



town planners

## Environmental Assessment



### Pitt Town Residential Precinct

Prepared for: Johnson Property Group  
Project No: 16915A  
Date: December 2007



Printed: 5 December 2007  
File Name: P:\PROJECTS\6915A Pitt Town Part 3A\Reports\6915A.RG2.doc  
Project Manager: R Gain  
Client: Johnson Property Group  
Project Number: 16915A

## Document history and status

Version	Issued To	Qty	Date	Reviewed
Draft	Project Manager	1	30/10/2007	Roger Gain
Draft	Project Manager	1	26/11/2007	David Kettle
Draft	JPG	1	27/11/2007	
Final Draft	JPG	1	05/12/2007	Roger Gain & David Kettle
Final Draft	DoP	1	05/12/2007	Roger Gain & David Kettle

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## **Appendices**

- A Letter from Department of Planning, dated 12 October 2007, Minister's declaration and Director General's Requirements
- B State Voluntary Planning Agreement (VPA)
- C Site Analysis Plan, Pitt Town Residential Precinct Concept Plan for JPG land, inclusive of Bona Vista, Fernadell, Blighton, Cleary and Thornton precincts and proposed boat ramp facilities
- D Proposed rezoning plan (LEP amendment) and Land Use Table
- E Pitt Town Residential Subdivision Estimated "Capital Investment Value" (WT Partnership 2007)
- F Transport Report Pitt Town Subdivision (Masson Wilson Twiney 2006) and letter dated 27 November 2007
- G Flora Assessment Hall Street Pitt Town (Anne Clements & Associates 2006) and letter dated 7 November 2007
- H Fauna Survey and Assessment (Ambrose Ecological Services 2006) and letter dated 14 November 2007
- I Aquatic Habitat Survey (The Ecology Lab 2007)
- J Bushfire Protection Assessment (ABPP 2007)
- K (i) Pitt Town Flood Risk Management Review (Molino Stewart 2007) and  
(ii) NSW State Emergency Services Report dated April 2003
- L Pitt Town Water Cycle Report (Brown Consulting 2007)
- M (i) Part Lot 2 in DP76375 Preliminary Contamination Assessment (Geotechnique 2006)  
(ii) Geotechnical Investigation Hall Street Pitt Town (Geotechnique 2006)
- N (i) Remediation Action Plan Bona Vista and Fernadell Sites (Golder Associates 2005)  
(ii) Geotechnical Investigation Proposed Residential Development Pitt Town (Golder Associates 2005)
- O Aboriginal Archaeological Test Excavation Report (AHMS 2006) and letter dated 23 November 2007
- P Historical Archaeological Assessment Lots 11-18 in DP1021340 (AHMS 2005)
- Q Utilities and Infrastructure Assessment (Brown Consulting 2007)
- R Heritage Landscape and Visual Assessment of Blighton (Mayne-Wilson 2005)
- S Blighton Conservation Management Strategy (Graham Brooks & Associates 2005) and letter dated 5 December 2007
- T Pitt Town Cultural Landscape Management of Heritage Values 2003
- U Letter from Hawkesbury City Council dated 17 December 2003
- V Proposed example Housing Design Guidelines

## Certification

### SUBMISSION OF ENVIRONMENTAL ASSESSMENT Prepared under Part 3A of the Environmental Planning and Assessment Act 1979

<b>PREPARED BY</b>		
<b>Name:</b>	Don Fox Planning Pty Ltd	
<b>Address:</b>	11 Dartford Road, Thornleigh, NSW, 2120	
<b>CONCEPT PLAN APPLICATION</b>		
<b>Applicant Name:</b>	Johnson Property Group	
<b>Applicant Address:</b>	PO Box 1308 Sydney South, Sydney, 1235	
<b>Land to be developed:</b>	Refer to Section 2.2 of the EA Report	
<b>Proposed development:</b>	Concept Plan approval is sought for a residential subdivision of 659 residential lots for single dwellings, an internal road network, provision of a boat ramp with associated car & trailer parking facilities, provision of playing fields and play grounds and infrastructure provision.	
<b>ENVIRONMENTAL ASSESSMENT</b>	An Environmental Assessment (EA) is attached which addresses all matters listed under Part 3A of the Environmental Planning and Assessment Act 1979.	
<b>CERTIFICATE</b>		
<b>Signature:</b>	<p>We certify that we have prepared the contents of this EA and to the best of our knowledge:</p> <ul style="list-style-type: none"> <li>it contains all available information that is relevant to the environmental assessment of the development to which the EA relates; and</li> <li>it is true in all material particulars and does not, by its presentation or omission of information, materially mislead.</li> </ul> <div style="text-align: center; margin-top: 10px;"> </div>	
<b>Name:</b>	David Kettle	Roger Gain
<b>Qualifications:</b>	BSc MTCP MPIA CPP	BSC(Eng) MIEAust
<b>Date:</b>	29 November 2007	

