.4 Ecology (Flora and fauna)

As previously shown on Figure 5-Figure 9, significant areas of the Reservoirs land were cleared of vegetation at some time either prior to or during construction of the reservoirs. With the exception of the vegetated land west of Reservoir 1, the vegetation is predominantly planted or regrowth. Presently it is characterised by a number of distinct ecological landscapes:

- cleared areas with predominantly grass cover;
- remnant bushland;
- native vegetation regrowth;
- cultural plantings, some of which includes introduced noxious trees and plants; and
- park-like areas with trees and grass.

The ecology of the site has been investigated by Eco Logical Australia (ELA). A copy of the ELA assessment report is included at Appendix B. A summary of the findings of the ecological assessment is provided below.

2.4.1 Flora

Two critically endangered ecological communities (CEECs) and one endangered ecological community (EEC) listed in State and Commonwealth environmental legislation have been found on the Reservoirs land, and are shown on Figure 28. They are:

- Cooks River Castlereagh Ironbark Forest (CRCIF) which is a CEEC;
- Sydney Turpentine Ironbark Forest (STIF) which is a CEEC; and
- Cumberland Plain Woodland (CPW) which is an EEC.

Table 4 lists these communities and identifies their size according to whether it is found on the redevelopment land, or on the Sydney Water retained land.



Figure 29 indicates the conservation significance of the vegetation, in terms of whether they are considered to be 'core', 'support for core', or 'other remnant vegetation'.

An assessment the conservation significance of the endangered communities and species indicated that they are considered to be of moderate to high conservation significance (as shown on Figure 30).

In addition, a threatened endangered plant species – the Downy Wattle (*Acacia pubescens*) – has also been found in locations in the south-west and central northern parts of the reservoirs site (located on Figure 31).

As can be seen from the data in Table 4, the land at Potts Hill that will be retained by Sydney Water for operational purposes contains the largest components of ecologically significant vegetation.

Of the 40 hectares of redevelopment land, approximately 3.5 hectares have valuable vegetation in various scatters throughout the site, shown on Figure 28, comprising:

- 1.77 hectares of Cooks River/ Castlereagh Ironbark Forest;
- 1.04 hectares of Cumberland Plain Woodland; and
- 0.62 hectares of Sydney Turpentine Ironbark Forest.

The remaining 36.5 hectares contains a range of cleared and uncleared land featuring exotic and native grasses and exotic, native planted vegetation (trees and shrubs), and cultural planting including Canary Island palms in avenues alongside Reservoir 2 and the water canal.



Figure 28 – Vegetation communities

TABLE 4 – VEGETATION COMMUNITIES AND STATUS

| Vegetation Community | Status * | | CSA ** | Vegetation Area (ha) | | | | |
|---|----------|------|----------|----------------------|-------------|---------------|---------------------------|--------------|
| | TSC | EPBC | | Development Area | Open Space | Retained Land | Potential Use (10-20 yrs) | Total |
| Cooks River/Castlereagh Ironbark Forest † | EEC | - | High | 0.26 | 1.11 | 6.36 | 0.57 | 8.30 |
| Creek (Riparian) | - | - | Low | 0.07 | 0.04 | - | - | 0.11 |
| Cumberland Plain Woodland | EEC | EEC | Moderate | 0.72 | 0.32 | - | - | 1.04 |
| Grassland - Native | - | - | Moderate | - | - | 0.33 | - | 0.33 |
| Sydney Turpentine Ironbark Forest † | EEC | CEEC | High | 0.55 | - | 1.35 | 0.70 | 2.60 |
| Total | | | | 1.60 | 1.47 | 8.04 | 1.27 | 12.38 |

* TSC = Threatened Species Conservation Act; EPBC = Environmental Protection and Biodiversity Conservation; EEC = Endangered Ecological Community; CEEC = Critically Endangered Ecological Community

** CSA = Conservation Significance Assessment.

† Classified as Critically Endangered Ecological Community in western Sydney (NPWS 2002a,b)

Emerging from the ecological assessment of the Reservoirs land and its redevelopment potential, a package of ecological measures to address the biodiversity of the site has been identified. It is outlined in Section 3.

2.4.2 Fauna

Due to the poor condition and high disturbance of the site, the ecological investigations have concluded that it is unlikely that significant native faunal assemblages inhabit the site.

However, specific searches have been made for bats, the Large Land Snail, and the Green and Golden Bell Frog. The findings of the ELA report on these species are summarised as follows:

- The site currently has poor connectivity to surrounding remnant vegetation due to the urban landscape, roads, rail and water pipeline easement, though it does facilitate 'stepping stone' connectivity for mobile fauna species;
- Potential exists for mobile species (birds and bats) to utilise habitat on site for roosting or foraging;
- The best areas of habitat in terms of floral and structural diversity comprise those remnant stands to be retained and managed on site;
- Vegetation within the site is not favourable habitat for the Cumberland Plain Land Snail, as areas are regularly mown and leaf litter therefore does not accrue. Habitat within the retained land has understorey and leaf litter in some areas, and hence is potential habitat. Targeted searches for the Cumberland Plain Land Snail were conducted, but did not result in any specimens being found;
- 57 hollow-bearing trees were mapped, most of which were exotic peppercorn trees (*Schinus areira*). Some of these will be retained within proposed open space in the residential precinct. The majority of tree hollows recorded were of sufficient size to accommodate bats, small birds or gliders, but were not large enough for use as nest sites by medium to large birds;
- Two threatened fauna species have been recorded in the locality:
 - Common Bent-wing Bat (*Miniopterus schreibersii*)
 - Grey-headed Flying-fox (*Pteropus poliocephalus*)

- Anabat call surveys were undertaken for micro-bats but no threatened species were identified;
- Call-back surveys and habitat searches were conducted for the Green and Golden Bell Frog, but no evidence of this species was recorded; and
- Frog habitat is very limited and isolated, as result of which the Green and Golden Bell Frog is considered unlikely to occur.



Figure 29 – Conservation significance of vegetation



Figure 30 – Conservation significance assessment of vegetation



Figure 31 – Location of *Acacia pubescens* (Downy wattle)

2.5 Geotechnical conditions and groundwater

2.5.1 Soils

Previous assessments of soils conditions within the Reservoirs land (Douglas Partners 2006) indicate that the site is underlain by the Bringelly Shale of Triassic age. At the site, this formation includes the 'Potts Hill Sandstone Member' which is exposed above approximate RL 60 in cuttings in Brunker Road and at the northern side of Reservoir No. 2 (reference to the Sydney 1:100 000 Geological Series Sheet).

The Reservoirs land contains significant amounts of fill created during the construction of the reservoirs, including three areas of slope/ embankment where the fill meets the surrounding ground levels. A number of geotechnical investigations have been undertaken to determine the implications of the fill and the embankments on the development potential of the land.

The depth of fill varies, with the deepest fill located immediately to the west and east of Reservoir 2 (see Figure 32). The plateau area to the west of Reservoir 1 has seen minimal or no fill. The Bagdad Street site has not been filled, and features shallow soils over bedrock.

The fill has been in place for over 80 years, and while it has been found to contain a mix of soil and boulders of varying size, it is considered to be relatively stable.

A recent survey including investigative drilling was undertaken by Coffey Geotechnics to assess the subsurface conditions and provide recommendations on geotechnical aspects of the proposed development.

2.5.2 Groundwater

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The proposed development adjacent to Reservoir 2 will be significantly further away – at a distance of over 45 metres to the nearest proposed earthworks (perimeter road construction), and over 50 metres to the nearest dwelling.

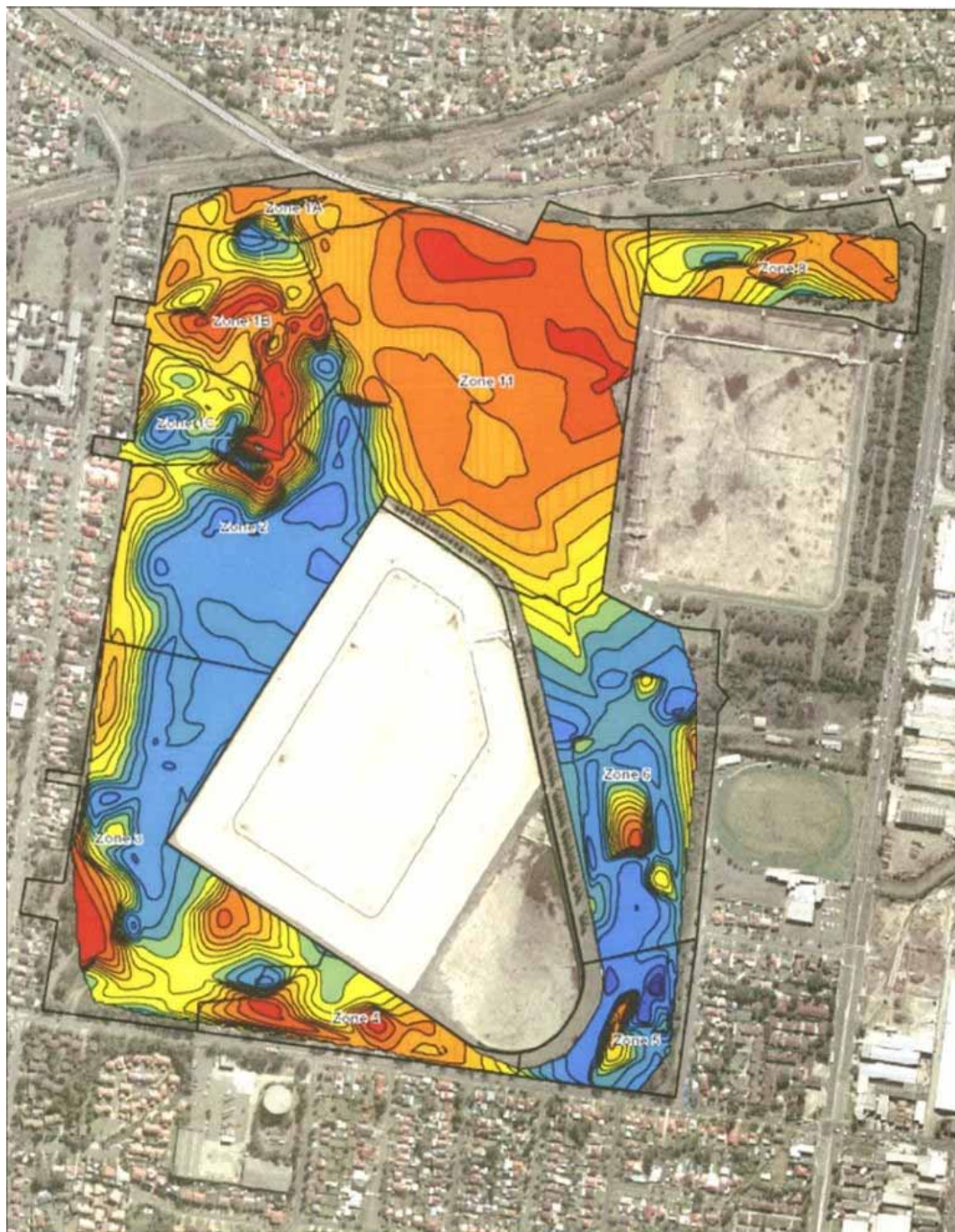


Figure 32 – Fill depth profile, main reservoirs site (URS)

2.6 Soil contamination

Initial assessments of the soil within the Reservoirs land were undertaken by Coffey Geosciences to determine whether there has been any contamination. More recently HLA ENSR were engaged to undertake further investigations including soil sampling and analysis in accordance with accepted legislative requirements. Minor levels of contaminated soil resulting from the construction of the reservoirs and subsequent site use have been found throughout the reservoirs site, consistent with similar sites in Sydney.

The nature and extent of contamination are able to be adequately addressed under the relevant legislation.

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The RAPs are to be completed shortly.

Physical remediation works are planned to occur in 2009, following which validation and Site Auditor statements will be prepared.

2.7 Social and community environment

A social impact assessment for Potts Hill has been prepared by Heather Nesbitt Planning. A copy of the report is included at Appendix C. A summary of the social and community context for Potts Hill, including community characteristics and community and recreational facilities from that report is provided below. These characteristics generally reflect the profile of the Bankstown and Auburn LGAs.

- In 2001, the area adjoining the site housed some 5,300 residents in 1,816 dwellings, with an average dwelling occupancy rate of 2.92 people per dwelling;
- Existing community infrastructure in the surrounding suburbs include: Birrong shopping centre; Birrong railway station; Birrong Girls High School; Birrong Boys High school; the Greyhound Social Club; Birrong Primary School, Regents Park Primary School, Birrong North Primary School; Birrong Preschool and Long Day Care Centre; Chester Hill, Yagoona and Regents Park Community Centres and Early Childhood Services; Chester Hill Library and Regents Park Library; Chester Hill Neighbourhood Centre; Roundabout Youth Service, Chester Hill; Birrong Post Office; Medical centre at Yagoona; Local bus services; Local churches and clubs; Parks and recreation facilities; hospital and community health services at Auburn and Bankstown; Bankstown and Lidcombe TAFEs; University of Western Sydney (UWS) Cumberland Campus; and several community/ emergency/ employment services in Auburn and Bankstown;
- The broader local area comprises the suburbs of Birrong, Yagoona, Sefton, Regents Park, Berala and Chester Hill and has a population of 44,200 persons;
- The area has an ageing population, although there is a significant proportion of households with children. A high proportion of households have weekly incomes less than \$400/ week; the Department of Housing provides a relatively significant proportion of accommodation.
- The main languages spoken other than English are Arabic, Vietnamese and Cantonese.
- Home computer/ internet usage is low.
- Public transport use for journey to work trips is around 20% ;
- In 2001, Auburn and Bankstown LGAs were the second and seventh most disadvantaged LGAs in Sydney respectively (SEIFA disadvantage index).

The Social Impact Assessment carried out by Heather Nesbitt Planning identified the following potential issues arising from the development of the Potts Hill site. It addresses both the residential and employment components of the proposals:

Need to minimise relative social and economic inequities between the existing community and the incoming residents – given the significant level of social disadvantage in the local area, it is essential that the Potts Hill project actively provides a range of housing opportunities which are accessible to existing local buyers and potential tenants. The Bankstown and Auburn LGAs are very diverse and mixed communities with young families and older residents; low and moderate income earners; Anglo and non-Anglo residents; home buyers and public/ private renters. The Potts Hill project should similarly support this diversity and seek to integrate the project with the existing community.

Additional demands on the existing stretched community infrastructure – as the project is located in an established, middle ring area of Sydney, much of the existing community infrastructure is dated and in need of upgrading. In addition, services and facilities are working to address the needs of existing residents many with high levels of social disadvantage. The impact of this project, together with other proposed developments in the Central West region as part of the Sydney Metropolitan Strategy, are likely to have a cumulative impact on existing community infrastructure. Both Bankstown and Auburn LGAs are expected to accommodate a projected 19,000 new dwellings by 2031.

Limited employment benefit to local residents – although this project provides for additional permanent employment, it is unlikely that many of these jobs will be for local residents. Rather they will be taken by existing skilled workers relocating with their existing employers. With unemployment consistently well above the Sydney average in this area and the high level of youth in vocational training but often unable to transition to permanent employment, skills development and employment opportunities need to be considered.

Significant need to address local housing issues as part of the Potts Hill project – housing affordability is a significant issue in Sydney and in particular, south west Sydney. For residents of Bankstown and Auburn LGAs, access to affordable housing for purchase or rental is difficult. Added to this is the area's growing aged population with access to appropriate aged housing and care particularly limited. The need to provide a range of affordable and/ or culturally appropriate housing options, including housing and care options for older residents, is important for this project.

Potential to increase resident and worker dependency on private transport – although the project is well-located in terms of access to public transport infrastructure, the reality is that the existing bus and rail services are limited in the Birrong area. Evidence of increasing use of private transport by Birrong residents together with car parking/ traffic issues in the local area and Chullora Industrial Area are of concern. Specific initiatives will be required to ensure that improved public transport services are available and residents/ employees are encouraged to utilise services.

Existing cultural and community tensions – both Bankstown and Auburn LGAs have a long history as being major centres for new immigrants to Australia. This has resulted in a culturally diverse community with many new immigrants arriving on humanitarian grounds or on temporary protection visas (TPVs). Added to this is the high level of social disadvantage which further widens the gap between people and often becomes a source of resentment, tension and misunderstanding. This project needs to recognise this issue and, as highlighted by the human service stakeholders consultation, build on the strengths of this diversity.

Difficulty for established existing community to support change – it is evident that residents directly adjoining the Potts Hill site together with residents in the broader local area (i.e. Birrong, Yagoona, Regents Park, Sefton, Chester Hill and Berala) may find change difficult. With the large proportion of older residents and extended families coupled with the high level of resident stability, this project is likely to be a significant change to the Birrong area and for local residents. This will be further exacerbated by one in four residents being poor English speakers while the area's

cultural diversity and high level of social disadvantage may make it difficult for residents to be engaged in the project.

2.8 Bushfire

The site is not included in any bushfire prone lands within the Bankstown LGA, therefore, in accordance with the guidelines for bushfire planning, the site is not considered to present any bushfire risk, and the guidelines do not apply.

2.9 Traffic and transport environment

A traffic and access report has been prepared by Masson Wilson Twiney (MWT). A copy of the report is included at Appendix D.

A summary of the existing access to the site, and traffic and transport conditions in the surrounding area from the MWT assessment is provided below. The information below also outlines data on car ownership and journey to work characteristics within the area surrounding Potts Hill and Birrong (2001 Census), published by the NSW Ministry of Transport as part of its Profile of Bus Contract Region 13.

2.9.1 Roads

The site is located in close proximity to the major metropolitan road network, with Rookwood Road an arterial road providing connections to the Hume Highway and M5 Motorway to the south and Parramatta Road and the M4 Motorway to the north. It is managed by the Roads & Traffic Authority (RTA) and carries around 52,000 vehicles per day.

Brunker Road west of Rookwood Road is a collector road managed by Bankstown Council. It connects the suburb of Birrong in the west to Rookwood Road. It carries around 12,500 vehicles per day.

Cooper Road is a local collector road connecting to the Yagoona shops and rail station on the Hume Highway in the south with Birrong in the north. It carries 5,000–7,000 vehicles per day, and is managed by Bankstown City Council. Two high schools are located along the northern part of Cooper Road.

The junctions of Rookwood and Brunker Roads and Rookwood Road and Boardman Street are controlled by traffic signals. The junction of Rookwood and Brunker Roads is presently operating at or beyond capacity in both the morning and evening peak periods as a result of existing traffic loads.

There is a roundabout at the junction of Brunker and Cooper Roads. It has been found to be operating beyond capacity in the morning peak, and is reported to have a history of accidents.

There are four existing access driveways along Brunker Road into the Reservoirs land, one off Cooper Road, and a disused entry off Rookwood Road.

2.9.2 Public transport

Birrong is served by existing bus and rail services, which are within a short walk of the site.

Birrong station is less than 400 metres (a five minute walk) from the site, and provides trains to employment and retail centres such as Central, Strathfield, Bankstown and Liverpool. Regents Park station is about 800m from Cooper Road. The frequency of services ranges from 1–3 services per hour in the off-peak (depending on the destination) to up to six services per hour in the peak, with the most frequent services to Bankstown and the city.

Private bus services travel past the site or near to the site, using Rookwood Road, Brunker Road and Auburn Road (as illustrated on Figure 33).

Potts Hill is located in 'Contract Region 13'. Routes servicing Potts Hill since September 2006 are as follows:

- 908 – Bankstown to Merrylands Station via Birrong, Regents Park, Berala, Auburn, and Granville;
- 909 – Bankstown to Parramatta via Birrong, Regents Park, Auburn and Granville; and
- 912 – Bankstown to Lidcombe Station via Potts Hill and Rookwood Road.

Current services are in the range of 1-2 buses per, with the more frequent services in the morning and afternoon peaks.

These services will be available for future residents and employees. A bus service from Lidcombe station along Rookwood Road is in close proximity to the proposed employment/ business park precinct.