## **Executive Summary**

### **Background**

On 12 October 2007, the Minister for Planning resolved to declare the Pitt Town Residential Precinct a Major Project under Part 3A of the Environmental Planning and Assessment Act 1979.

This application seeks approval for a Concept Plan to create 659 allotments together with associated infrastructure on land controlled by the Johnson Property Group (JPG) and also seeks rezoning of the land controlled by JPG together with additional land not controlled by JPG. A total of 739 lots will result from full implementation of land covered by the rezoning application.

This application follows rezoning of the Pitt Town investigation area in August 2006 (Hawkesbury LEP Amendment No. 145) which was based on a Local Environmental Study prepared by Connell Wagner and commissioned by Hawkesbury City Council (CW LES). HLEP Amendment No. 145 deferred an area north of Hall Street in the north-west of the study area mainly because it was considered that further study was required of matters related to Aboriginal and European heritage.

JPG has obtained development consent for subdivision of Bona Vista property to create 225 lots and has commenced construction.

This Environmental Assessment (EA) considers development of a total of 739 lots, comprising 390 conventional residential lots and 349 lots for rural housing.

### **Site and Study Area**

The site is located north of the existing village of Pitt Town and covers the land included in the CW LES, but excludes an area between Johnston Street and Hall Street.

The site was used for many years for agriculture and orcharding, although most of the orchard trees have been removed. There are some areas of remnant bushland within and surrounding the site and there are several windrows of predominantly pine trees. There are houses scattered throughout the site together with farm buildings and other improvements typical of land that has been farmed for many years.

The site is generally above the 100 year flood level and is considered to be flood free.

JPG controls approximately 129 hectares of the site with a further 26.7 hectares in the north-east of the site controlled by others.

The site is generally surrounded by rural, low density development to the west, north and east with the village of Pitt Town to the south.

### **Project Summary**

The Concept Plan seeks approval for subdivision to create 659 allotments, together with the internal road network and related infrastructure, a boat ramp and car park, provision of playing fields, playgrounds and a community centre and transfer of approximately 26.9 hectares of open space adjoining the Hawkesbury River.

No extensive site preparation works or broad acre clearing of native vegetation will be required.

The development will be staged and will commence in Bona Vista. Development will then proceed on Fernadell and Cleary Precincts concurrently, providing a variety of lot sizes and will then proceed on Blighton and ultimately on Thornton Precinct.

Development on Cattai Precinct (not controlled by JPG) is likely to follow development of the JPG land, since this precinct is dependent on services provided through the other precincts.

Trunk services (water supply, sewerage, electricity and gas) are currently being upgraded to provide services to the approved development on Bona Vista. Telstra has advised that there is sufficient telecommunications capacity to service the proposed development.

### **Planning Agreements and/or Developer Contributions**

JPG has entered into a State Voluntary Planning Agreement with the Minister of Planning. The VPA covers transfer of land and a monetary contribution to Pitt Town Public School, Pitt Town Road improvement works and a monetary contribution to the Department of Conservation.

The provision of other infrastructure including roads and community facilities is under negotiation with the Department of Planning and Hawkesbury City Council.

### **Statutory Matters**

The EA addresses the relevant statutory matters including:

- The Environmental Protection and Biodiversity Conservation Act;
- State Environmental Planning Policies;
- Relevant State Acts;
- The Metropolitan Strategy and the Draft North West Sub-Regional Strategy;
- Shaping Western Sydney;
- Section 117 Directions;
- Planning Circulars;
- State Regional Environmental Plan 20 – Hawkesbury Nepean River (No. 2 – 1997);
- Integrated Development Approvals; and
- Hawkesbury LEP 1989.