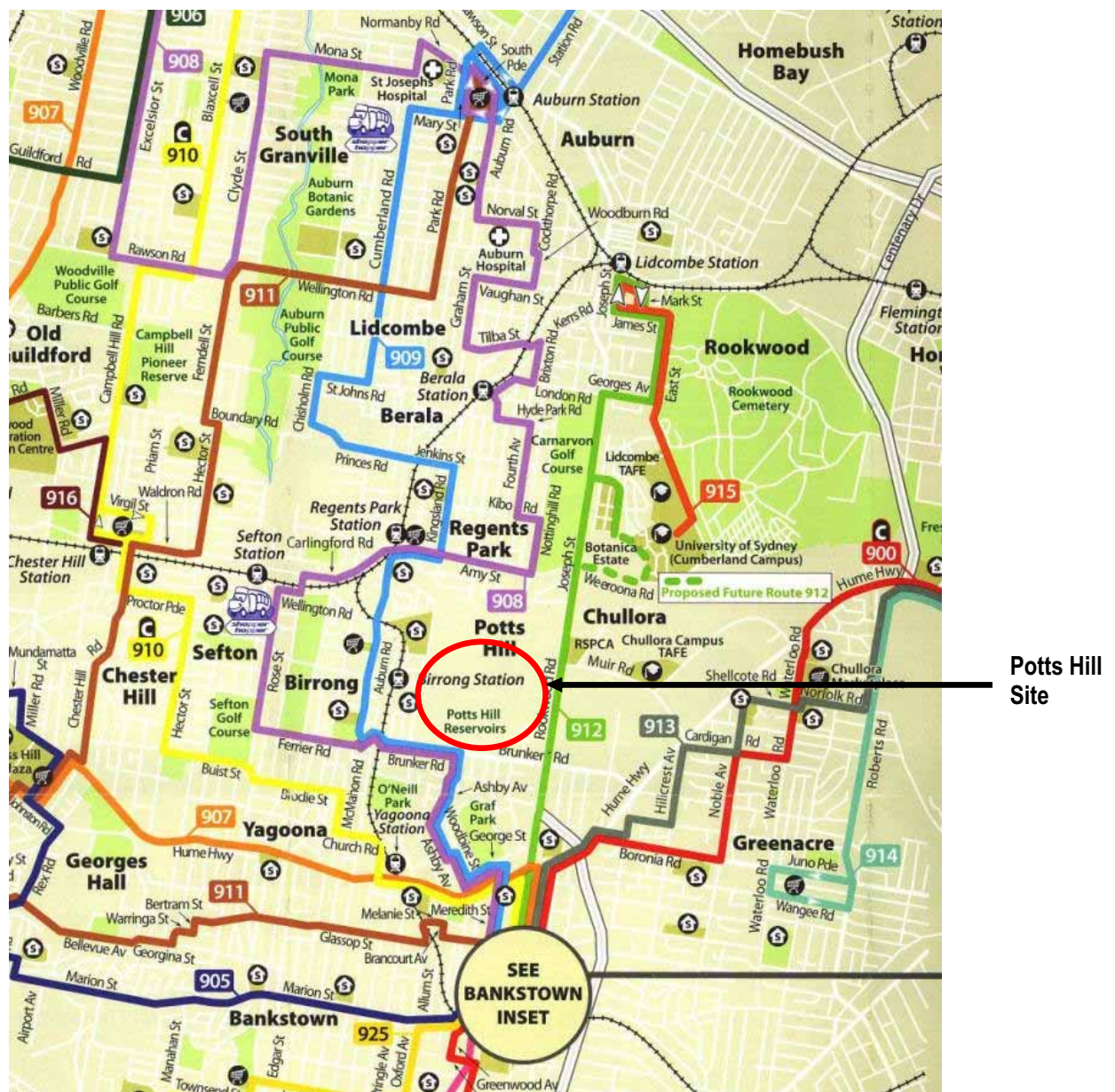


Figure 33 – Bus routes in the vicinity of the site

2.9.3 Pedestrians and cyclists

Pedestrian facilities

A pedestrian path is located only on the western side of Cooper Road for its entire length. Pedestrian crossing facilities are in the form of a marked foot crossing outside Birrong Girls High School and Birrong Boys High School.

The Cooper Road rail overbridge provides a narrow footpath on the western side of the road. A concrete barrier and steel posted wire fence provides protection of the footpath from the travel lanes. While pedestrian access is provided and no evidence of a history of accidents, it is not considered a pedestrian-friendly route, and does not have a high level of use by pedestrians or cyclists.

A footpath is installed on the northern side of Brunner Road between Cooper Road and Ashby Avenue. A footpath is installed on the southern side of Brunner Road for its entire length.

A pedestrian refuge is installed in Brunner Road to the west of its intersection with Ashby Avenue. This pedestrian refuge is poorly-located as the crest of the hill restricts sight distances.

There is a pedestrian path on the western side of Rookwood Road between Brunner Road and Graf Avenue. Pedestrian refuges are installed at the traffic signals at Rookwood Road/ Brunner Road. Pedestrian refuges are also installed across Graf Avenue and the northern side of the traffic controlled intersection of Graf Avenue/ Rookwood Road.

No pedestrian footpaths are installed in Graf Avenue.

Pedestrian access to Birrong Station is provided via stairs from the southern side of Avalon Street. No lift or ramps are provided, thus there is no disabled access to the station platform.

There is a marked foot crossing on Avalon Street at the station entrance. Avalon Street is a Bankstown City Council-managed road.

Bicycle facilities

A range of bicycle facilities are located in proximity to the Reservoirs land, as set out below:

- A shared pedestrian/ cycle path is located along Brunner Road and Rookwood Road.
- The Brunner Road to Hume Highway route connects with the Ryde-Botany Bay bike route. Rookwood Road connects with the Auburn bike route.
- West of the Bankstown Rail Line on Brunner Road is a signed route/ shared path going south to O'Neill Park through to Punchbowl and then linking to the Hurstville bike route.
- North of the site there is a path adjacent to the water supply pipeline for the Bay to Mountains bike route.
- Sealed shoulder routes exist along the M5 and adjacent to Salt Pan Creek.
- Bicycle/ parking lane routes exist west of the site on Auburn Road.

2.9.4 Car ownership, journey to work and public transport use

The Ministry of Transport has prepared data relating to car ownership, journey to work and the use of public transport for its publication *Profile for Bus Contract Region 13*, which encompasses the suburbs of Birrong and Potts Hill. Some relevant data are presented below.

Car ownership

- At the 2001 Census 14% of dwellings in Contract Region 13 had no motor vehicle. 77% of dwellings had at least one vehicle, and 38% had two or more vehicles.

Journey to work and use of public transport

- For the 2001 Census Journey to Work (JTW) originating in Contract Region 13, the most common mode of travel to work is by car as driver (63%), followed by train (18%), and car as passenger (8%). Only 1% travel to work by bus.
- Almost 23% of journey to work trips originating in Contract Region 13 are contained within Region 13.

Commuting to the CBDs

- 8% of the Sydney CBD workforce, and 3% of the Parramatta CBD workforce come from Contract Region 13;
- To travel to the Sydney CBD, 86% of Region 13 commuters use the train, 9% drive, 2% travel as car passengers, and 1% go by bus; and
- To travel to Parramatta from Region 13, the priority modes are: car as driver (47%), train (24%), and car as passenger (11%).

2.9.5 Summary of existing transport network constraints

The assessment undertaken by MWT identified a number of existing road network, public transport and pedestrian constraints surrounding the Potts Hill Reservoirs land. These constraints include the following, illustrated on Figure 34:

- Poor intersection operation and capacity constraints:
 - Brunker Road/ Cooper Road.
 - Rookwood Road/ Brunker Road.
 - Rookwood Road/ Boardman Street.
- Poor safety/ potential accident locations:
 - Brunker Road/ Graf Avenue – vehicle accidents.
 - Avalon Street pedestrian crossing at Railway Station – lack of pedestrian protection devices.
- Pedestrian constraints:
 - No disabled access to Birrong Railway Station.
 - Lack of pedestrian path along the eastern side of Cooper Road.
 - Generally pedestrian unfriendly access across rail line bridges and along routes from the site to rail stations.

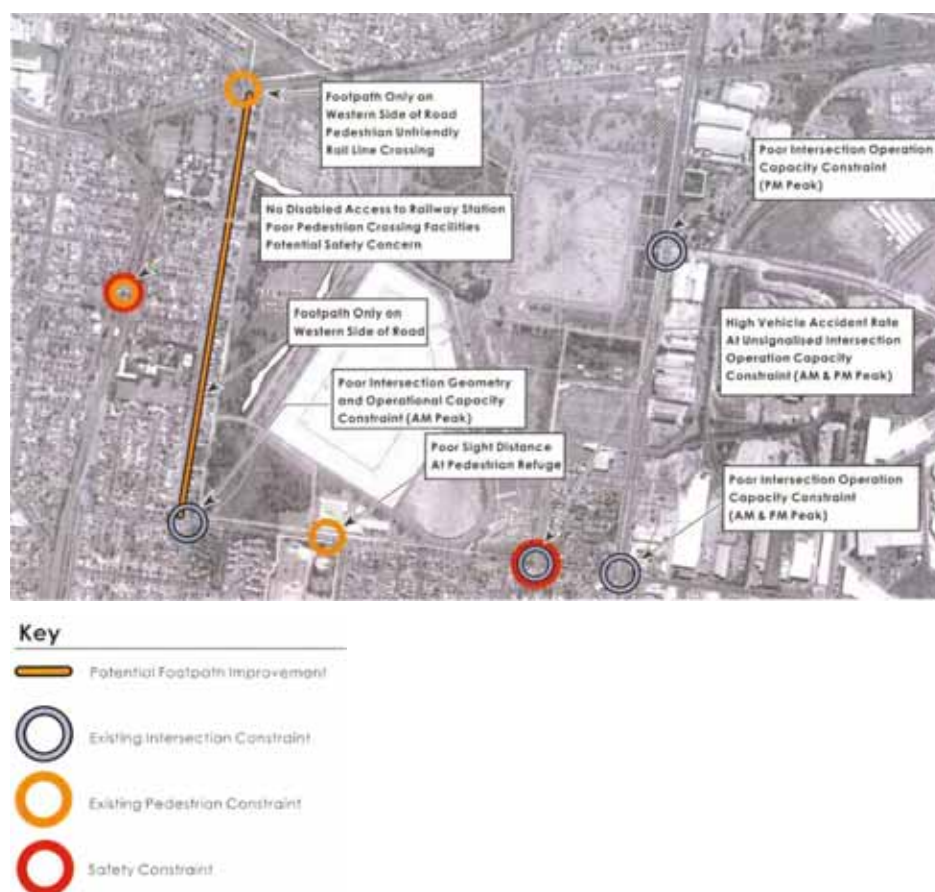


Figure 34 – Existing traffic and transport context and issues

The traffic and access implications of the redevelopment of the site and the mitigation measures proposed are outlined in Section 4, full details of which are included in the MWT report at Appendix D.

2.10 Indigenous heritage

An Aboriginal archaeological assessment of the redevelopment land at Potts Hill was undertaken by Jo McDonald Cultural Heritage Management Pty Ltd in accordance with established protocols (see Appendix E).

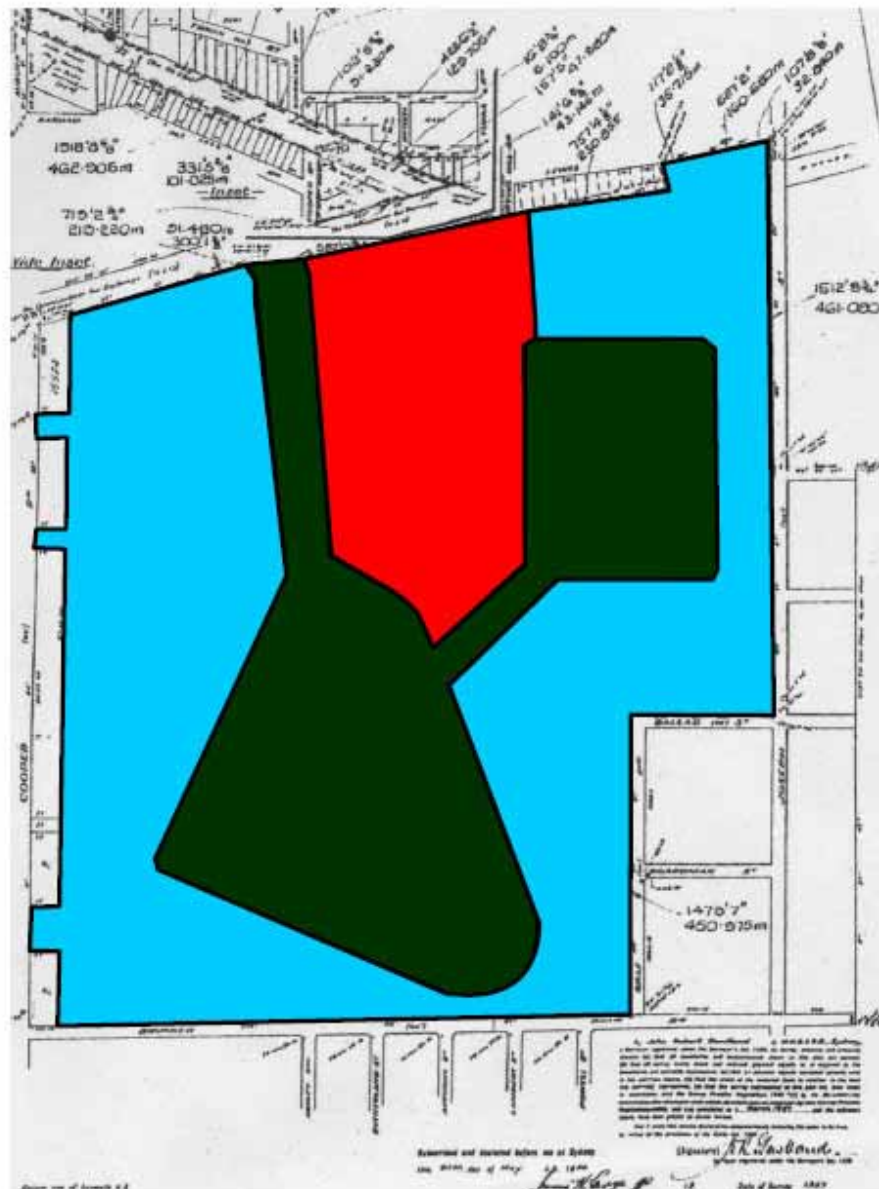
A summary of the findings of the Jo McDonald report includes the following:

- There are no areas within the redevelopment land that are considered to have high archaeological potential and no areas are identified as being worthy for conservation of their Indigenous heritage values; and
- There is no requirement for any further archaeological investigations in the redevelopment land.

As part of the 2005 Conservation Management Plan (CMP) for the Potts Hill site listed on the SHR, Sydney Water carried out an assessment of indigenous heritage. Figure 35 (extracted from the CMP) shows that the areas covered by Reservoir 1 and Reservoir 2, a connection between the reservoirs, and the water canal that connects Reservoir 2 to the northern boundary are “completely excavated – no [archaeological] potential”. It also indicates that the main area of potential indigenous heritage is the vegetated area west of Reservoir 1.

The conclusions of that assessment relevant to the retained land are reproduced in Appendix E, and include stop work protocols if any excavation within the vegetated area uncovers any archaeological artefacts.

In addition, the assessment indicates that Reservoir 1 has no indigenous archaeological potential. This is relevant to potential re-use of Reservoir 1 outlined at Section 3.7.



- Completely excavated –no potential
- Heavily disturbed, with no known historical uses. Archaeological potential limited.
- Little disturbance, however no known historical uses. "Stop Work" protocols to be used in excavation.

Figure 3-64 Areas of Archaeological Sensitivity

Figure 35 – Indigenous heritage conclusions from 2005 CMP for Potts Hill

2.11 Services and utilities

The site is located in an established suburb and redevelopment will require augmentation of most services and utilities.

A services report based on discussions with all relevant servicing authorities has been prepared by Worley Parsons (incorporating Patterson Britton & Partners), and is at Appendix F. A summary of its findings is provided below.

2.11.1 Potable water

The Reservoirs land is bounded by water reticulation services. Trunk mains exist on both the southern side of Brunker Road between Cooper Road and Rookwood Road and in Rookwood Road adjacent the eastern boundary of the site. A 150mm diameter reticulation main exists on the eastern side of Cooper Road adjacent the western border of the site and a 100mm diameter reticulation mains exist in Graf Avenue and Boardman Street in the south-eastern corner of the site.

Sydney Water has indicated that the redevelopment land at Potts Hill is able to be adequately serviced by the Bankstown water system via the Bankstown elevated reservoir. Existing water mains will require some augmentation to account for the increased demand from redevelopment.

2.11.2 Recycled water

Discussions with Sydney Water have identified the possible opportunity for the use of recycled water within the redevelopment land, and the region in general. Potts Hill has been identified as a possible location for recycled water storage. The presence of such infrastructure would provide the opportunity to supply recycled water to new development.

2.11.3 Sewerage

The site sits on a ridge that defines two sewer catchments. As a result it is capable of delivering to two sewerage systems: the eastern employment land will discharge to the Northern Suburbs Ocean Outfall System (NSOOS), while the western residential area will discharge to the Southern and Western Suburbs Ocean Outfall Sewerage System (SWSOOS).

Approximately 1km of pipe augmentation external to the site to the west will be required to meet the demands of new development.

Minor augmentation of the sewerage services in Graf Avenue and Boardman Street will be needed to allow for the increased loading from employment/ business park precinct.

2.11.4 Electricity

Significant EnergyAustralia (EA) distribution assets are currently located within the road reserves for Cooper Road, Brunker Road and Rookwood Road.

There is also a high voltage transmission line that traverses the eastern part of the site in the vicinity of Graf Avenue, and one that traverses the western precinct between Cooper Road and the north-eastern part of the Reservoirs land, which will be addressed as part of the redevelopment process.

EA have indicated that any development will need to be connected to its assets residing in the public domain.

Sufficient capacity exists in the high-voltage networks bordering the site to supply a high-voltage feeder to the proposed residential precinct and a similar base load to the proposed employment/ business park precinct without major augmentation or amplification.

Development will require the provision of substations (kiosks) at suitable locations. It is estimated that approximately three kiosks will be required in both the residential and employment/ business park precincts.

2.11.5 Gas

Agility has advised of existing infrastructure in Brunner Road and Rookwood Road and some limited infrastructure in Cooper Road. Based on a preliminary assessment, they have advised that the provision of gas to the redevelopment land is feasible.

2.11.6 Telecommunications

Servicing plans and information provided by Telstra have indicated that there is a main optical fibre cable in Brunner Road and Rookwood Road.

In addition, there is an extensive local cable network in Cooper Road. Advice provided by Telstra indicates that any development within the redevelopment land will be able to be adequately serviced by telecommunications.

2.11.7 Run-off water management

The proposed redevelopment of the site is expected to increase the volume of runoff from the site when compared with its existing state. Hence, appropriate on-site detention (OSD) storage systems will be required. Options include an arrangement of aboveground and sealed underground systems that together ensure that peak discharges from the site for events greater than, or equal to, the five year ARI event do not exceed those prior to development.

Possible controls to meet water quality objectives include gross pollutant traps, swales, ponds, wetlands and bio-retention systems.

There is an opportunity to coordinate the OSD and water quality objectives with the selection and development of land to be utilised for public open space and other public domain.

2.12 Existing zoning

The site is presently zoned predominantly 5 Special Uses – Sydney Water, with a number of parcels located on Cooper Road zoned Residential 2(a) under Bankstown Local Environmental Plan (Bankstown LEP) 2001, and Special Uses (Water Supply) under Auburn LEP 2000, as shown on Figure 36.

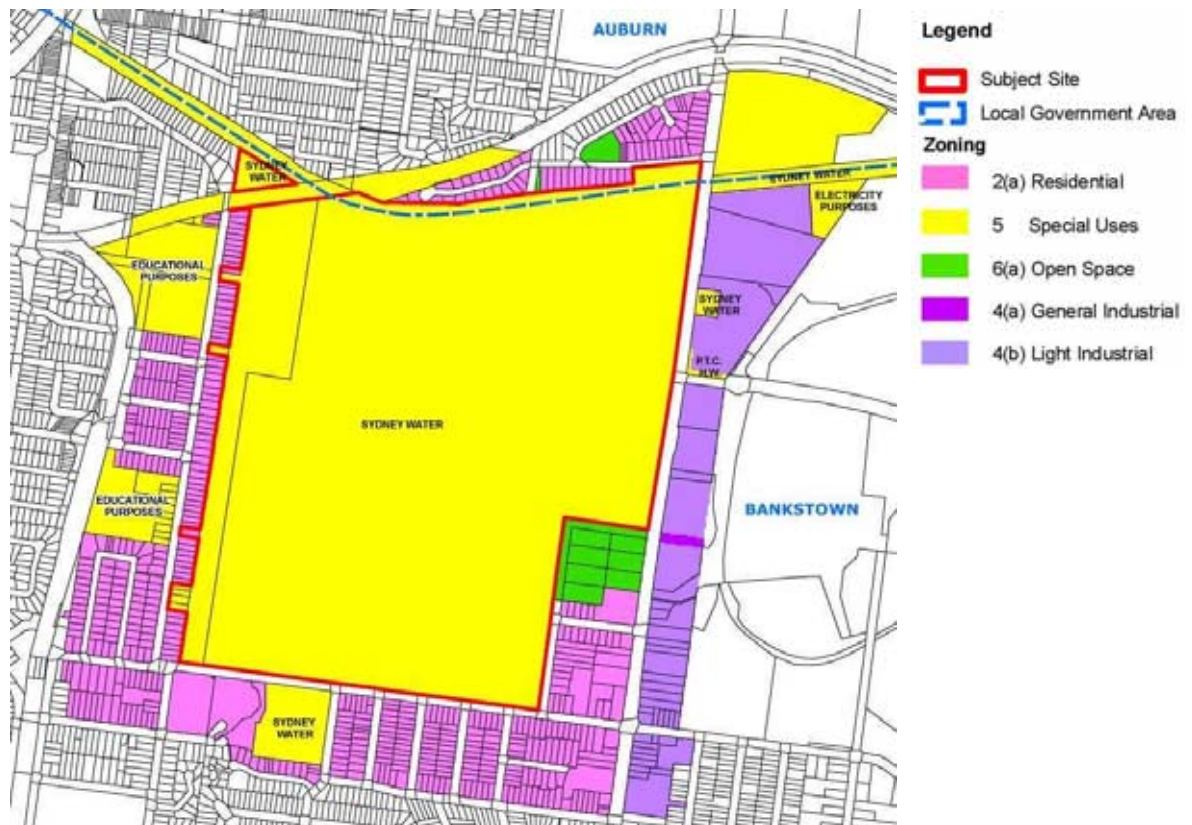


Figure 36 – Existing site zoning

2.13 Surrounding development

The surrounding development comprises a mix of generally low-density dwellings, interspersed with new higher density dwellings – including town houses, villas, and duplex or semi-detached dwellings - which reflects the uses permissible in these areas. The character of surrounding development is illustrated on Figure 37–Figure 45.

Figure 46 and Figure 47 are of the local shops on Auburn Road at Birrong, which are less than 800 metres from the Reservoirs land. These shops cater for the local convenience shopping for the community with a supermarket and specialty shops.



Figure 37 – Local housing – Cooper Road



Figure 38 – Local housing – Cooper Road



Figure 39 – Local housing – Cooper Road



Figure 40 – Local housing – Cooper Road



Figure 41 – Local housing – Cooper Road



Figure 42 – Local housing – Cooper Road



Figure 43 – Local housing – new dwellings and semi-detached housing along Cooper Road (rear photo)



Figure 44 – Local housing – Graf Ave



Figure 45 – Local housing – south of Bruner Road



Figure 46 – Birrong Shops, Auburn Rd



Figure 47 – Birrong Shops, Auburn Rd

2.14 Summary of site constraints and opportunities

The constraints and opportunities of the Potts Hill Reservoirs land are summarised graphically on Figure 48 and Figure 49, prepared by Allen Jack + Cottier (AJ+C) Architects. The constraints are summarised in Table 5, along with a comment on the manner in which they can be addressed. Table 6 summarises the opportunities, along with a comment on their implications.

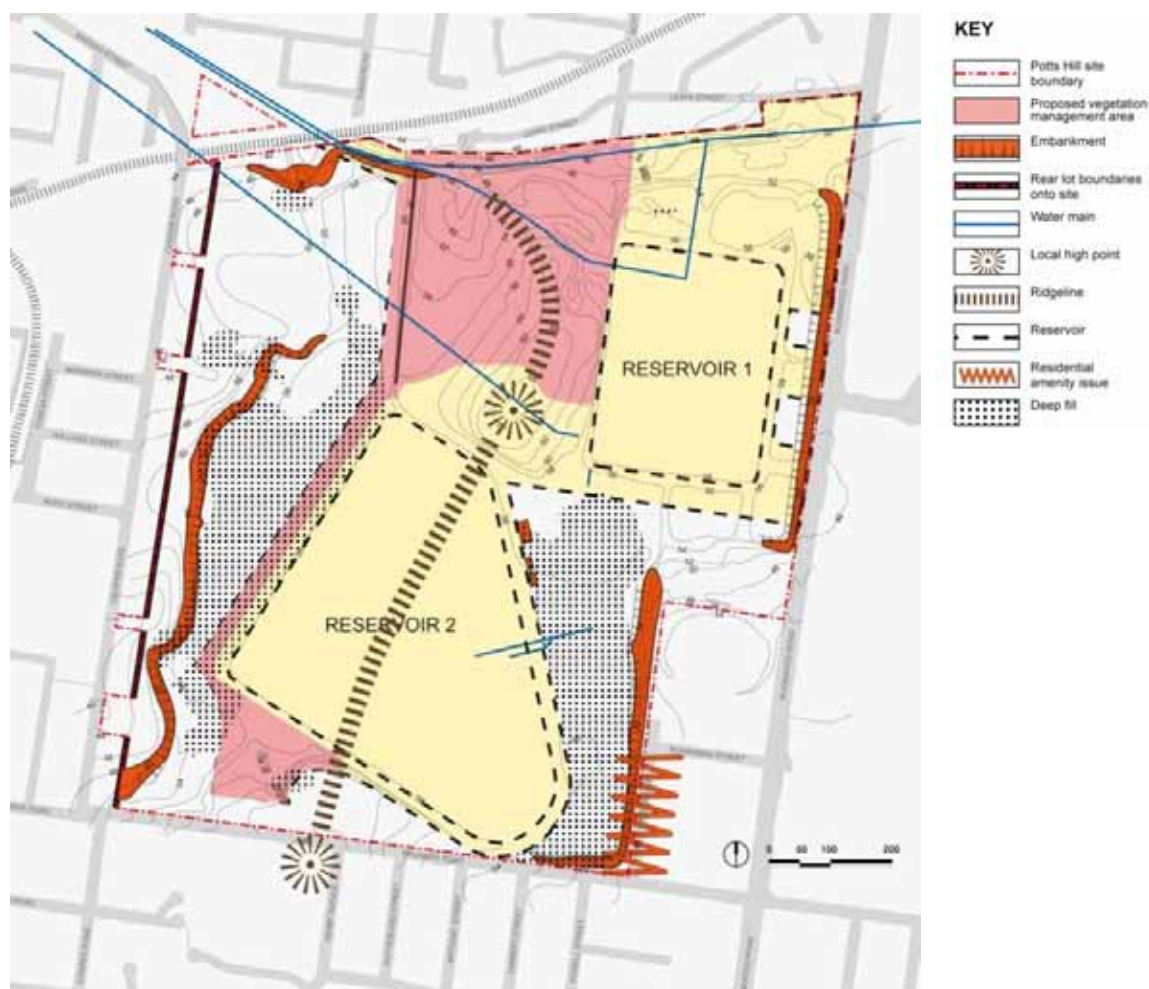


Figure 48 – Site constraints

TABLE 5 – SUMMARY OF KEY SITE CONSTRAINTS AND IMPLICATIONS

| CONSTRAINTS | IMPLICATIONS |
|---|---|
| Deep fill areas | Deep fill areas to be compacted to enable development. |
| Embankments | Geotechnical works will address the embankments – the western embankment will be incorporated into future residential allotments; the eastern embankment will be stabilised and landscaped extensively. |
| Interfaces with adjoining residential areas | Special planning attention will occur at interfaces to ensure that suitable amenity is provided with the new development. Measures proposed include providing sufficient distance separation between existing and new development, landscaped areas, and the suitable placement of new access roads into the redevelopment land. |
| Existing in-ground water infrastructure to be retained | Development will be planned to avoid any possible conflict. |
| Retention of Sydney Water operational land | Sydney Water has identified the land required for its on-going needs following a rigorous process having regard for future possible needs for potable water, recycled water and desalination infrastructure. The retained operational land will provide a high level of amenity for future adjoining residents due to its vegetation cover and undulating landform. |
| Valuable vegetation communities in areas identified for development | A package of biodiversity outcomes is proposed on Sydney Water retained land (comprising a combination of retention, conservation and rehabilitation) that will result in a net improvement in biodiversity. |

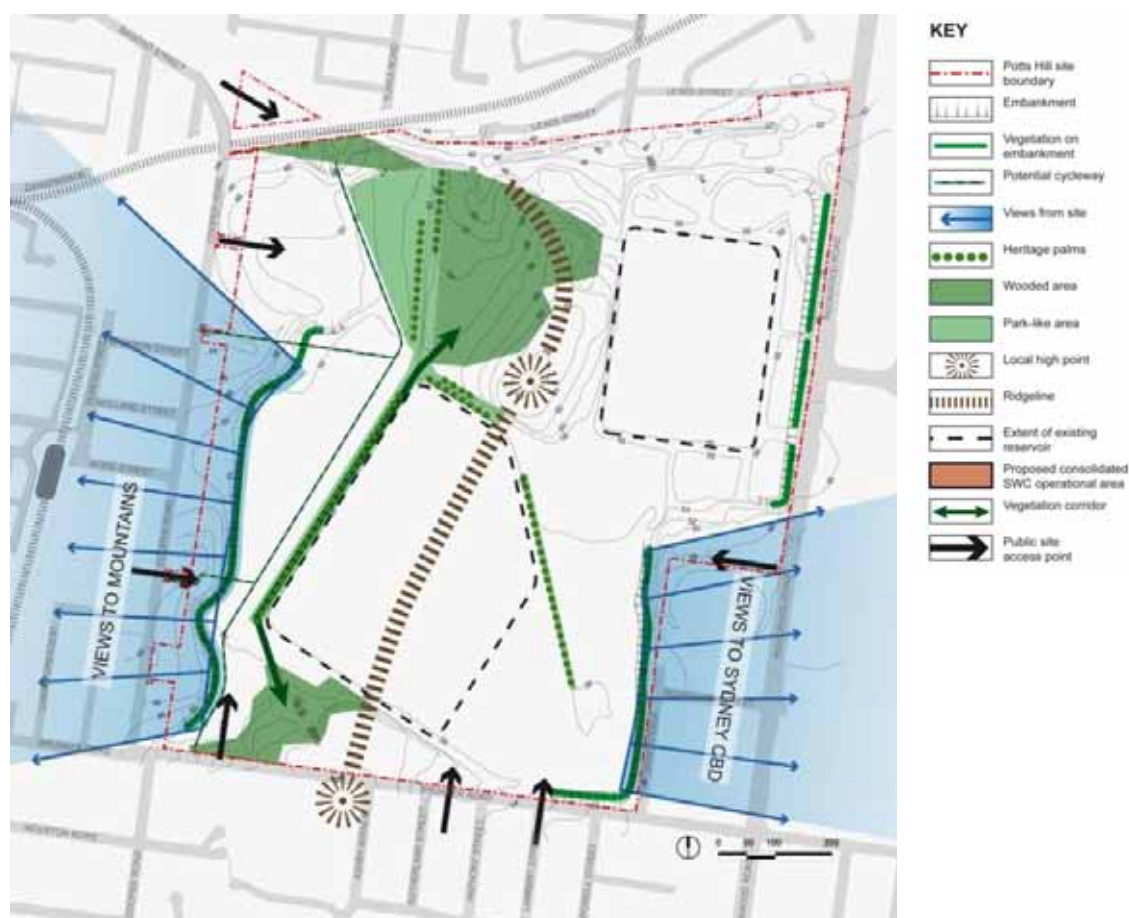


Figure 49 – Site opportunities

TABLE 6 – SUMMARY OF KEY SITE OPPORTUNITIES AND IMPLICATIONS

| OPPORTUNITIES | IMPLICATIONS |
|---|---|
| Elevated land and views for the western residential precinct | Dwellings can be sited to take advantage of views over western Sydney and the Blue Mountains while protecting the amenity of existing residents by providing suitable distance separation between existing and new development and landscape treatments, etc. |
| Proximity to existing public transport services | Enables a suitable density of development and range of housing to take advantage of proximity to bus and train services. |
| Existing vegetation on the Sydney Water retained land | Provides a significant level of visual amenity for future residents through the outlook from the residential area. |
| Existing Sydney Water land ownership along Cooper Road | Provides opportunities to ensure physical integration of the residential area with the local street system and local community. |
| Existing community, recreation and education facilities in the locality | The site is located in an established area that has the full range of services and facilities. Some of these will need augmentation to meet the demands arising from development. |
| Employment and residential outcomes | The site has the capacity to deliver both dwellings and jobs to an established area, creating a more sustainable community and assisting with achieving targets under Sydney's Metropolitan Strategy, and the draft West Central Sub-Regional Strategy. |



Figure 31 – Location of *Acacia pubescens* (Downy wattle)

2.5 Geotechnical conditions and groundwater

2.5.1 Soils

Previous assessments of soils conditions within the Reservoirs land (Douglas Partners 2006) indicate that the site is underlain by the Bringelly Shale of Triassic age. At the site, this formation includes the 'Potts Hill Sandstone Member' which is exposed above approximate RL 60 in cuttings in Brunker Road and at the northern side of Reservoir No. 2 (reference to the Sydney 1:100 000 Geological Series Sheet).

The Reservoirs land contains significant amounts of fill created during the construction of the reservoirs, including three areas of slope/ embankment where the fill meets the surrounding ground levels. A number of geotechnical investigations have been undertaken to determine the implications of the fill and the embankments on the development potential of the land.

The depth of fill varies, with the deepest fill located immediately to the west and east of Reservoir 2 (see Figure 32). The plateau area to the west of Reservoir 1 has seen minimal or no fill. The Bagdad Street site has not been filled, and features shallow soils over bedrock.

The fill has been in place for over 80 years, and while it has been found to contain a mix of soil and boulders of varying size, it is considered to be relatively stable.

A recent survey including investigative drilling was undertaken by Coffey Geotechnics to assess the subsurface conditions and provide recommendations on geotechnical aspects of the proposed development.

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The Coffey investigations found that out of eight investigation zones no evidence of groundwater was found at five locations, with two areas featuring localised perched water, and one area (adjacent to Graf Avenue) in which groundwater was encountered (at 1.1m below ground surface).

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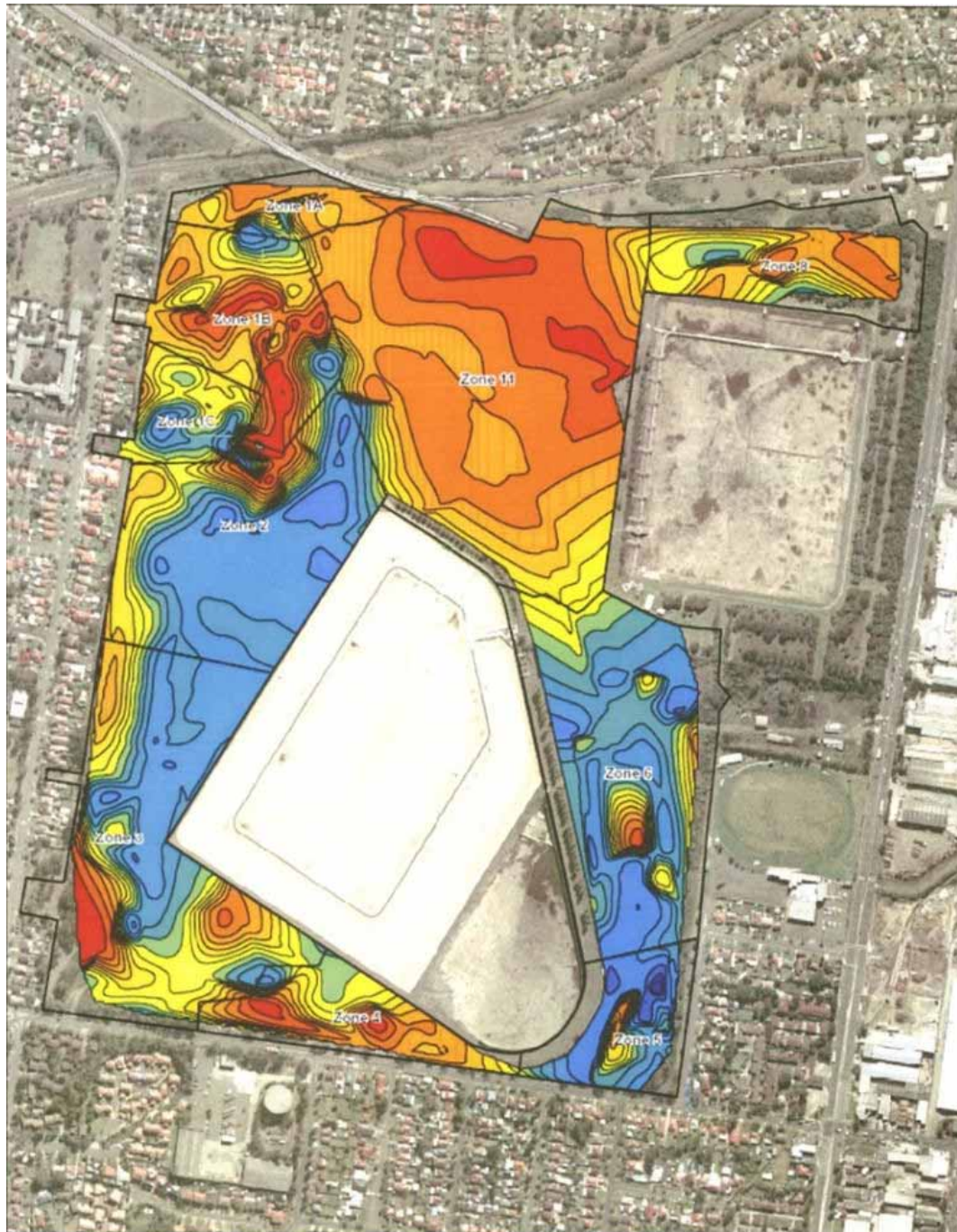


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The nature and extent of contamination are able to be adequately addressed under the relevant legislation.

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- Existing community infrastructure in the surrounding suburbs include: Birrong shopping centre; Birrong railway station; Birrong Girls High School; Birrong Boys High school; the Greyhound Social Club; Birrong Primary School, Regents Park Primary School, Birrong North Primary School; Birrong Preschool and Long Day Care Centre; Chester Hill, Yagoona and Regents Park Community Centres and Early Childhood Services; Chester Hill Library and Regents Park Library; Chester Hill Neighbourhood Centre; Roundabout Youth Service, Chester Hill; Birrong Post Office; Medical centre at Yagoona; Local bus services; Local churches and clubs; Parks and recreation facilities; hospital and community health services at Auburn and Bankstown; Bankstown and Lidcombe TAFEs; University of Western Sydney (UWS) Cumberland Campus; and several community/ emergency/ employment services in Auburn and Bankstown;
- The broader local area comprises the suburbs of Birrong, Yagoona, Sefton, Regents Park, Berala and Chester Hill and has a population of 44,200 persons;
- The area has an ageing population, although there is a significant proportion of households with children. A high proportion of households have weekly incomes less than \$400/ week; the Department of Housing provides a relatively significant proportion of accommodation.
- The main languages spoken other than English are Arabic, Vietnamese and Cantonese.
- Home computer/ internet usage is low.
- Public transport use for journey to work trips is around 20% ;
- In 2001, Auburn and Bankstown LGAs were the second and seventh most disadvantaged LGAs in Sydney respectively (SEIFA disadvantage index).

The Social Impact Assessment carried out by Heather Nesbitt Planning identified the following potential issues arising from the development of the Potts Hill site. It addresses both the residential and employment components of the proposals:

Need to minimise relative social and economic inequities between the existing community and the incoming residents – given the significant level of social disadvantage in the local area, it is essential that the Potts Hill project actively provides a range of housing opportunities which are accessible to existing local buyers and potential tenants. The Bankstown and Auburn LGAs are very diverse and mixed communities with young families and older residents; low and moderate income earners; Anglo and non-Anglo residents; home buyers and public/ private renters. The Potts Hill project should similarly support this diversity and seek to integrate the project with the existing community.

Additional demands on the existing stretched community infrastructure – as the project is located in an established, middle ring area of Sydney, much of the existing community infrastructure is dated and in need of upgrading. In addition, services and facilities are working to address the needs of existing residents many with high levels of social disadvantage. The impact of this project, together with other proposed developments in the Central West region as part of the Sydney Metropolitan Strategy, are likely to have a cumulative impact on existing community infrastructure. Both Bankstown and Auburn LGAs are expected to accommodate a projected 19,000 new dwellings by 2031.

Limited employment benefit to local residents – although this project provides for additional permanent employment, it is unlikely that many of these jobs will be for local residents. Rather they will be taken by existing skilled workers relocating with their existing employers. With unemployment consistently well above the Sydney average in this area and the high level of youth in vocational training but often unable to transition to permanent employment, skills development and employment opportunities need to be considered.

Significant need to address local housing issues as part of the Potts Hill project – housing affordability is a significant issue in Sydney and in particular, south west Sydney. For residents of Bankstown and Auburn LGAs, access to affordable housing for purchase or rental is difficult. Added to this is the area's growing aged population with access to appropriate aged housing and care particularly limited. The need to provide a range of affordable and/ or culturally appropriate housing options, including housing and care options for older residents, is important for this project.

Potential to increase resident and worker dependency on private transport – although the project is well-located in terms of access to public transport infrastructure, the reality is that the existing bus and rail services are limited in the Birrong area. Evidence of increasing use of private transport by Birrong residents together with car parking/ traffic issues in the local area and Chullora Industrial Area are of concern. Specific initiatives will be required to ensure that improved public transport services are available and residents/ employees are encouraged to utilise services.

Existing cultural and community tensions – both Bankstown and Auburn LGAs have a long history as being major centres for new immigrants to Australia. This has resulted in a culturally diverse community with many new immigrants arriving on humanitarian grounds or on temporary protection visas (TPVs). Added to this is the high level of social disadvantage which further widens the gap between people and often becomes a source of resentment, tension and misunderstanding. This project needs to recognise this issue and, as highlighted by the human service stakeholders consultation, build on the strengths of this diversity.

Difficulty for established existing community to support change – it is evident that residents directly adjoining the Potts Hill site together with residents in the broader local area (i.e. Birrong, Yagoona, Regents Park, Sefton, Chester Hill and Berala) may find change difficult. With the large proportion of older residents and extended families coupled with the high level of resident stability, this project is likely to be a significant change to the Birrong area and for local residents. This will be further exacerbated by one in four residents being poor English speakers while the area's

cultural diversity and high level of social disadvantage may make it difficult for residents to be engaged in the project.

2.8 Bushfire

The site is not included in any bushfire prone lands within the Bankstown LGA, therefore, in accordance with the guidelines for bushfire planning, the site is not considered to present any bushfire risk, and the guidelines do not apply.

2.9 Traffic and transport environment

A traffic and access report has been prepared by Masson Wilson Twiney (MWT). A copy of the report is included at Appendix D.

A summary of the existing access to the site, and traffic and transport conditions in the surrounding area from the MWT assessment is provided below. The information below also outlines data on car ownership and journey to work characteristics within the area surrounding Potts Hill and Birrong (2001 Census), published by the NSW Ministry of Transport as part of its Profile of Bus Contract Region 13.

2.9.1 Roads

The site is located in close proximity to the major metropolitan road network, with Rookwood Road an arterial road providing connections to the Hume Highway and M5 Motorway to the south and Parramatta Road and the M4 Motorway to the north. It is managed by the Roads & Traffic Authority (RTA) and carries around 52,000 vehicles per day.

Brunker Road west of Rookwood Road is a collector road managed by Bankstown Council. It connects the suburb of Birrong in the west to Rookwood Road. It carries around 12,500 vehicles per day.

Cooper Road is a local collector road connecting to the Yagoona shops and rail station on the Hume Highway in the south with Birrong in the north. It carries 5,000–7,000 vehicles per day, and is managed by Bankstown City Council. Two high schools are located along the northern part of Cooper Road.

The junctions of Rookwood and Brunker Roads and Rookwood Road and Boardman Street are controlled by traffic signals. The junction of Rookwood and Brunker Roads is presently operating at or beyond capacity in both the morning and evening peak periods as a result of existing traffic loads.

There is a roundabout at the junction of Brunker and Cooper Roads. It has been found to be operating beyond capacity in the morning peak, and is reported to have a history of accidents.

There are four existing access driveways along Brunker Road into the Reservoirs land, one off Cooper Road, and a disused entry off Rookwood Road.

2.9.2 Public transport

Birrong is served by existing bus and rail services, which are within a short walk of the site.

Birrong station is less than 400 metres (a five minute walk) from the site, and provides trains to employment and retail centres such as Central, Strathfield, Bankstown and Liverpool. Regents Park station is about 800m from Cooper Road. The frequency of services ranges from 1–3 services per hour in the off-peak (depending on the destination) to up to six services per hour in the peak, with the most frequent services to Bankstown and the city.