### **Consultation**

There was extensive consultation associated with the CW LES and HLEP Amendment No. 145. There has also been consultation with Council and some government agencies in relation to other development proposals on the site. Accordingly, the requirements of the various agencies are well understood.

It is proposed to undertake further consultation during the exhibition period.

### **Urban Design and Built Form**

The EA addresses the relevant matters outlined in the Hawkesbury Development Control Plan (DCP). The DCP includes guidelines relating to desired character, land use, lot design, street design, bus and cycle routes, community facilities, public open space and recreation, environmental protection, heritage conservation, stormwater management and utility services. The DCP also sets out development standards in respect of building envelopes, building design, landscaping and fencing. Plans within the DCP relate to the development proposed under HLEP Amendment No.145.

This EA proposes a number of modifications to the DCP to show the currently proposed road and lot layouts, amending the density controls and lot sizes and amending the site coverage, setback provisions and building details of the DCP, with details of the amendments to be submitted with a future Project Application.

The EA also proposes to establish a new set of Exempt and Complying provisions to complement the proposed changes to the DCP.

The subdivision layout proposed in the Concept Plan application is based on similar concepts to the layout adopted for the Pitt Town DCP and includes a rectangular grid pattern, preserving historical fence lines and providing for larger lots along the existing roads. A substantial area of open space is provided along the Hawkesbury River ensuring public access and ample provision is made for walking and cycling as well as for a bus route. Provision is made for a community centre and playing fields in close proximity to the expended public school. All lots have flood free access above the 100 year flood level and have an emergency evacuation route leading uphill from approaching floodwaters.

### **Environmental Assessment**

The Environmental Assessment undertaken as part of this EA is based on the CW LES together with further detailed investigations where considered necessary and appropriate. The extent of the additional work is varied with, for example, fully detailed investigations being completed on Bona Vista, to the point where construction certificate plans are approved, while for Cattai Precinct the only investigation has been the CW LES.

### **Biodiversity**

An area of vegetation in the south-east of Bona Vista Precinct is identified as being of high ecological value and considered to meet the criteria for Shale Gravel Transition Forest. The area also contains several *Acacia pubescens*. No other threatened species or endangered ecological communities have been identified on the site.

The vegetation having high ecological value also contains habitat for threatened species, two of which were located within the area of vegetation.

Accordingly, this vegetation in the south-east corner of Bona Vista Precinct is excluded from development.

Other recommendations include retaining a 40 metre wide buffer zone adjacent to the Hawkesbury River and retaining many canopy trees on other parts of the subject site.

### **Traffic**

It is concluded that with the works currently being undertaken to improve Pitt Town Road, the additional lots proposed will have an acceptable impact on traffic.

### **Aboriginal and European Heritage**

The original work undertaken within the CW LES has been supplemented by additional studies, particularly related to the area deferred from LEP Amendment No. 145. The additional work has comprised detailed historic documentary research, extensive field research, consultations and test excavations, covering both Aboriginal and European heritage. This work has culminated in a Conservation Management Strategy which will guide the future conservation management and further development of land in the north-west corner of the site.

The Conservation Management Strategy takes account of both Aboriginal occupation of the site dating back to at least 6,000 years and European occupation, including the establishment of a model farm by Governor Bligh in 1807.

The site has been extensively disturbed, at least within the 300mm deep plough zone, to a point where the remains of significant occupation is barely detectable.

Conservation management of this area includes:

- A conservation zone within the proposed lots;

- Land to be transferred as open space along the low lying river flats to the north of, and contiguous with, the conservation zone on the private lots; and
- Open ground nearer to Hall Street which has very limited Aboriginal or European significance and is suitable for housing.

It is proposed to nominate land within the conservation zone and the open space area to the NSW Heritage Council for inclusion in the NSW State Heritage Register.

There has been detailed surface or sub-surface investigation of the Cattai Precinct and the EA recommends that additional investigations be undertaken prior to lodging a Project Plan for the Cattai Precinct.