Private bus services travel past the site or near to the site, using Rookwood Road, Brunker Road and Auburn Road (as illustrated on Figure 33).

Potts Hill is located in 'Contract Region 13'. Routes servicing Potts Hill since September 2006 are as follows:

- 908 – Bankstown to Merrylands Station via Birrong, Regents Park, Berala, Auburn, and Granville;
- 909 – Bankstown to Parramatta via Birrong, Regents Park, Auburn and Granville; and
- 912 – Bankstown to Lidcombe Station via Potts Hill and Rookwood Road.

Current services are in the range of 1-2 buses per, with the more frequent services in the morning and afternoon peaks.

These services will be available for future residents and employees. A bus service from Lidcombe station along Rookwood Road is in close proximity to the proposed employment/ business park precinct.

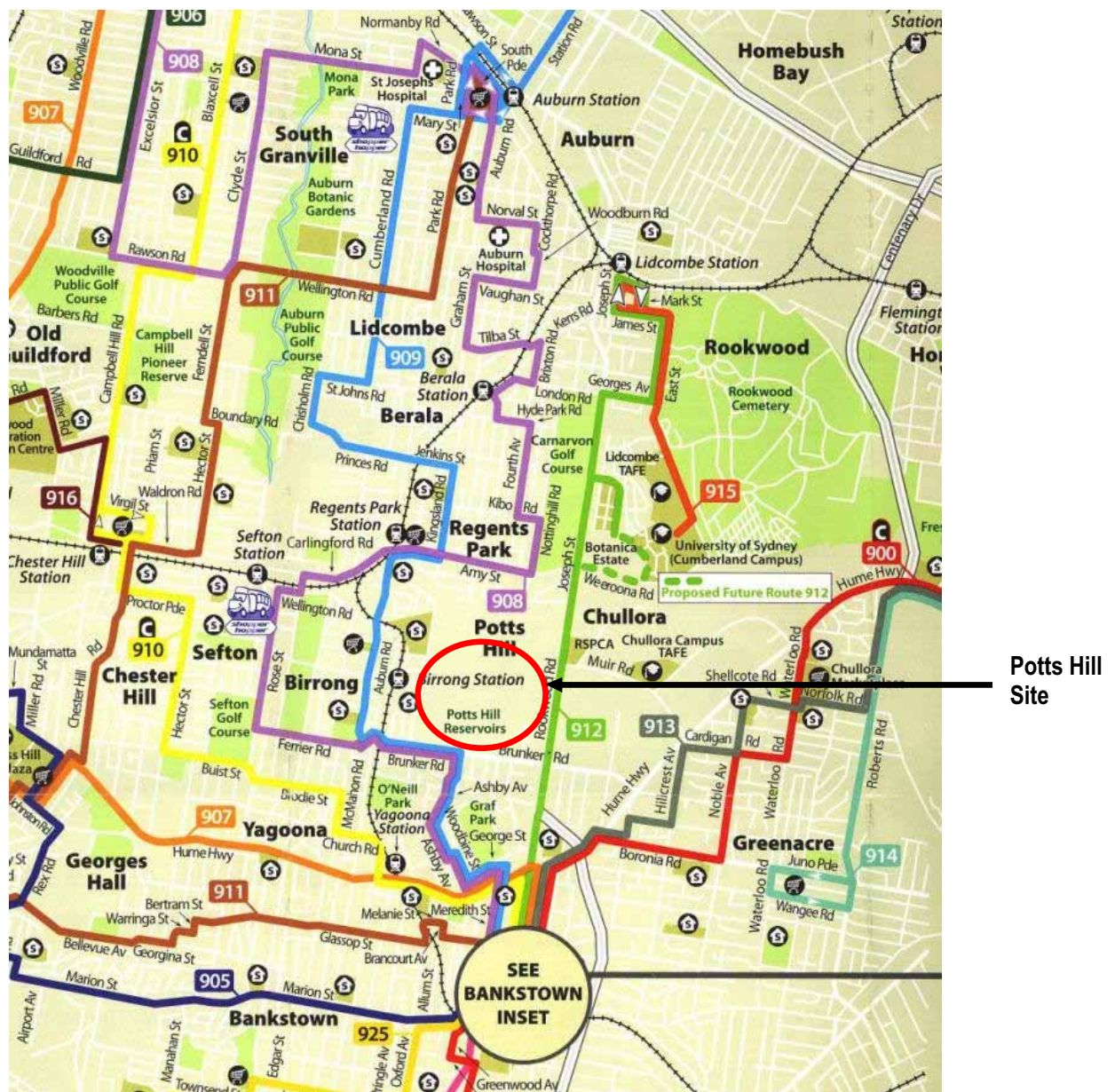


Figure 33 – Bus routes in the vicinity of the site

2.9.3 Pedestrians and cyclists

Pedestrian facilities

A pedestrian path is located only on the western side of Cooper Road for its entire length. Pedestrian crossing facilities are in the form of a marked foot crossing outside Birrong Girls High School and Birrong Boys High School.

The Cooper Road rail overbridge provides a narrow footpath on the western side of the road. A concrete barrier and steel posted wire fence provides protection of the footpath from the travel lanes. While pedestrian access is provided and no evidence of a history of accidents, it is not considered a pedestrian-friendly route, and does not have a high level of use by pedestrians or cyclists.

A footpath is installed on the northern side of Brunner Road between Cooper Road and Ashby Avenue. A footpath is installed on the southern side of Brunner Road for its entire length.

A pedestrian refuge is installed in Brunner Road to the west of its intersection with Ashby Avenue. This pedestrian refuge is poorly-located as the crest of the hill restricts sight distances.

There is a pedestrian path on the western side of Rookwood Road between Brunner Road and Graf Avenue. Pedestrian refuges are installed at the traffic signals at Rookwood Road/ Brunner Road. Pedestrian refuges are also installed across Graf Avenue and the northern side of the traffic controlled intersection of Graf Avenue/ Rookwood Road.

No pedestrian footpaths are installed in Graf Avenue.

Pedestrian access to Birrong Station is provided via stairs from the southern side of Avalon Street. No lift or ramps are provided, thus there is no disabled access to the station platform.

There is a marked foot crossing on Avalon Street at the station entrance. Avalon Street is a Bankstown City Council-managed road.

Bicycle facilities

A range of bicycle facilities are located in proximity to the Reservoirs land, as set out below:

- A shared pedestrian/ cycle path is located along Brunner Road and Rookwood Road.
- The Brunner Road to Hume Highway route connects with the Ryde-Botany Bay bike route. Rookwood Road connects with the Auburn bike route.
- West of the Bankstown Rail Line on Brunner Road is a signed route/ shared path going south to O'Neill Park through to Punchbowl and then linking to the Hurstville bike route.
- North of the site there is a path adjacent to the water supply pipeline for the Bay to Mountains bike route.
- Sealed shoulder routes exist along the M5 and adjacent to Salt Pan Creek.
- Bicycle/ parking lane routes exist west of the site on Auburn Road.

2.9.4 Car ownership, journey to work and public transport use

The Ministry of Transport has prepared data relating to car ownership, journey to work and the use of public transport for its publication *Profile for Bus Contract Region 13*, which encompasses the suburbs of Birrong and Potts Hill. Some relevant data are presented below.

Car ownership

- At the 2001 Census 14% of dwellings in Contract Region 13 had no motor vehicle. 77% of dwellings had at least one vehicle, and 38% had two or more vehicles.

Journey to work and use of public transport

- For the 2001 Census Journey to Work (JTW) originating in Contract Region 13, the most common mode of travel to work is by car as driver (63%), followed by train (18%), and car as passenger (8%). Only 1% travel to work by bus.
- Almost 23% of journey to work trips originating in Contract Region 13 are contained within Region 13.

Commuting to the CBDs

- 8% of the Sydney CBD workforce, and 3% of the Parramatta CBD workforce come from Contract Region 13;
- To travel to the Sydney CBD, 86% of Region 13 commuters use the train, 9% drive, 2% travel as car passengers, and 1% go by bus; and
- To travel to Parramatta from Region 13, the priority modes are: car as driver (47%), train (24%), and car as passenger (11%).

2.9.5 Summary of existing transport network constraints

The assessment undertaken by MWT identified a number of existing road network, public transport and pedestrian constraints surrounding the Potts Hill Reservoirs land. These constraints include the following, illustrated on Figure 34:

- Poor intersection operation and capacity constraints:
 - Brunker Road/ Cooper Road.
 - Rookwood Road/ Brunker Road.
 - Rookwood Road/ Boardman Street.
- Poor safety/ potential accident locations:
 - Brunker Road/ Graf Avenue – vehicle accidents.
 - Avalon Street pedestrian crossing at Railway Station – lack of pedestrian protection devices.
- Pedestrian constraints:
 - No disabled access to Birrong Railway Station.
 - Lack of pedestrian path along the eastern side of Cooper Road.
 - Generally pedestrian unfriendly access across rail line bridges and along routes from the site to rail stations.

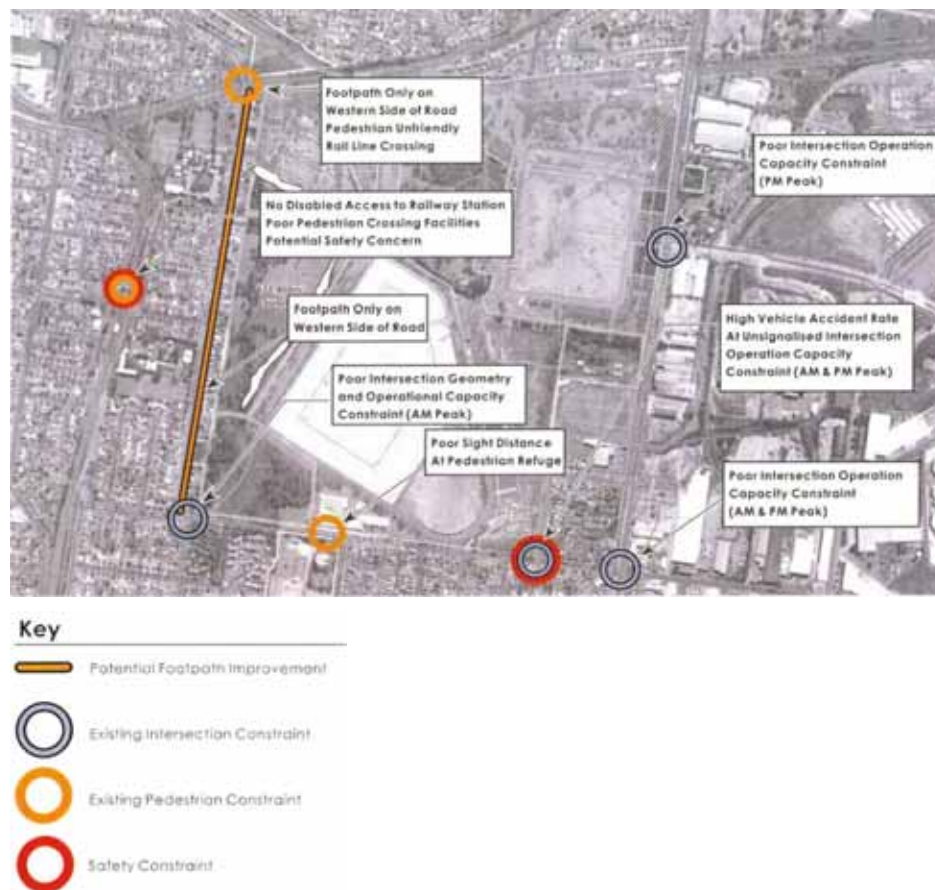


Figure 34 – Existing traffic and transport context and issues

The traffic and access implications of the redevelopment of the site and the mitigation measures proposed are outlined in Section 4, full details of which are included in the MWT report at Appendix D.

2.10 Indigenous heritage

An Aboriginal archaeological assessment of the redevelopment land at Potts Hill was undertaken by Jo McDonald Cultural Heritage Management Pty Ltd in accordance with established protocols (see Appendix E).

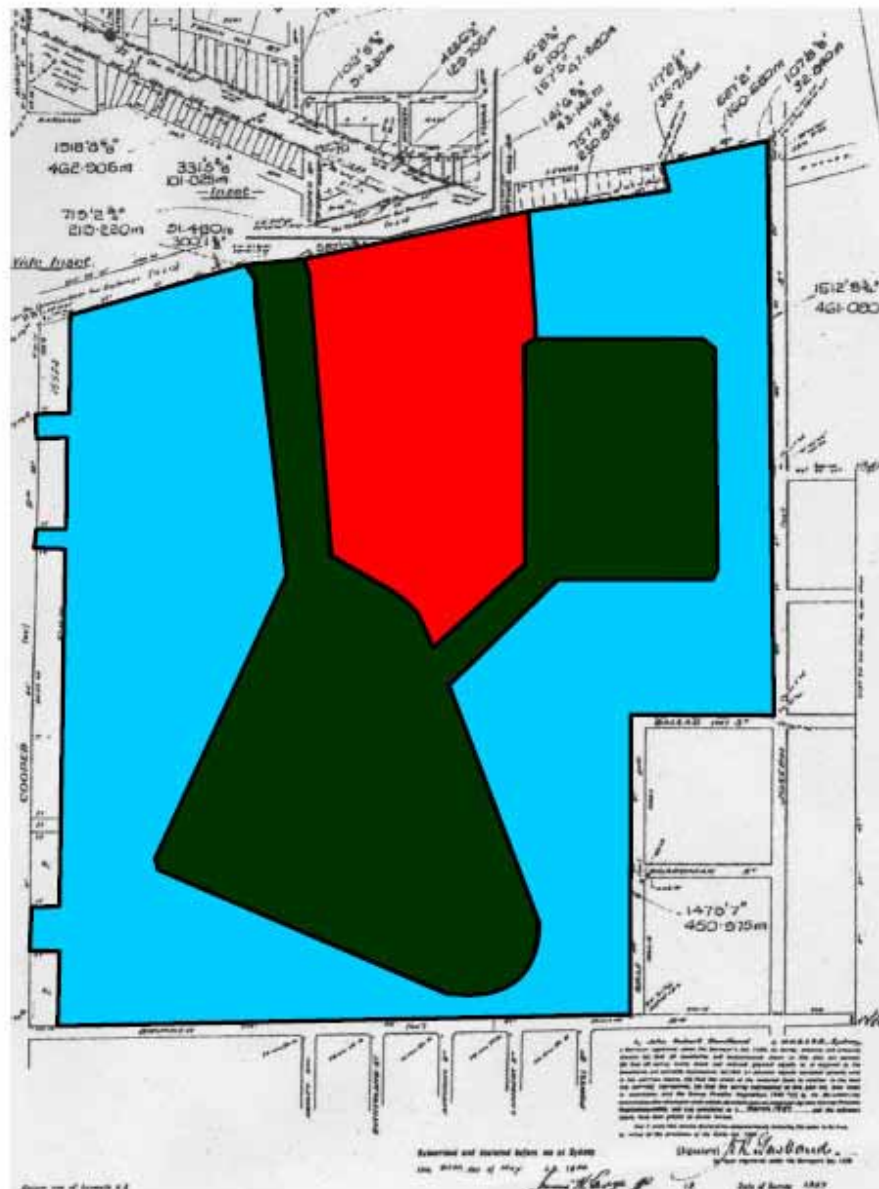
A summary of the findings of the Jo McDonald report includes the following:

- There are no areas within the redevelopment land that are considered to have high archaeological potential and no areas are identified as being worthy for conservation of their Indigenous heritage values; and
- There is no requirement for any further archaeological investigations in the redevelopment land.

As part of the 2005 Conservation Management Plan (CMP) for the Potts Hill site listed on the SHR, Sydney Water carried out an assessment of indigenous heritage. Figure 35 (extracted from the CMP) shows that the areas covered by Reservoir 1 and Reservoir 2, a connection between the reservoirs, and the water canal that connects Reservoir 2 to the northern boundary are “completely excavated – no [archaeological] potential”. It also indicates that the main area of potential indigenous heritage is the vegetated area west of Reservoir 1.

The conclusions of that assessment relevant to the retained land are reproduced in Appendix E, and include stop work protocols if any excavation within the vegetated area uncovers any archaeological artefacts.

In addition, the assessment indicates that Reservoir 1 has no indigenous archaeological potential. This is relevant to potential re-use of Reservoir 1 outlined at Section 3.7.



- Completely excavated –no potential
- Heavily disturbed, with no known historical uses. Archaeological potential limited.
- Little disturbance, however no known historical uses. 'Stop Work' protocols to be used in excavation.

Figure 3-64 Areas of Archaeological Sensitivity

Figure 35 – Indigenous heritage conclusions from 2005 CMP for Potts Hill

2.11 Services and utilities

The site is located in an established suburb and redevelopment will require augmentation of most services and utilities.

A services report based on discussions with all relevant servicing authorities has been prepared by Worley Parsons (incorporating Patterson Britton & Partners), and is at Appendix F. A summary of its findings is provided below.

2.11.1 Potable water

The Reservoirs land is bounded by water reticulation services. Trunk mains exist on both the southern side of Brunker Road between Cooper Road and Rookwood Road and in Rookwood Road adjacent the eastern boundary of the site. A 150mm diameter reticulation main exists on the eastern side of Cooper Road adjacent the western border of the site and a 100mm diameter reticulation mains exist in Graf Avenue and Boardman Street in the south-eastern corner of the site.

Sydney Water has indicated that the redevelopment land at Potts Hill is able to be adequately serviced by the Bankstown water system via the Bankstown elevated reservoir. Existing water mains will require some augmentation to account for the increased demand from redevelopment.

2.11.2 Recycled water

Discussions with Sydney Water have identified the possible opportunity for the use of recycled water within the redevelopment land, and the region in general. Potts Hill has been identified as a possible location for recycled water storage. The presence of such infrastructure would provide the opportunity to supply recycled water to new development.

2.11.3 Sewerage

The site sits on a ridge that defines two sewer catchments. As a result it is capable of delivering to two sewerage systems: the eastern employment land will discharge to the Northern Suburbs Ocean Outfall System (NSOOS), while the western residential area will discharge to the Southern and Western Suburbs Ocean Outfall Sewerage System (SWSOOS).

Approximately 1km of pipe augmentation external to the site to the west will be required to meet the demands of new development.

Minor augmentation of the sewerage services in Graf Avenue and Boardman Street will be needed to allow for the increased loading from employment/ business park precinct.

2.11.4 Electricity

Significant EnergyAustralia (EA) distribution assets are currently located within the road reserves for Cooper Road, Brunker Road and Rookwood Road.

There is also a high voltage transmission line that traverses the eastern part of the site in the vicinity of Graf Avenue, and one that traverses the western precinct between Cooper Road and the north-eastern part of the Reservoirs land, which will be addressed as part of the redevelopment process.

EA have indicated that any development will need to be connected to its assets residing in the public domain.

Sufficient capacity exists in the high-voltage networks bordering the site to supply a high-voltage feeder to the proposed residential precinct and a similar base load to the proposed employment/ business park precinct without major augmentation or amplification.

Development will require the provision of substations (kiosks) at suitable locations. It is estimated that approximately three kiosks will be required in both the residential and employment/ business park precincts.

2.11.5 Gas

Agility has advised of existing infrastructure in Brunner Road and Rookwood Road and some limited infrastructure in Cooper Road. Based on a preliminary assessment, they have advised that the provision of gas to the redevelopment land is feasible.

2.11.6 Telecommunications

Servicing plans and information provided by Telstra have indicated that there is a main optical fibre cable in Brunner Road and Rookwood Road.

In addition, there is an extensive local cable network in Cooper Road. Advice provided by Telstra indicates that any development within the redevelopment land will be able to be adequately serviced by telecommunications.

2.11.7 Run-off water management

The proposed redevelopment of the site is expected to increase the volume of runoff from the site when compared with its existing state. Hence, appropriate on-site detention (OSD) storage systems will be required. Options include an arrangement of aboveground and sealed underground systems that together ensure that peak discharges from the site for events greater than, or equal to, the five year ARI event do not exceed those prior to development.

Possible controls to meet water quality objectives include gross pollutant traps, swales, ponds, wetlands and bio-retention systems.

There is an opportunity to coordinate the OSD and water quality objectives with the selection and development of land to be utilised for public open space and other public domain.

2.12 Existing zoning

The site is presently zoned predominantly 5 Special Uses – Sydney Water, with a number of parcels located on Cooper Road zoned Residential 2(a) under Bankstown Local Environmental Plan (Bankstown LEP) 2001, and Special Uses (Water Supply) under Auburn LEP 2000, as shown on Figure 36.

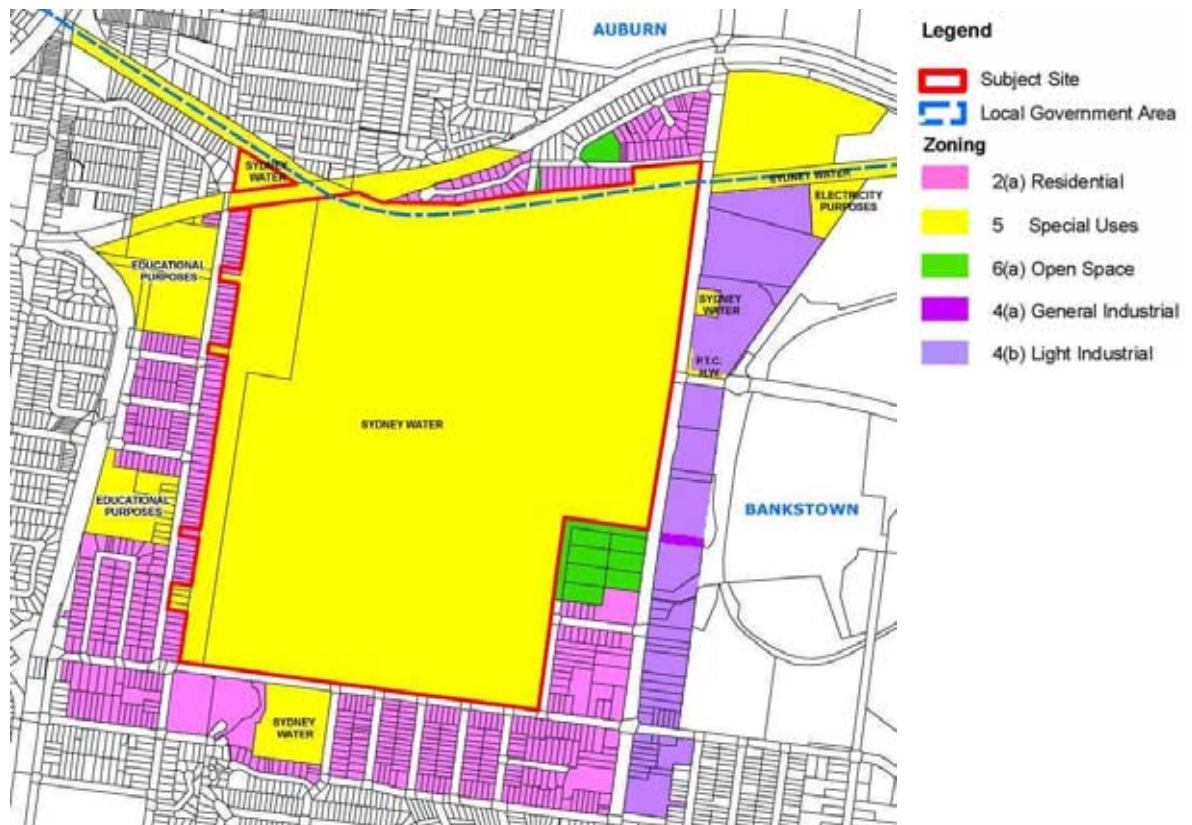


Figure 36 – Existing site zoning

2.13 Surrounding development

The surrounding development comprises a mix of generally low-density dwellings, interspersed with new higher density dwellings – including town houses, villas, and duplex or semi-detached dwellings - which reflects the uses permissible in these areas. The character of surrounding development is illustrated on Figure 37–Figure 45.

Figure 46 and Figure 47 are of the local shops on Auburn Road at Birrong, which are less than 800 metres from the Reservoirs land. These shops cater for the local convenience shopping for the community with a supermarket and specialty shops.



Figure 37 – Local housing – Cooper Road



Figure 38 – Local housing – Cooper Road



Figure 39 – Local housing – Cooper Road



Figure 40 – Local housing – Cooper Road



Figure 41 – Local housing – Cooper Road



Figure 42 – Local housing – Cooper Road



Figure 43 – Local housing – new dwellings and semi-detached housing along Cooper Road (rear photo)



Figure 44 – Local housing – Graf Ave



Figure 45 – Local housing – south of Brunner Road



Figure 46 – Birrong Shops, Auburn Rd



Figure 47 – Birrong Shops, Auburn Rd

2.14 Summary of site constraints and opportunities

The constraints and opportunities of the Potts Hill Reservoirs land are summarised graphically on Figure 48 and Figure 49, prepared by Allen Jack + Cottier (AJ+C) Architects. The constraints are summarised in Table 5, along with a comment on the manner in which they can be addressed. Table 6 summarises the opportunities, along with a comment on their implications.

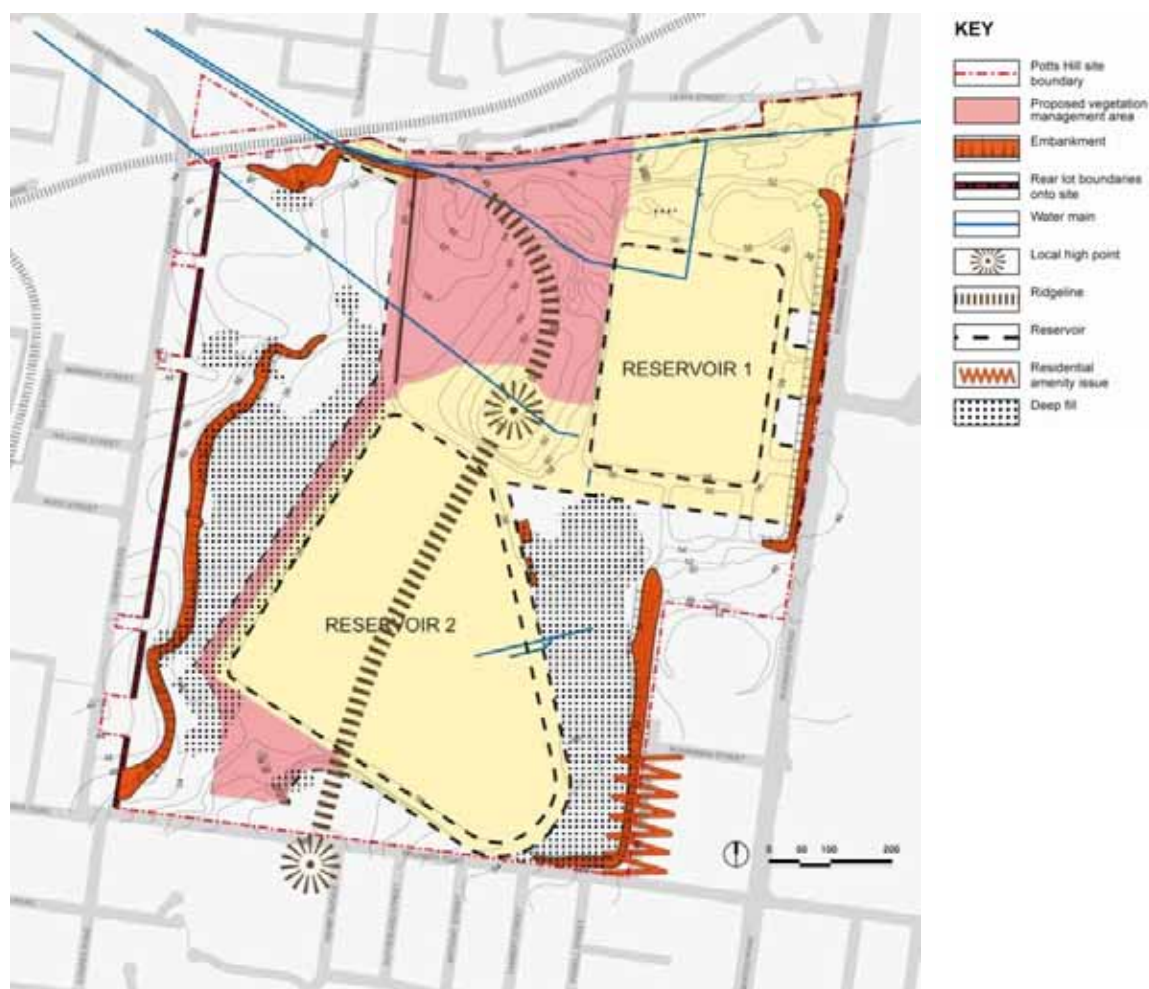


Figure 48 – Site constraints

TABLE 5 – SUMMARY OF KEY SITE CONSTRAINTS AND IMPLICATIONS

| CONSTRAINTS | IMPLICATIONS |
|---|---|
| Deep fill areas | Deep fill areas to be compacted to enable development. |
| Embankments | Geotechnical works will address the embankments – the western embankment will be incorporated into future residential allotments; the eastern embankment will be stabilised and landscaped extensively. |
| Interfaces with adjoining residential areas | Special planning attention will occur at interfaces to ensure that suitable amenity is provided with the new development. Measures proposed include providing sufficient distance separation between existing and new development, landscaped areas, and the suitable placement of new access roads into the redevelopment land. |
| Existing in-ground water infrastructure to be retained | Development will be planned to avoid any possible conflict. |
| Retention of Sydney Water operational land | Sydney Water has identified the land required for its on-going needs following a rigorous process having regard for future possible needs for potable water, recycled water and desalination infrastructure. The retained operational land will provide a high level of amenity for future adjoining residents due to its vegetation cover and undulating landform. |
| Valuable vegetation communities in areas identified for development | A package of biodiversity outcomes is proposed on Sydney Water retained land (comprising a combination of retention, conservation and rehabilitation) that will result in a net improvement in biodiversity. |

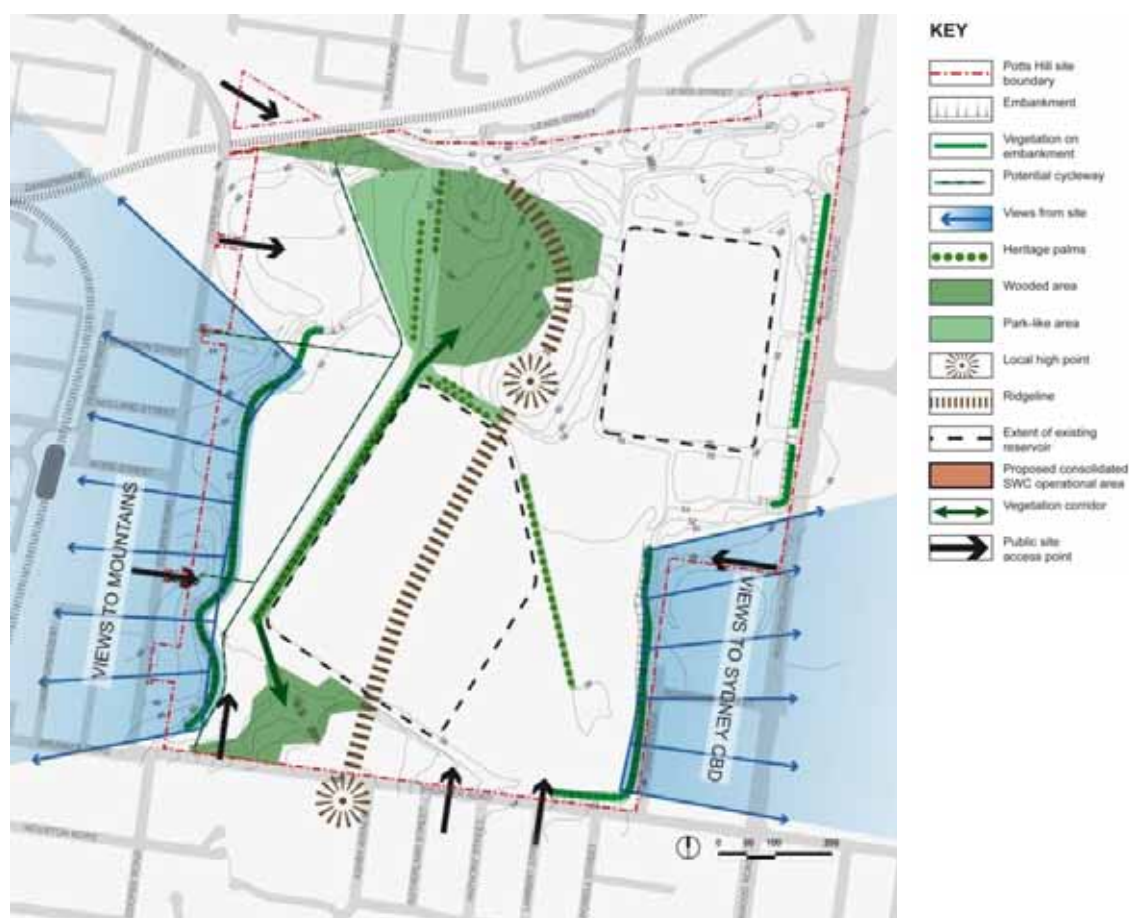


Figure 49 – Site opportunities

TABLE 6 – SUMMARY OF KEY SITE OPPORTUNITIES AND IMPLICATIONS

| OPPORTUNITIES | IMPLICATIONS |
|---|---|
| Elevated land and views for the western residential precinct | Dwellings can be sited to take advantage of views over western Sydney and the Blue Mountains while protecting the amenity of existing residents by providing suitable distance separation between existing and new development and landscape treatments, etc. |
| Proximity to existing public transport services | Enables a suitable density of development and range of housing to take advantage of proximity to bus and train services. |
| Existing vegetation on the Sydney Water retained land | Provides a significant level of visual amenity for future residents through the outlook from the residential area. |
| Existing Sydney Water land ownership along Cooper Road | Provides opportunities to ensure physical integration of the residential area with the local street system and local community. |
| Existing community, recreation and education facilities in the locality | The site is located in an established area that has the full range of services and facilities. Some of these will need augmentation to meet the demands arising from development. |
| Employment and residential outcomes | The site has the capacity to deliver both dwellings and jobs to an established area, creating a more sustainable community and assisting with achieving targets under Sydney's Metropolitan Strategy, and the draft West Central Sub-Regional Strategy. |

3 OUTLINE OF PROPOSALS

This section of the Environmental Assessment outlines the residential, employment/ business park and open space proposals for the redevelopment land. It also describes two associated proposals relevant to the retained land – the re-use of Reservoir 1 for the storage of inert fill, and the package of proposed environmental (vegetation) outcomes as an off-set for the potential loss of trees within the redevelopment land.

3.1 Concept layout

A concept layout has been prepared for the site illustrating the proposed land uses, and access points into the proposed residential precinct and employment/ business park precinct (see Figure 50). The potential outcomes for the site are described in further detail below. The background to the concept plan is set out in Appendix G, Concept Plan Design Principles, prepared by AJ+C.

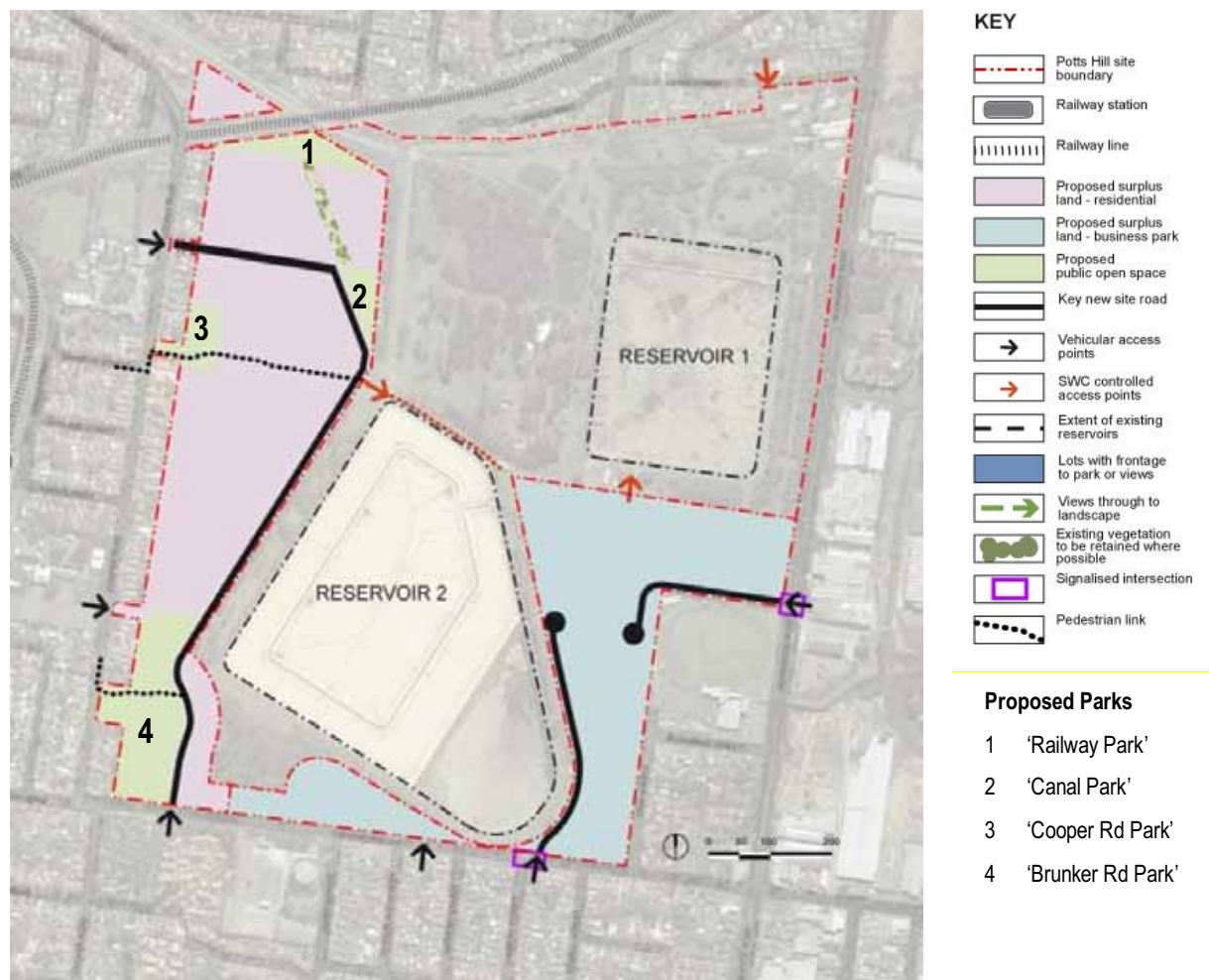


Figure 50 – Concept layout for the redevelopment land

3.2 Residential precinct

The western part of the redevelopment land is suitable for residential development. The proposed residential precinct is 24.7 hectares, of which 19.8 hectares are suitable for residential development (including roads), and 4.9 hectares for open space.

Following a rigorous analysis of its attributes, the residential precinct has the potential to be developed with the following key features shown on an illustrative plan at Figure 51:

- The majority of the residential precinct has been found to be suitable for housing that is similar in form and scale to the surrounding Potts Hill area. Of this, the majority of the dwellings are expected to be detached dwellings;
- Two sites with high levels of amenity and the potential for views provide the opportunity for higher density housing forms, including apartment buildings, allowing a mix of housing types. These two sites shown on Figure 51 are 1.1 hectares and 1.6 hectares in size respectively, and have the capacity to be developed for apartments up to 3 storeys, with a total capacity for about 180 apartments;
- Two vehicular access points are available off Cooper Road, and one off Bruncker Road using a combination of existing entry points to the Reservoirs land, and new connections;
- Two dedicated pedestrian access points are also available off Cooper Road through open space areas;
- The western embankment can be incorporated into future residential allotments, allowing dwellings to take advantage of a remodelled, stabilised and replanted slope, and the views from the elevated land;
- Special attention will be given to the interface between the residential area and existing dwellings along Cooper Road to ensure that a high level of amenity is maintained. The concept plan at Figure 51 shows one option that has been investigated, consisting of a road along the rear of existing properties on Cooper Road. This arrangement would allow for existing residents to redevelop their properties with an additional dwelling (subject to appropriate Council planning controls). It would also allow for a landscaped verge and road separating the existing dwellings from new dwellings by a distance of over 20 metres. A range of additional opportunities for treatment of this area are being investigated and will be outlined in future Project Applications;
- Potential to develop a legible road network that provides a high level of connectivity for vehicles, pedestrian and cyclists, replicating the east-west orientated grid pattern of streets that exists in the surrounding suburbs;
- A street system that borders the Sydney Water operational land, thereby creating a green outlook for future residents, and providing passive surveillance of the Sydney Water land;
- A street network that will allow ready access to proposed public open space areas;
- The Bagdad Street site is also proposed for low-density residential development, reflecting the nature of surrounding development and taking advantage of existing road access;
- Four open space areas that provide 4.9 hectares of potential passive open space that will be accessible and available for the existing local community as well as new residents. These spaces will provide a range of unique recreational experiences for the incoming residents as well as residents in the surrounding Potts Hill area.

An illustrative master plan showing how the residential precinct could be developed is provided at Figure 51. While the road structure may change following further detailed investigations, this plan shows that the land can be readily developed for residential purposes. Further detailed development proposals for the site, including potential lot layout and dwelling types will be submitted as Project Applications.



Figure 51 – Illustrative concept plan for the residential precinct

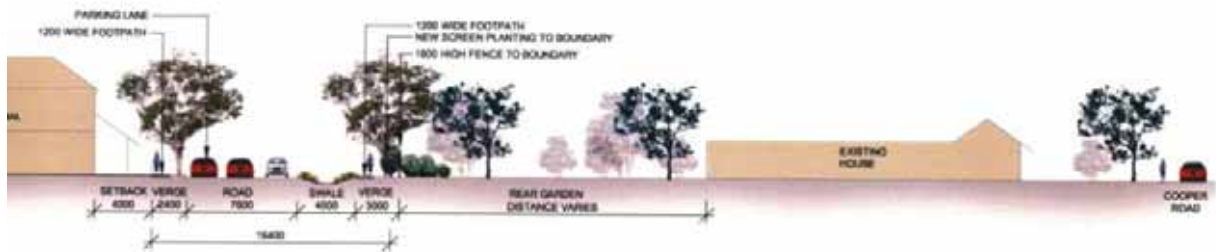


Figure 52 – Section detail through land at rear of Cooper Road properties

The localities of Potts Hill and Birrong have been undergoing redevelopment in recent years in response to the age and condition of existing dwellings, changing demographic characteristics, and an ability to build a range of dwellings under the existing planning regime. Figure 53 provides an indication of the types of residential development that could be developed on the Potts Hill site to provide a choice in dwelling type to suit different households, to take advantage of the characteristics of the site, and to take advantage of the location of the site and its proximity to public transport and other services.

The creation of a new extension to the existing Potts Hill residential community and the added housing choice will enable existing residents to age in place without moving out if their current community networks, and for those who live in older dwellings, to trade up into newer, more modern homes. The design and water and energy efficiency measures proposed for the residential precinct will also assist with reducing the consumption of water and power.





Figure 53 – Sample of potential dwelling types

Details of proposed draft built form controls/ design guidelines for the residential precinct are outlined in Appendix H.

3.3 Open space

Four areas of the residential precinct totalling 4.9 hectares have been identified as suitable for public open space, and are proposed for dedication to Bankstown City Council. They are shown on Figure 50 and Figure 51 and described below. Concepts have also been prepared for three of these parks:

- 'Canal Park' – around 0.56 hectares of the park-like land adjacent to the water supply canal that presently consists of a mix of cultural plantings, interspersed with grass – see landscape illustration at Figure 54; and
- 'Brunker Road Park' – an area of around 2.8 hectares of mixed vegetation and cleared land in the south-western corner of the site adjacent to Brunker Road. This area has been identified in response to a preference expressed by Council – see landscape illustration at Figure 55;
- 'Railway Park' – around 0.86 hectares in the north-western corner of the site adjacent to the freight rail line. It contains native vegetation and some specimens of the Downy wattle. It currently performs a minor drainage function. It is proposed that it will be kept in its natural state;
- 'Cooper Road Park' – approximately 0.68 hectares of land off Cooper Road in the central part of the site (see landscape illustration at Figure 56).

The proposed open spaces are in a very good condition, and have the potential to function as passive recreation areas with passive recreation facilities and cycle and pedestrian paths. They will be accessible to both the existing local community and new residents.

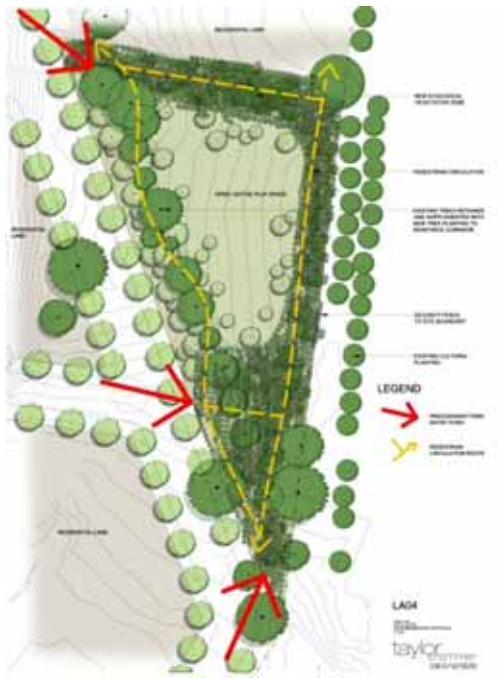


Figure 54 – Preliminary concept for proposed 'Canal Park' adjacent to the water canal



Figure 55 – Preliminary concept for proposed 'Brunker Road Park' adjacent to Brunker Road

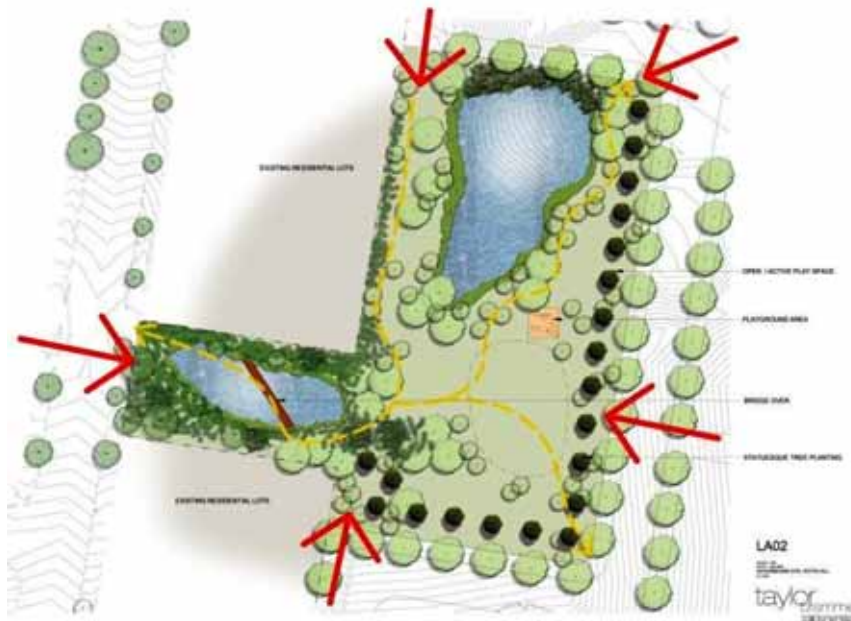


Figure 56 – Preliminary concept for proposed 'Cooper Road Park'

3.4 Employment/ business park precinct

The proposed employment/ business park precinct comprises 15.3 hectares consisting of an inverted 'L' shaped area located south of Reservoir 1 and east of Reservoir 2, with road frontage to Rookwood Road to the east and Brunner Road to the south, as well as an irregular shaped parcel on Brunner Road where Sydney Water has some administration buildings and associated uses.

The L-shaped area is also bounded by Graf Avenue, but does not have access from the frontage to Graf Avenue by virtue of an embankment along its length. This area accommodates a number of industrial-style buildings and has traditionally been used by Sydney Water for quasi-industrial uses.

The style of future development is likely to be a mix of office and storage/ warehouse/ maintenance buildings with associated parking and landscaped areas.

Discussions are being held with a range of Government agencies and utilities interested in locating within the eastern precinct. The nature of their activities is outlined in the following sections.

Examples of possible building types for the employment land are shown at Figure 57.

Development within this precinct will be the subject of future Project Applications under Part 3A, in due course.

Details of draft proposed built form controls/ design guidelines for the employment/ business park precinct are outlined in Appendix I, Draft Business Park Design Guidelines prepared by AJ+C.

3.4.1 Sydney Water Corporation field headquarters

The Sydney Water field headquarters will comprise the following uses:

- Offices;
- Warehouse;
- Retention of two heritage sheds and incorporation into the new facility;
- Communications facilities;
- Hardstand for storage of essential equipment;

- Car parking; and
- Landscaped areas.

3.4.2 NSW Police Force business units

The Police Facility will comprise the following uses:

- Offices;
- Warehouse and archives;
- Workshops and garages;
- Hard stand areas for vehicles, plant and other equipment;
- Car parking;
- Landscaped areas;
- Up to two radio antennae, potentially up to 30m high; and
- An emergency helicopter landing pad. The helipad will be sited to ensure that there are no unacceptable impacts on nearby residents.



Figure 57 – Employment land – possible building types

3.4.3 TransGrid electricity substation

The proposed substation will be a new prototype. This development will be an essential component of the planned augmentation of the electricity supply for the greater Sydney

metropolitan area. While no design concepts have been prepared at this stage, a low profile building is envisaged built into the embankment south of Reservoir 1.

Substantial boundary setbacks from Rookwood Road, the proposed access road off Rookwood Road, and the Sydney Water Facility are also envisaged to allow for landscape screening and appropriate security measures.

3.4.4 EnergyAustralia depot

The existing parcel of land on Brunner Road currently occupied by Sydney Water administration uses and parking/ open storage also provides the opportunity for development as a depot for EnergyAustralia, comprising office and warehouse uses. This parcel will also be the subject of a future application.

3.4.5 Signage on Rookwood Road

It is envisaged that there will be identification signage and advertising on the Rookwood Road frontage of the employment precinct and possibly within the employment precinct as part of Sydney Water's delivery of community information about water use and conservation. Advertising signage is also desirable for the marketing of the residential precinct. Applications for consent for signage will be prepared at the appropriate time.

3.5 Road structure and access

A concept of the potential road layout and access locations for the employment precinct and the residential precinct are shown on Figure 50 and Figure 51.

The traffic implications of the proposed access arrangements for the residential precinct, and for the employment precinct, including an assessment of the nature and scale of the expected occupants of the employment land have been addressed by MWT and are detailed at Appendix D. The assessment has been carried out using the proposed land-uses and expected traffic generation levels in accordance with accepted modelling approaches consistent with Council and RTA requirements. Proposed traffic management measures to address the effects of development are outlined in Section 4.5. Given that this is a concept plan application, the details of parking arrangements have not yet been addressed, however, compliance with relevant codes and policies is not expected to be a problem, and this will be addressed in subsequent project or development applications.

3.5.1 Employment precinct

The proposed access arrangements for the employment precinct comprise a cul-de-sac off Brunner Road in the location of the current access driveway into the Sydney Water site, and a cul-de-sac off Rookwood Road adjacent to the boundary with the greyhound track. Each access is proposed as a full-turning movement signalised intersection. This arrangement will enable adequate access to the employment precinct for internal users of the land, and will avoid any possibility of a traffic shortcut through the employment land between Brunner Road and Rookwood Road.

In addition, a pedestrian and emergency vehicle access will be provided from the Sydney Water Facility across the Sydney Water retained land to the residential precinct, to allow employees to walk to and from Birrong Station, and to facilitate access by emergency vehicles.

The other parcel of employment land on Brunner Road will be accessed via a driveway in the vicinity of the existing driveway to Sydney Water uses.

3.5.2 Residential precinct

The residential precinct will be served by two access points off Cooper Road, and one access point off Brunker Road just east of Cooper Road.

Two dedicated pedestrian access points are proposed off Cooper Road to facilitate efficient access between the residential precinct and Birrong Station.

3.6 Proposed land form

Geotechnical investigations have indicated that future landforms can closely follow the existing ground levels. Roads will be placed at grade wherever possible. Some earth works will be required to form terraces or retaining walls on the embankments in order to allow dynamic compaction, but otherwise the earthworks are expected to be minimal.

3.7 Removal of fill and re-use of Reservoir 1

The proposed solution to the geotechnical conditions on-site is dynamic compaction of fill areas to achieve stability. A trial measure is proposed. However, if the results are not satisfactory, an alternative approach will be adopted.

The alternative would be to remove an amount of fill that is equivalent to the weight/ pressure of the development that is likely to go on the land. This process is expected to produce an amount of surplus fill, which is estimated to be of such a quantity that is not cost effective to remove to landfill. Investigations carried out by Patterson Britton & Partners (now Worley Parsons) into the possible use of Reservoir 1 for the storage of the excess fill has determined that it is structurally and economically feasible (a copy of that report is included at Appendix J).

The preferred manner in which the fill could be stored is shown in Figure 58, prepared by Worley Parsons (formerly Patterson Britton & Partners).

The reservoir has the capacity to accommodate up to 6m of fill above the reservoir floor. The preferred approach to using the reservoir would see the fill located adjacent to the eastern and southern walls to improve its wall stability. It would be located to allow Sydney Water continued access to key infrastructure within and around the reservoir, and to allow the reservoir to continue to perform its present minor storm water management role.

In addition to locating the excess fill within Reservoir 1, there is an opportunity to utilise part of the reservoir for the storage of storm water or recycled water. These options are being investigated in conjunction with water sustainability measures associated with the redevelopment of the surplus land.

Preliminary investigations indicate that the storage of fill and water within Reservoir 1 (including site preparation and the transporting of fill) can be achieved without any detrimental impact on the fabric of the reservoir.

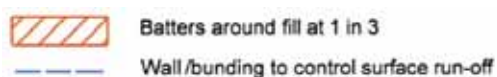
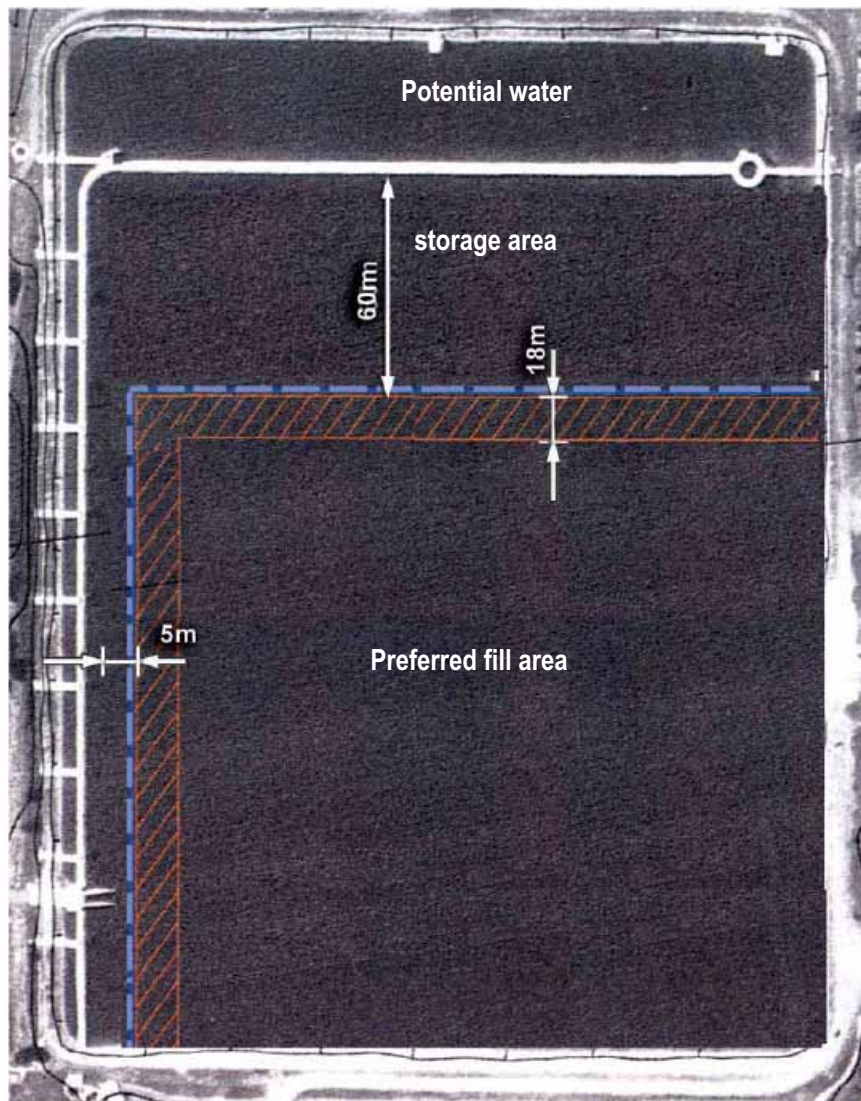


Figure 58 – Approach for the re-use of Reservoir 1 for storage of excess inert fill and/ or water

3.8 Proposed zonings

The proposed zones for the site are outlined below and shown on Figure 59. Under the arrangements for Part 3A applications and State Significant Sites, an amendment is needed to the Major Projects SEPP. Appendix K contains a draft amendment to the SEPP incorporating the preferred zoning and planning provisions, consistent with the 'new LEP Template'.

3.8.1 Redevelopment land

Residential precinct

The preferred zoning for the residential component comprises Zone R2 Low Density Residential for the bulk of the residential precinct, and Zone R3 Medium Density Residential for the 2 sites identified as suitable for medium density/ apartment buildings, as shown on Figure 59. These zones allow for a range of housing types to respond to the market in this locality.

The concept planning for the residential precinct indicates that it has the capacity for around 410 dwellings, comprising around 230 predominantly detached dwellings, and two medium density sites that have the capacity for about 180 apartments or seniors housing.

The medium density (apartment building) sites have been identified after a rigorous assessment of the site and its attributes, including available views, presence of landscape to create a high level of amenity, and proximity to proposed park areas. These sites have the potential to create a high level of amenity, and on the basis of site planning, urban design and environmental assessment appear to be highly suitable medium density sites.

The actual number of apartment dwellings and seniors housing that may occur on these sites is dependent on market conditions. However, the assessment carried out for this concept proposal supports such an outcome on planning and urban design grounds.

Based on the above potential dwelling yield, the number of new residents that could be added to the existing Birrong community is expected to be in the order of 1,000–1,500 persons, depending on the final number and configuration of housing types.

This level of development and housing choice is considered appropriate having regard for the physical and landscape attributes of the site, and its proximity to public transport, employment and other essential community facilities and services.

Employment / business park precinct

The preferred zoning for the eastern employment area is Zone B7 Business Park. This zone is preferred on the grounds that it will enable a broad range of uses in line with the anticipated future uses. The employment area is expected to accommodate in the order of 800–900 employees.

Open space

The preferred zoning for the open space areas is zone RE1 Public Recreation. These areas are proposed for dedication to Bankstown City Council for recreation purposes.

3.8.2 Sydney Water retained land

Since the land to be retained by Sydney Water has been excluded from any rezoning action, it will remain under its current zoning arrangements (Bankstown and Auburn LEPs).

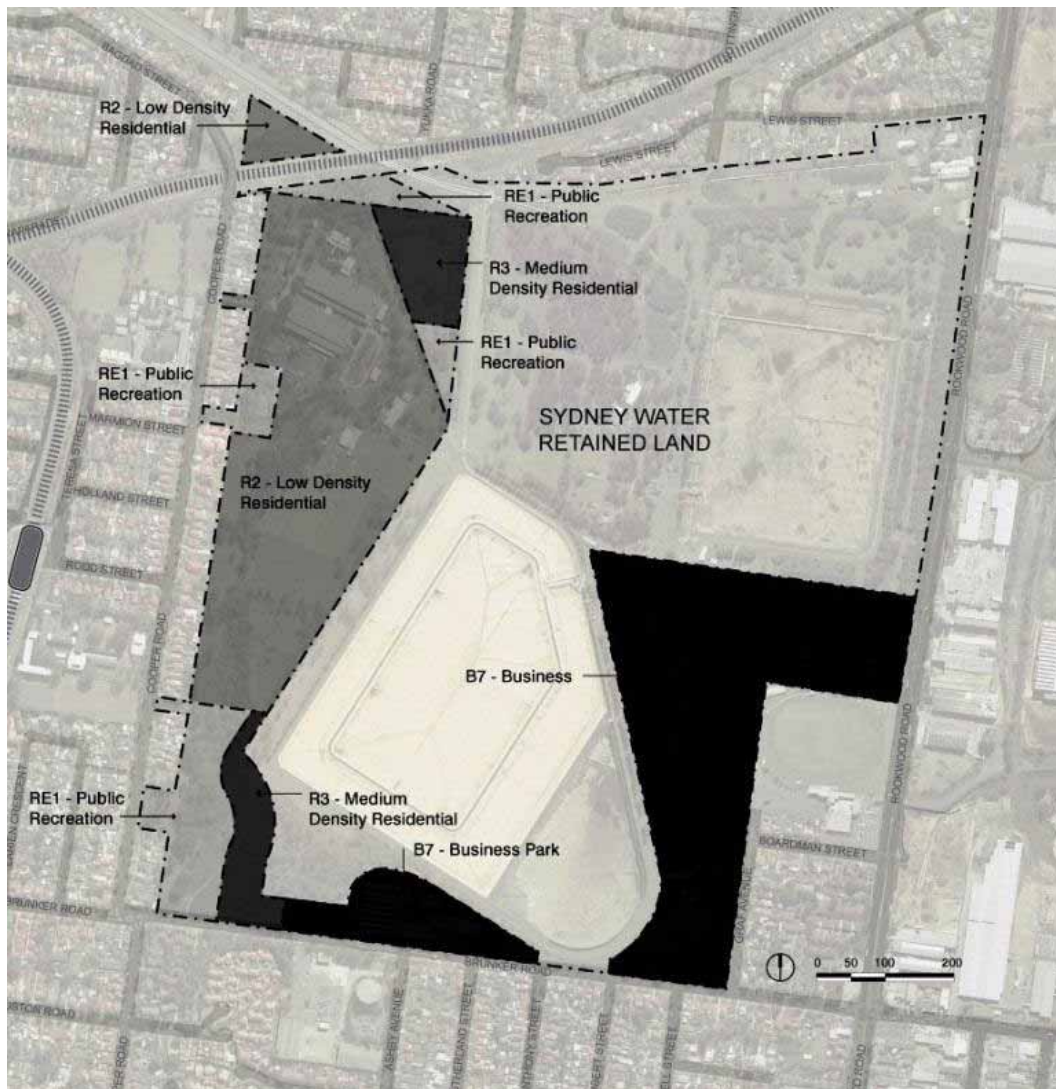


Figure 59 – Proposed zonings

3.9 Proposed development parameters

3.9.1 Residential precinct

Residential development should deliver a range of housing types to meet the needs of different households, and in response to the location of the site close to public transport, employment, schools and other essential urban facilities. This should include detached and attached dwellings ranging from single dwellings to residential apartments and seniors' housing.

Given its locational characteristics, it would be appropriate for the residential precinct to achieve an overall density of at least 20 dwellings per hectare, which could comprise an area of 15 dwellings per hectare for mainly detached and attached dwellings, with 2 additional medium density areas suitable for apartments and/ or seniors housing, shown on Figure 60.

It is proposed that the maximum building height for the detached/ attached dwelling areas would be generally 2 storeys, and 3 storeys for the apartment/ seniors housing sites, as shown on Figure 61. In those parts of the proposed residential precinct where the final form of the embankment west of Reservoir 2 will result in steeper topography, it may be appropriate to allow three storey dwelling construction, with a garage at ground level and 2 storeys of residential accommodation above. The identification of areas where this may be suitable is expected to follow detailed site planning.

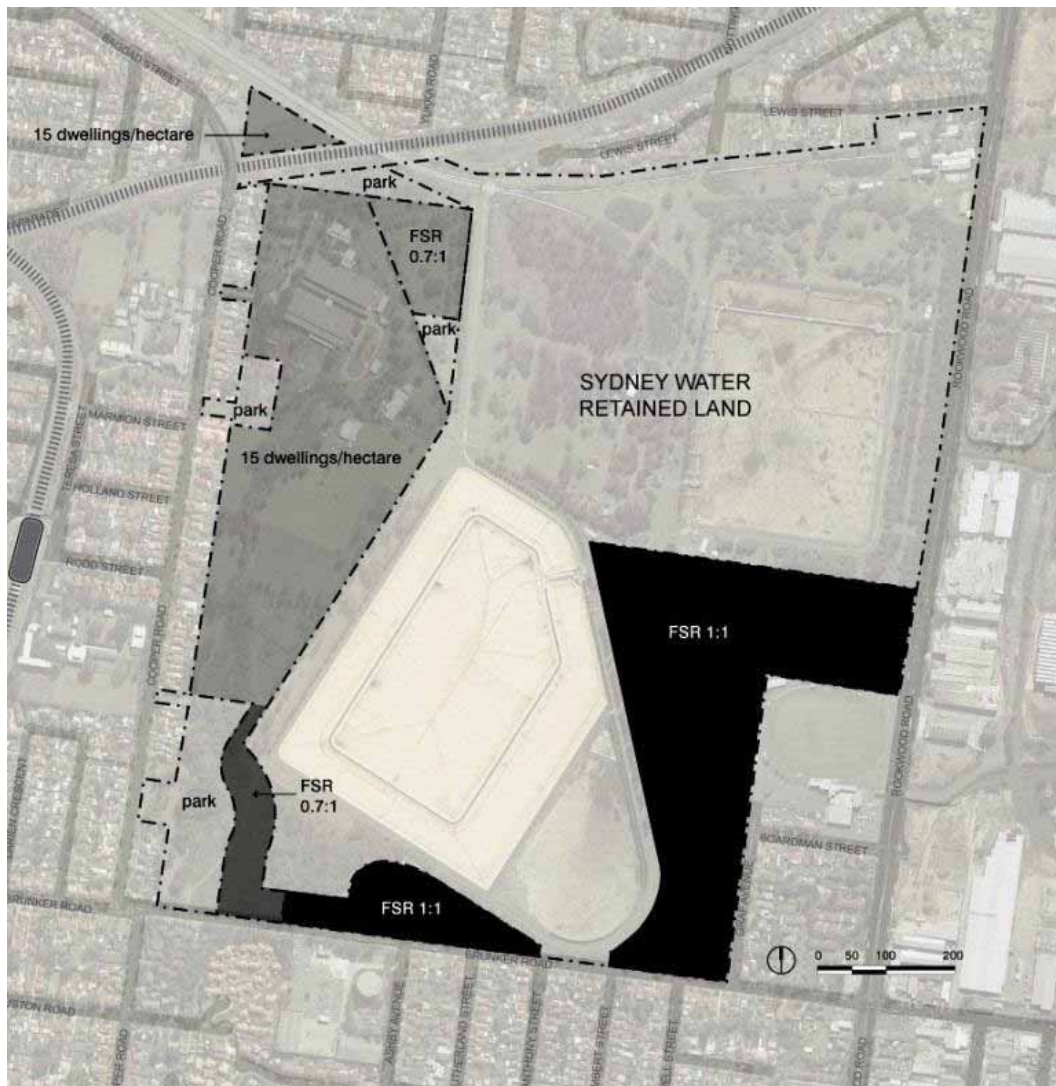


Figure 60 – Proposed density/ development parameters - business park and residential precinct

3.9.2 Employment / business park precinct

For the employment land, a density (or floor space ratio) of 1:1 is proposed, which matches Bankstown Council's current planning provisions for industrial development. Furthermore, a maximum building height of 16 metres is proposed, for both warehouse-style buildings and office components. Potential telecommunications towers within the employment area are likely to required, up to around 20 metres high.

The density and height parameters are illustrated on Figure 60 and Figure 61.

Development guidelines have been prepared for the business park area to address issues such as the relationship of future development along site interfaces to surrounding residential areas, landscape and public domain, and are outlined in Appendix I.



Figure 61 – Proposed building height - business park and residential precinct

3.10 Design guidelines

Draft design guidelines have been prepared for the proposed residential area by AJ+C, incorporating landscape proposals by Taylor Brammer, Landscape Architects. A copy of the guidelines is provided at Appendix H.

3.10.1 Residential precinct

The guidelines for the residential precinct address the following matters:

- The landscape character sought for the residential area;
- Development guidelines for each of the character areas (outlined in Section 2), to make the most of the attributes of each area;
- Potential styles of residential development;
- Guidelines for proposed public domain areas;
- Street types and sections;
- Planting guidelines;
- Subdivision and siting objectives;

- Draft development controls for each type of residential development, which are to form part of the development controls for complying development. These draft controls address parameters such as floor space ratios; boundary setbacks; solar access; private open space; and access and car parking; and
- Siting guidelines for residential apartment buildings.

3.10.2 Employment/ business park precinct

The guidelines for the employment/ business park precinct address the following matters:

- Overall vision for the business park;
- Desirable built form character;
- Planting guidelines;
- Subdivision and site planning; and
- Planning parameters, including floor space ratio; building height; boundary setbacks; and access and parking.

3.11 Heritage proposals

A number of heritage-related measures are proposed for the redevelopment land (and the retained land) to reflect the heritage significance of the Reservoirs land. These include the following:

- Interpretive elements in the residential precinct reflective of the original street pattern within the Potts Hill area prior to the construction of the reservoirs;
- Interpretive elements in the residential precinct that recall the migrant workers' settlement, including street names and signage;
- Restoration and conservation of two heritage sheds on the eastern edge of Reservoir 2, and their incorporation into the new Sydney Water facility;
- Street names within the employment/ business park precinct associated with people connected with the site and Sydney Water;
- Retention of cultural planting within the ecological corridor, the proposed public open space areas, key development parcels, and the Sydney Water retained land;
- Provision of adequate distance separation between the new development and heritage elements remaining within the retained land;
- Landscape treatment at key locations within the residential precinct that relates to heritage planting schemes within the Reservoirs land;
- Landscape treatment along the interface of the redevelopment land and the retained land to provide visual transition between the developed land and open areas within the operational land; and
- A scale of development that is suitable for the site given its past use and future relationship with the retained land.

3.11.1 Revised SHR boundary

A submission will be made to the Heritage Council seeking approval to amend the boundary of the site that appears on the State Heritage Register.

A Heritage Impact Statement (HIS) prepared by Tanner Architects to accompany the submission demonstrates that the revised boundary relates appropriately to the operational area, and that the

proposed boundary respects the heritage context of the site, including cultural plantings of trees and shrubs. The Tanner HIS is located in Appendix L.

3.11.2 Re-use of Reservoir 1 for storage of inert fill

A HIS for the re-use of Reservoir 1 has been prepared by Tanner Architects and included at Appendix L. It demonstrates that the re-use of Reservoir 1 for the placement of inert fill and/ or water is consistent with the options assessed under the endorsed Conservation Management Plan (2005), and that storage of fill in the manner set out in this proposal is supportable on heritage grounds since it will assist with maintaining the structural integrity of the reservoir, will enable the heritage significance of the reservoir to continue to be appreciated, and will not have any detrimental impact on the heritage fabric or heritage values of Reservoir 1.

3.12 Proposed 'ecological footprint' and biodiversity package

A package of ecological outcomes addressing the ecological issues associated with redevelopment land has been prepared by Eco Logical Australia. A draft of the proposals was submitted to the Department of Environment and Climate Change in September 2007. The package and the associated assessments are the equivalent of the information and approach that would have been proposed for achieving 'biodiversity certification' under the *Threatened Species Conservation (TSC) Act 1995*.

Since September, 2007, a number of amendments have been made to the concepts for the redevelopment land (especially the location of proposed open space areas), and Sydney Water has identified two potential future areas within the retained land likely to be required for future water infrastructure. As a consequence, a revised report has been prepared by ELA. The principles of the original package of measures remain unchanged. A full copy of the updated ELA report is attached at Appendix B. The proposed ecological footprint is shown on Figure 62.

The package outlines the retention, rehabilitation, conservation and on-going management of ecological areas within the Sydney Water retained land, as an offset for the loss of ecological areas within the redevelopment land.

The gains and losses that have been identified from the ecological outcomes package are set out in Table 7 (from ELA report at Appendix B).

TABLE 7 – ASSESSMENT OF VEGETATION 'GAINS AND LOSSES', POTTS HILL RESERVOIRS LAND

| Vegetation Community | Ecological Gains – Retain/ rehabilitate (ha) | Ecological Gains - revegetation (ha) | Losses (ha) | Neutral (ha) | Interim Gain (10-20 year - weed management only) |
|---|--|--------------------------------------|-------------|--------------|--|
| Cooks River/Castlereagh Ironbark Forest | 6.36 | - | 0.26 | 1.11 | 0.22 |
| Riparian (Cumbungi-dominated drainage) | - | - | 0.07 | 0.04 | - |
| Cumberland Plain Woodland | - | - | 0.72 | 0.32 | - |
| Grassland - Native | 0.33 | - | - | - | - |
| Sydney Turpentine Ironbark Forest | 1.35 | - | 0.55 | - | 0.51 |
| Revegetation (includes corridor - 2.23 ha). | - | 10.49 | - | - | - |
| Total | 8.04 | 10.49 | 1.60 | 1.47 | 0.73 |

The ELA report concludes as follows in respect of the 'offset ratio' created by the biodiversity package, and the assessment of the principle of 'maintain or improve' biodiversity (ELA report, pp 25-29).

'Comparing the loss of 1.60 ha, with the retention, management and rehabilitation of 8.04 ha in the retained land, gives an offset ratio of approximately 1:5 (loss vs gain).

Additionally, up to 10.49 ha of vegetation will be revegetated, which will consolidate existing fragmented patches of high conservation value vegetation. Revegetation within the proposed corridor will also promote connectivity between vegetation patches, thus 'linking up' the proposed ecological gains. These works will partially assist the achievement of the ecological corridor along the northern boundary of the site, which is identified as a desirable outcome in the Bankstown Biodiversity Strategy (BCC and ELA 2002).'

Based on the outcomes proposed in this document, the Part 3A Concept Plan proposal passes the 'maintain or improve' assessment for biodiversity values, because:

- *Loss of 1.60 ha of vegetation will be offset by ecological gains of 8.04 ha of rehabilitation of existing vegetation (offset ratio 1: 5, loss v gain) and up to 10.49 ha of revegetation (offset ratio 1: 6, loss v gain) in retained lands*
- *Rehabilitation of 8.04 ha of vegetation proposed to be retained will improve the current condition of vegetation and habitat values.*
- *A loss of 0.26 ha of Cooks River/ Castlereagh Ironbark forest will be offset by ecological gains of 6.36 ha of rehabilitated Cooks River/ Castlereagh Ironbark forest (offset ratio 1: 24, loss v gain)*
- *A loss of 0.55 ha of Sydney Turpentine Ironbark Forest will be offset by ecological gains of 1.35 ha of rehabilitated Sydney Turpentine Ironbark Forest (offset ratio 1: 2.5, loss v gain)*
- *Enhanced connectivity on-site will be provided by a proposed 30m wide corridor connecting areas of retained vegetation in the north of the site to areas of vegetation in the south of the site*
- *Potential impacts of the proposal on threatened species Acacia pubescens, Eastern Bent-wing Bat and Grey-Headed Flying Fox have been assessed following Part 3A Draft Assessment Guidelines for Threatened Species listed under TSC Act."*

It should be noted that the reference in the ELA report (p27) to an additional area of 10.49 hectares of vegetation that will be revegetated includes an area adjacent to the water supply pipeline (north-west of Reservoir 1) that Sydney Water advises may be the subject of future consideration for water infrastructure. This area is presently largely cleared and contains existing underground water infrastructure that may need augmentation in future.

In summary, the proposed ecological outcomes located on the Sydney Water retained land include the following:

- Protection and enhancement (rehabilitation) of native vegetation communities;
- Restoration of vegetation communities in selected areas to consolidate or link currently fragmented native vegetation;

- Creation of an ecological corridor to link areas of retained native vegetation thus enhancing their long term viability and integrity;
- Protection of threatened plant species and areas of habitat;
- Improvements to habitat quality for certain threatened fauna species; and
- Provision for ongoing vegetation management by Sydney Water, and integrating these management outcomes with continued water management activities.

To provide security for proposed ecological outcomes Sydney Water has made the following commitments in respect of the retained land:

- The identification of areas likely to be needed for future water management infrastructure over the next 10–20 years;
- The preparation of an Environmental Management Plan (EMP) and a Vegetation Management Plan (VMP) for the Sydney Water retained land, in conjunction with DECC. The structure of those management plans is illustrated in the ELA report at Appendix B; and
- Implementation of the vegetation management plan over a five year period.

Appropriate funding for vegetation management will be identified by Sydney Water as part of the preparation of the VMP.

Given that the residential precinct contains vegetation communities listed under the Commonwealth EPBC Act, the proposals will be referred to the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) for consideration.



Figure 62 – Proposed ecological ‘footprint’/ conservation gains and losses

3.13 Landscape proposals

A landscape concept for the residential precinct has been prepared by Taylor Brammer Landscape Architects (see Appendix M), and Figure 63.

Landscape guidelines for the employment precinct are included in Appendix I.

3.14 Development staging

The development works in the redevelopment land will commence on the employment precinct. Sydney Water proposes to commence works on the field headquarters facility as early as possible in 2009, which is likely to coincide with the commencement of the Police Facility. The delivery of physical infrastructure to the site has been the subject of preliminary discussion with all relevant service agencies as outlined in Section 2.11.

The likely sequence of development staging for the employment precinct will be as follows:

- Subdivision to create a “superlot” for the employment land (and further subsequent subdivision to create individual development parcels);
- Site preparation (remediation and earthworks);
- Installation of infrastructure (access roads, stormwater drainage, water reticulation, sewer, power, and telecommunications) in accordance with the requirements of servicing authorities, including off-site traffic management works subject to arrangements with Council and/ or the RTA; and
- Construction of buildings.

The residential precinct will form the second stage of the works. Sydney Water will vacate its facilities on the northern area of the residential precinct and relocate to the new field headquarters when completed. This will make the residential precinct available for development in stages with the southern area likely to start first.

The likely sequence of development staging for the residential precinct will be as follows:

- Subdivision of a “superlot” to create the overall residential area (and further subsequent subdivision to create development precincts);
- Site preparation (remediation and earthworks);
- Installation of infrastructure (access roads, stormwater drainage, water reticulation, sewer, power, and telecommunications) in accordance with the requirements of servicing authorities, including off-site traffic management works subject to arrangements with Council and/ or the RTA; public domain works;
- Subdivision to create individual retail house or medium density lots, roads and open space areas; and
- Construction of dwellings, and strata subdivision where necessary.

Detailed staging of the residential precinct will depend on market demand for the various types of housing proposed.



3.15 Job creation

The creation of jobs will commence with the construction of the new Sydney Water field headquarters and the Police Facility.

The Sydney Water Facility will accommodate employees from the existing buildings on Potts Hill as well as a number of other nearby locations. There will be about 450 employees in this facility.

The Police Facility will accommodate around 400 employees.

The completion of the Sydney Water Facility and the Police Facility will mean that the additional jobs will be created within the next three years.

The timing of the utility depot is expected to occur shortly after the completion of the Sydney Water and Police facilities, adding a further 50 employees.

The TransGrid substation will be an unmanned facility. Its construction program has not yet been determined.

3.16 Housing construction and community building

Housing construction in the residential precinct is not expected to occur until 2010, following the completion of the Sydney Water field headquarters, the associated demolition of existing buildings on the site, remediation and key earthworks to render the site suitable for development.

While the likely market conditions can not be predicted at this stage, it is anticipated that the site will be developed over a 4–5 year period. As a result, completion and full occupancy are expected to occur around 2015.

3.17 Social sustainability proposals

To address the potential social and community issues arising from the redevelopment, Heather Nesbitt recommended a number of actions outlined in Table 8. These measures will be investigated as part of a Strategic Social Plan to be prepared by Landcom as outlined in the Draft Statement of Commitments at Appendix O.

TABLE 8 – RECOMMENDED SOCIAL AND COMMUNITY MEASURES

| Healthy and inclusive community |
|--|
| Partner with appropriate agencies to provide community infrastructure both on and off site |
| Implement a skills development program for local residents and local youth |
| Provide a range of housing products including flexibility in purchase and design approaches e.g. housing for extended families, culturally appropriate housing |
| Ensure marketing and financing strategies are appropriate to the local area's diverse population |
| Provide a component of housing for moderate income households |
| Ensure there are no physical and visual barriers between new development area and existing community |

Table 8 cont'd

| |
|--|
| Expanded/upgraded community infrastructure |
| Partner with appropriate agencies to provide new/expanded community infrastructure including facilities and services/programs |
| Build on existing services/ programs/ organisations to ensure services are available to new residents and employees |
| Provide high speed broadband access to all homes and employment uses |
| Support provision of a community-based technology program to improve local skills and literacy |
| Housing mix |
| Provide a range of housing products including flexibility in purchase and design approaches e.g. housing for extended families, culturally appropriate housing |
| Provide a component of housing for moderate income households |
| Provide appropriate housing options suitable for older people already living in the area e.g. supported housing, homes for extended families, universal housing |
| Skilled community |
| Implement a skills development program for local residents and local youth |
| Support provision of a community-based technology program to improve local skills and literacy |
| Public and active transport provision and linkages |
| Prepare a Public and Active Transport Strategy for the site including initiatives for both residents and workers which: |
| – improve physical access to public transport services |
| – improve frequency of public transport services |
| – provide walking and cycling infrastructure which connect to existing facilities/attractors |
| – encourage use of public transport |
| – encourage active transport i.e. walking and cycling |
| – addresses car parking issue |
| Valuing existing community assets |
| Build on existing services/programs/organisations to ensure services are available to both new and existing residents |
| Implement a skills development program for local residents and local youth |
| Undertake a crime and safety audit for the Concept Plan and address concerns identified including safety at Birrong Railway Station |
| Undertake a crime and safety audit for all subsequent development applications and address issues raised |
| Provide a component of housing for moderate income households |
| Implement a Welcome Program for new residents which provides information on the existing community and links them to existing services, organisations and networks |
| Community engagement |
| Prepare and implement a consultation and communication program for the local community covering all stages of the development |
| Build on existing services/programs/organisations to ensure services are available to new residents and employees |
| Engage existing service providers and community organisations in the community infrastructure initiatives identified |
| Partner with appropriate agencies to provide community infrastructure both on and off site |
| Sydney Water develop opportunities to “open up” their existing facility for tours, educational activities and community partnerships |

Table 8 cont'd

| Healthy community |
|---|
| Prepare and implement a consultation & communication program for the local community for all stages of the development |
| Ensure the construction program for all development includes mitigation measures for dust, noise, etc |
| Ensure the transport strategy includes measures to ensure pedestrian and cyclist safety particularly around local schools |

In respect of public access to the existing Reservoirs site, it should be noted that Sydney Water currently allows limited public access to the site during Heritage Week for interested heritage groups.

3.18 Services and utilities

All essential services and utilities will be provided to the residential and employment precincts in accordance with the requirements of servicing agencies. The connection to services will occur as the need arises with the staging of development.

3.19 Energy and water sustainability

A statement on energy and water sustainability has been prepared by Cundall (see Appendix N), outlined below

The proposed development at Potts Hill will comply with all relevant sustainability requirements.

Eastern Precinct – Employment/Business Park

All government office buildings will be designed to achieve a minimum ABGR rating of 4.5 stars. This will include:

- *Energy efficient building design; and*
- *Energy efficient hot water systems, air conditioners and lighting.*

All buildings, including warehouses and TransGrid facility, will achieve the requirements of BCA Section J Energy Efficiency.

A site water management plan will be prepared and water efficient fixtures will be installed as standard throughout.

Western Precinct – Residential

All residential buildings will comply with the requirements of BASIX and BCA Section J Energy Efficiency.

Detailed strategies to address these sustainability requirements will be provided as part of the Project Applications when site specific built forms are proposed. In addition, all commercial offices will implement Energy Savings Action Plan in accordance with DEUS guidelines as soon as it is practically feasible post Practical Completion if applicable.

Energy Savings Action Plans for the commercial buildings will be prepared by the relevant agency proposing these developments (i.e. Sydney Water, NSW Police Force, etc) following practical completion of these buildings.

Worley Parsons has prepared a stormwater management concept that addresses water sensitive urban design (WSUD) principles and the requirements of Bankstown City Council for on-site detention of stormwater run-off. The concept is shown on Figure 64. Its main components comprise:

- At-source runoff control, such as rainwater re-use and bio-retention systems; and
- Integration of water quality control measures with the urban design and ecological features.

The proposed development will include a range of best practice measures to meet the following Water Sensitive Urban Design (WSUD) objectives:

- *Reduction in potable water consumption;*
- *Utilisation of available rainwater;*
- *Minimisation of impacts on downstream receiving waters;*
- *Safe conveyance of stormwater;*
- *Integration of water management measures with landscape design into the proposed development, and*
- *Sustainable use of available water resource.*

Elements of the WSUD approach include:

- *rainwater tanks ...;*
- *bio-retention swales along roads ...;*
- *gross pollutant traps (GPTs) to remove sediment, debris, organic matter and litter; and*
- *bio-retention basins at focal points in the catchment*

Generally, the stormwater treatment flow path for runoff in the residential area will consist of the following:

- *Runoff from roof areas ... collected and retained in rainwater re-use tanks and then into the minor drainage system,*
- *runoff from many roads and lots .. directed into bio-retention swales where it will be filtered and treated biologically,*
- *stormwater collected from impervious areas (roads, paths and driveways) ... piped towards GPTs to remove coarse sediment, litter, debris, oils and greases, and*
- *runoff ... treated in bio-retention basins at catchment focal points.*

Development within the business park/ employment land will manage its own stormwater on-site.

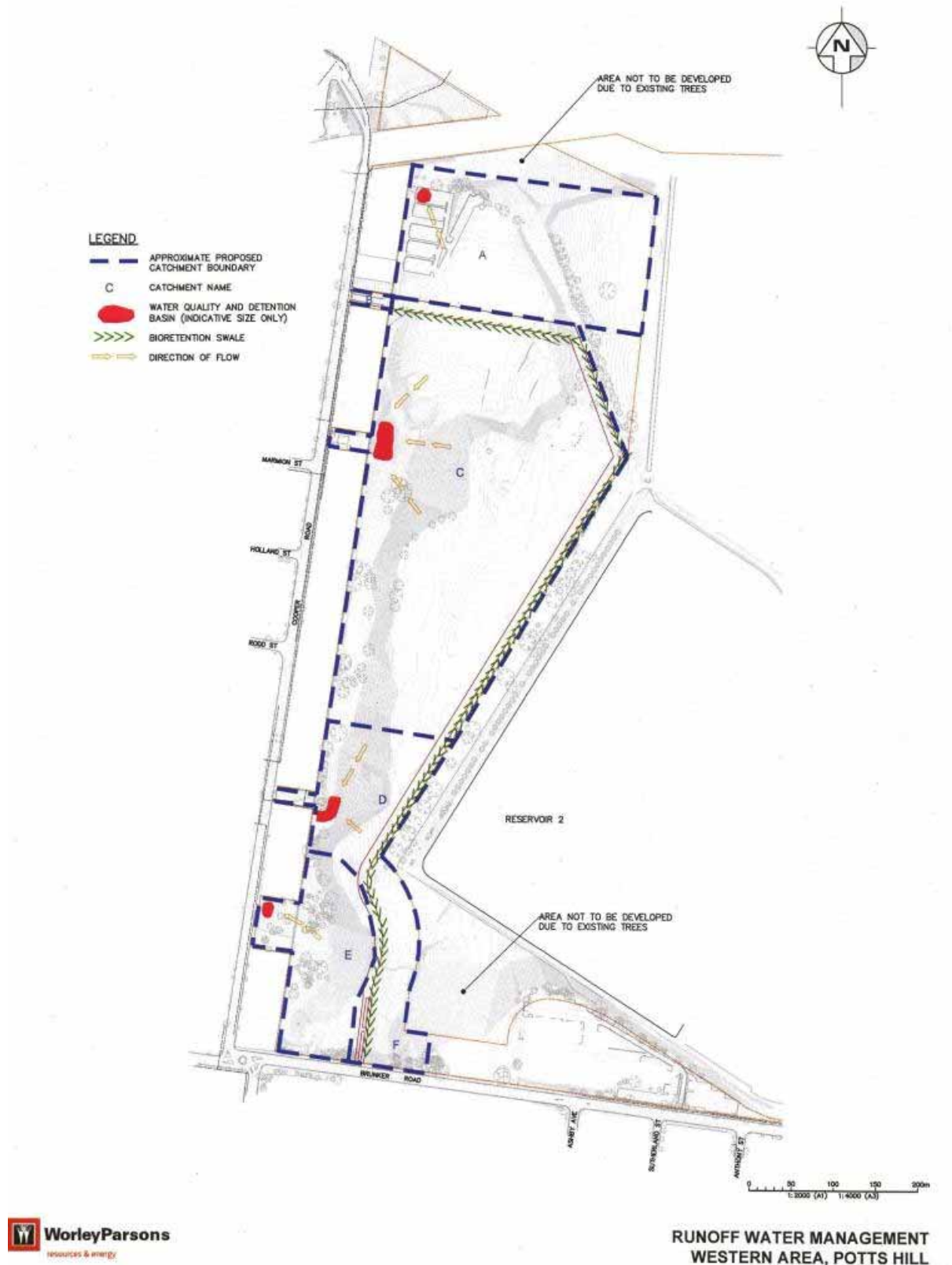


Figure 64 – Stormwater management concept for the residential precinct

3.20 Summary of project outline and approvals sought

A summary of the key outcomes expected for the Potts Hill Reservoirs land is provided in Table 9. Those aspects for which approval are sought are highlighted in **bold**.

TABLE 9 – PROJECT OUTLINE AND APPROVALS SOUGHT

| LAND USE/ ELEMENT | AREA/ OUTCOME AND APPROVAL SOUGHT |
|------------------------------------|--|
| Residential precinct | <p>19.8 hectares of net residential land that has the potential to yield around 410 dwellings, comprising approximately 230 detached/ attached dwellings, two sites suitable for medium density apartments/ seniors housing with a capacity for around 180 apartments. This equates to an overall density on the residential precinct of 20 dwellings per hectare.</p> <p>The low density area has a notional density of 15 dwellings per hectare. The two medium density areas have a notional maximum density of 0.7:1 floor space ratio (FSR).</p> <p>Built form is expected to be generally similar to the form in the surrounding residential areas. The two areas proposed for medium density development have the maximum building height of three storeys.</p> <p>Adoption of residential design guidelines as controls for complying development.</p> <p>The preferred zoning is a combination of Zone R2 Low Density Residential, and Zone R3 Medium Density Residential. These zonings will provide for a range of dwelling types to respond to the demand for a variety of housing in this locality.</p> <p>The residential development is expected to add approximately 1,000–1,500 persons to the local community.</p> |
| Employment/ business park precinct | <p>Approximately 15.3 hectares of employment land suitable for light industrial and business park-style activities; occupiers of the employment land are expected to include Sydney Water, NSW Police Force, TransGrid and EnergyAustralia.</p> <p>The preferred zoning is Zone B7 Business Park.</p> <p>A density (floor space ratio) of 1:1 is sought.</p> <p>A maximum building height of 16 metres is sought, excluding potential telecommunications antennae.</p> <p>Total employment is expected to be in the order of 800–900 employees.</p> |
| Open space | <p>4.9 hectares of open space in four locations: an area in the south-western corner of the site adjacent to Brunner Road/ Cooper Road; an area adjacent to the water supply canal; an area off Cooper Road in the centre of the site; and an area alongside the freight line in the northern part of the site – to be dedicated to Bankstown City Council. These areas are most suitable for passive recreation.</p> <p>The preferred zoning for the open space areas is Zone RE1 Public Recreation.</p> |
| Sydney Water 'retained land' | <p>Approval for the use of Reservoir 1 for the storage of surplus inert fill, and/ or storage of stormwater (or recycled water), in lieu of approval under Section 60 of the Heritage Act.</p> |
| Biodiversity package | <p>Approval of the biodiversity package so that it is acknowledged that future development on the site to be rezoned for residential purposes is not likely to significantly affect any threatened species, population or ecological community or its habitat.</p> |

Specific planning controls for the employment and residential precincts are outlined in Appendix K, and are proposed to be included in Schedule 3 to the Major Projects SEPP.

3.21 Subsequent applications and approvals

The approvals regime requested for subsequent applications in the redevelopment land is set out in Table 10.

TABLE 10 – SUBSEQUENT APPLICATIONS AND APPROVALS REGIME

| FUTURE DEVELOPMENT | APPLICATION PROCESS | CONSENT AUTHORITY |
|--|---|--|
| Land subdivision (super lots/ development stages/ precincts) | Part 3A | Minister for Planning |
| Remediation | Part 3A | Minister for Planning |
| Bulk earthworks | Part 3A | Minister for Planning |
| Infrastructure and services | Part 3A | Minister for Planning |
| Employment uses | Part 3A | Minister for Planning |
| Signage | Part 4 – Complying development certificate | Bankstown City Council or Accredited Certifier, as appropriate |
| Residential subdivision (individual allotments) | Part 4 | Bankstown City Council or Accredited Certifier, as appropriate |
| Dwelling houses | Part 4 – Complying development certificate if the development meets the standards outlined in the residential design controls; otherwise Part 4 – development consent | Bankstown City Council or Accredited Certifier, as appropriate |
| Multi-dwelling housing | Part 4 – Complying development certificate if the development meets the standards outlined in the residential design controls; otherwise Part 4 – development consent | Bankstown City Council or Accredited Certifier, as appropriate |
| Residential flat buildings | Part 4 – Development consent | Bankstown City Council |
| Housing for Seniors | Part 4 – Development consent | Bankstown City Council |

3.22 Draft statement of commitments

A draft statement of commitments to which Landcom and Sydney Water are joint signatories is included at Appendix O. It addresses the following elements:

- Compliance with relevant legislation, statutory EPIs and other requirements;
- Built form, urban design, and environmental design (energy and water efficiency, etc);
- Open space and recreation;
- Bushland works;
- Traffic and transport;
- Community services and facilities;

- Urban villages and CBD public domain elements of Bankstown Council's Section 94 Plan;
- Section 94 administration and studies elements of Bankstown Council's Section 94 Plan;
- Potts Hill redevelopment public domain/ utilities, etc;
- Heritage interpretation;
- Landscape works;
- Storm water management;
- Infrastructure and utilities;
- Energy and water efficiency measures;
- Soil remediation measures;
- Geotechnical measures;
- Environmental mitigation and management measures and monitoring;
- Environmental Management and Vegetation Management in the Sydney Water retained land; and
- Potts Hill Reservoirs and Site Conservation Management Plan, Sydney Water Corporation – endorsed by the NSW Heritage Council April 2005 for the Sydney Water retained land.

4 ENVIRONMENTAL ASSESSMENT OF PROPOSALS

This section of the Environmental Assessment report addresses the key environmental and planning issues that arise from the proposals for the Potts Hill Reservoirs land, and the amelioration measures set out in the proposals in Section 3. These have been found to relate to the following:

- Impacts on the European heritage status of the Reservoirs land;
- Geotechnical engineering issues;
- Biodiversity effects;
- Soil remediation;
- Traffic and access impacts;
- Visual impacts from the proposed new employment and residential development;
- Social impacts;
- Energy and water efficiency; and
- Management of remediation, site preparation and construction impacts.

Each issue is discussed below.

4.1 European heritage

A Heritage Impact Statement (Tanner Architects, Appendix L) and supporting information have been prepared for the revision of the SHR boundary for the Potts Hill Reservoirs land. The information indicates that the proposed residential uses in the western precinct and the proposed employment uses on the eastern precinct incorporate suitable measures to address any possible impacts on the heritage significance of the retained operational land.

In addition a number of heritage-related measures will be implemented to reflect the heritage importance of the Reservoirs land.

4.2 Geotechnical engineering

The approach to the geotechnical conditions within the site will be to compact the existing soil using dynamic compaction to create a landform and soil conditions suitable for development.

To address the stability of the Graf Avenue embankment to allow for development, suitable stabilisation and landscaping will occur.

The resultant landform throughout the site is expected to be similar to the current landform.

Best practice measures will be implemented to address noise, dust, vibration, and potential sedimentation to ensure that there are no adverse impacts on the surrounding properties or the existing community. A construction management plan will be prepared prior to commencement of earthworks to address these issues.

As a consequence, the proposed approach to the geotechnical conditions is considered to be appropriate.

4.3 Biodiversity

The proposed package of vegetation management, rehabilitation and protection and the associated offset ratio of 1:5 (loss–v–gain) has been assessed by ecological specialists as meeting the principle of ‘improve or maintain’ as required under the relevant legislation.

The vegetated areas within the Sydney Water retained land will be the subject of an EMP and VMP to be prepared by Sydney Water in consultation with DECC.

Within the residential and employment precincts, all efforts will be made to avoid the unnecessary loss of vegetation. Construction management plans in the residential precinct will respect the need to minimise any impacts on adjoining areas of ecological values, including measures to address the spread of weeds, etc.

Having regard for the ecological outcomes and the proposed biodiversity package, the proposals for Potts Hill will result in a net improvement in biodiversity on the site.

4.4 Soil remediation

Appropriate measures are underway to address the minor soil contamination that has occurred on the land that is proposed for residential, employment or open space.

All relevant environmental clearances will be obtained demonstrating that the land is suitable for its intended purpose.

4.5 Traffic and access impacts and implications

The assessment of the traffic and transport implications of the proposals prepared by MWT recommends a range of traffic improvements, which in part will address existing traffic problems on the local roads. The measures are described below and illustrated on Figure 65, and are reflected in the draft Statement of Commitments at Appendix O.

The traffic works comprise:

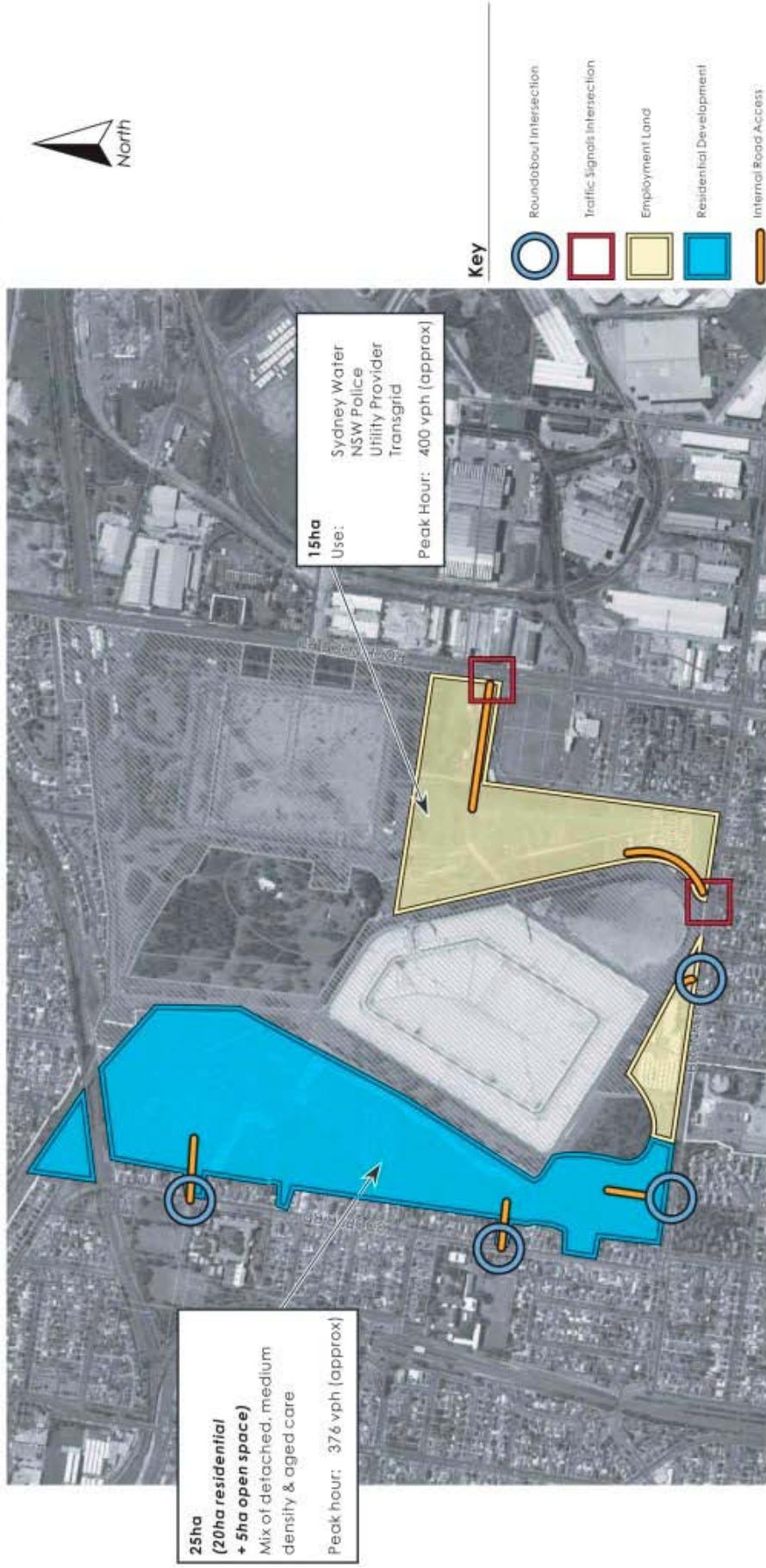
- Roundabouts to be built at the intersection of Cooper Road and the two new entry streets to the residential precinct, which will also act as traffic calming measures along Cooper Road;
- Roundabout along Brunner Road at the intersection with the new entry road into the residential precinct;
- Roundabout at the entrance to the smaller parcel of employment/ business park land on Brunner Road (referred to as 36B Brunner Road)
- Traffic signals along Brunner Road at the intersection with the new entry road to the employment/ business park precinct (referred to as 36A Brunner Road); and
- Traffic signals on Rookwood Road at the junction with the new entry road to the employment/ business park precinct.

In addition, a range of local traffic improvements are proposed:

- Footpath along the eastern side of Cooper Road – this measure addresses a current deficiency on Cooper Road, and will significantly improve pedestrian safety and amenity for existing and future residents; and
- Combined footpath/ cycle path along the northern side of Brunner Road between Cooper Road and Graf Avenue.

DEVELOPMENT CONCEPT & SITE ACCESS ARRANGEMENTS

POTTS HILL RESERVOIR



MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

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Date: 20 May 2008

Figure 65 – Proposed traffic management improvements

It is proposed that these works be discussed in the context of this concept application with Bankstown City Council and the RTA to determine the most appropriate mechanism for and timing of implementation, through consent conditions on subsequent project/ development applications or other mutually acceptable arrangements. The Statement of Commitments (Appendix K) includes a commitment to comply with all relevant parking and other codes and policies relevant to subsequent Project Applications or development applications.

While it is premature to deal with future parking provision within the redevelopment land at this concept plan stage, all future project or development applications will be capable of complying with relevant Council codes.

4.6 Visual impacts

The concept plan for the employment precinct and the residential precinct have been prepared having regard for the possible effects on surrounding residential areas, which are considered to be the most sensitive to the land use changes proposed. The scale of both employment and residential development, and especially the placement of higher density housing have been determined through a rigorous assessment of the specific character of the site, and adjoining uses.

Design guidelines have been prepared for the employment uses and for the residential development, with the main aim to create a visually acceptable environment within each precinct.

Each precinct will also be the subject of landscape treatment to provide appropriate 'softening' of the new development.

The design guidelines represent a suitable response to the potential visual effects arising from the new development, and are expected to assist in making a positive contribution to the locality.

4.7 Social impacts and proposed social sustainability measures

The potential benefits and impacts of the proposed employment and residential outcomes that would arise as a consequence of the proposals outlined in this application have been the subject of a rigorous assessment. A number of social integration and community sustainability measures have been built into the concept planning and land use planning. In addition Landcom and Sydney Water have identified a range of initiatives for the redevelopment land which are identified in the draft Statement of Commitments.

Further, there are a number of additional measures that are under investigation as to whether they can be incorporated into the redevelopment proposals.

4.8 Energy and water efficiency

Suitable water and energy efficiency measures will be implemented as part of the future development of the redevelopment land at Potts Hill. In view of the preliminary nature of the current proposals, it is premature to outline in any detail the proposed measures. However, initiatives which extend the principles and objectives of BASIX, and water sensitive urban design are being explored for the project.

The future approach to the management of storm water (through water sensitive urban design practices and storm water treatment) will ensure that there are no unacceptable impacts on local water quality emerging from the development.

Full details of these measures will be outlined in future applications.

4.9 Management of potential remediation, site preparation and construction impacts

During the remediation, site preparation/ bulk earthworks and construction phases, a range of potential impacts are likely, including: noise, vibration, dust generation, sedimentation, and traffic generation.

Future detailed applications (as a combination of development applications under Part 4, or Project Applications under Part 3A) will be needed to progress the proposals for the employment land and the residential land. As part of those applications, suitable management plans will be prepared addressing:

- Water and soil management;
- Noise, dust and vibration management;
- Building waste management; and
- Construction vehicle movements.

5 CONCLUSIONS

This Concept Plan Application and Environmental Assessment outline the redevelopment proposals for the Potts Hill Reservoirs land. Its main focus is on proposals for the redevelopment land that is no longer required for the operational purposes of Sydney Water. It also assesses the potential impacts from redevelopment and presents appropriate mitigation measures.

It has been prepared in accordance with legislative requirements and Department of Planning guidelines, and addresses each of the issues identified in the D-GRs issued on 2 October 2007.

The proposals outlined in this Environmental Assessment report will result in the following benefits for the locality of Potts Hill and the Sydney metropolitan area:

- Efficient and timely re-use of land at Potts Hill that is no longer required for operational purposes by Sydney Water;
- Provision of employment, residential and essential utilities which take advantage of the locational attributes of the site, and which are compatible with surrounding activities;
- Retention of land within the reservoirs site for the ongoing use and expansion of water management infrastructure by Sydney Water (the retained land);
- Significant employment outcomes, comprising 800–900 jobs, arising from high levels of coordination between compatible government agencies in need of new accommodation:
 - A Police Facility that is a key to state-wide government operations – accommodating around 400 employees, relocated from Green Square;
 - New field headquarters accommodation for Sydney Water – around 450 employees including field staff – assisting with the efficient relocation of employees as part of the Sydney Water's relocation strategy;
 - New utility depot with an employment potential of 50 employees;
 - New electricity substation for TransGrid that will assist with power supply for metropolitan Sydney.
- Site cleanup to overcome minor soil contamination due to historical construction of reservoirs and other on-site operational activities;
- Residential development that has the capacity to yield around 410 dwellings, consisting of around 230 detached/ attached dwellings, and two sites for medium density apartment buildings having a capacity of about 180 apartments/ seniors housing. Both the seniors housing and apartment dwelling yields are contingent on suitable market conditions.
- Well-located public open spaces in areas which are presently not accessible to the public. The open spaces proposed comprise bushland areas and park-like areas that will make a significant contribution to the availability of passive open space for the local community;
- Retention, rehabilitation and conservation of ecological areas within land to be retained and managed by Sydney Water;
- Retention and re-use of selected heritage items; and
- A redevelopment proposal that will be integrated with the surrounding community, providing additional support for local services and facilities.

Notwithstanding the benefits outlined above the development proposals will have a number of consequences principally in respect of additional traffic generation, added pressure on local and State facilities and services in the local area, as well as some temporary impacts during the site preparation and construction phases.

Suitable mitigation measures are available to address all potential impacts, through a combination of program implementation, carrying out of works, or provision of funding to appropriate agencies,

that will ensure that the proposals make a positive contribution to the local community. These measures are set out in a draft Statement of Commitments.

Extensive consultation has been carried out with relevant agencies and the community in determining the nature and scope of the redevelopment proposals. This has assisted in framing the project and potential mitigation measures.

Future applications (either as Project Applications under Part 3A or as Development Applications under Part 4 of the Act) providing the details of the residential and employment proposals, accompanied by the necessary technical assessments, will be prepared in due course.

On balance, therefore, with these measures in place, the positive benefits arising from the development proposals are considered to outweigh any negative impacts.

Having regard for the information contained in this Environmental Assessment, in accordance with Section 75J of the *Environmental Planning & Assessment Act*, the Minister is requested to approve the redevelopment proposals for the site at Potts Hill, and to amend the Major Projects SEPP with the planning provisions for Potts Hill outlined in this submission.