The CW LES also identifies a weatherboard cottage within Cattai Precinct which should be assessed and taken into account, if necessary.

There are no other heritage constraints to development within the Concept Plan area.

### **Bushfire**

Except for the area of vegetation to be retained in the south-east corner of Bona Vista, the site is not mapped as bushfire prone.

The layout provides for a perimeter road around the vegetation and also provides adequate buffers between the vegetation and the nearby houses.

### **Flooding and Emergency Access**

All proposed lots contain sufficient area for a building envelope above the 100 year flood level, although some lots particularly in the northern part of the site include land extending below the 100 year flood level. All lots have been provided with access above the 100 year flood level.

In large floods, Pitt Town becomes isolated and accordingly the NSW State Emergency Services (SES) has devised an evacuation plan for the area. The SES found that up to 1,000 additional lots could be developed without requiring upgrading of the evacuation route or placing unacceptable demands on SES services.

This EA concludes that the proposed development is consistent with the NSW Government Flood Prone Land Policy, confirms that the additional residents can be safely evacuated and will not cause any other unacceptable impacts.

### **Stormwater**

The EA assesses the impacts of the proposed development on water management objectives as set out in the Hawkesbury DCP.

The EA proposes a series of detention basins and water quality facilities. Generally, all stormwater will receive treatment so as to meet the water quality requirements of the DCP. Stormwater flows passing directly into the Hawkesbury River will not receive detention to reduce the coincidence of peak flows from the site with other flows in the River, while flows not passing directly into the River will be detained as required by the DCP. Treatment of stormwater is proposed to be by use of a combination of gross pollutant traps, swales, wetlands and bioretention basins.

The development area does not contain defined riparian corridors either because the watercourses are near the top of the catchments or because any corridors which might have existed have been disturbed by agriculture.

A monitoring program will be developed and submitted with the Project application to measure the effectiveness of the proposed water quality and detention systems to ensure no unacceptable impacts on downstream users.

### **Geotechnical Considerations**

In Fernadell and Bona Vista Precincts there are no geotechnical constraints to development, noting that minor contamination has now been remediated.

On Blighton and Cleary Precincts, there are no obvious signs of contamination and the site is considered to be suitable for residential development. An Acid Sulfate Soils Management Plan might be required if excavation depths exceed 1.5 metres, but no particular action is required in relation to salinity. The soils are considered to be non-aggressive to mildly aggressive and the site is considered suitable for residential development.

Within Thornton Precinct the geotechnical investigation identified some localised soil contamination which is not considered to pose a risk of harm to human health and the site is suitable for residential development. Soil sampling and testing is recommended to assess the contamination status of the soils in and around formal orchards and an identified area of filling, particularly in relation to impacts on future planting and/or landscaping. An Acid Sulfate Soils Management Plan might be required if excavations will be deeper than 1.5 metres. Soils are non-saline and the soils are non-aggressive to mildly aggressive.

No sub-surface geotechnical testing has been undertaken within the Cattai Precinct. The Cattai Precinct is unlikely to contain acid sulfate soils, although it is possible that soils in the south-western fringe of the precinct may present a moderate salinity hazard.

### **Visual Sensitivity**

The EA includes a Scenic Landscape Assessment which identified a visually sensitive catchment principally located within the Pitt Town Bottoms area to the east of the proposed residential development, but extending to the east around the northern part of the site. The assessment also identified visually sensitive areas within the Concept Plan area including Bona Vista Homestead and its curtilage, the Blighton archaeological area in the north-western part of the site, early circulation roads and the historical rectilinear farm lot and fence line pattern.

The EA concluded that the proposed development will have acceptable impacts on the scenic and visual quality of the area because the visually sensitive areas are avoided, existing street vegetation is retained, particularly along Bathurst Street, larger lots are proposed along the early circulation roads, Bona Vista Homestead and its buildings are retained and protected within a suitable curtilage and the rectilinear street pattern is retained. Particularly within the Blighton and Cleary Precincts, houses on the lots extending north towards the river cannot be built below RL17.3 (the 100 year flood level) and will have landscape and fencing style controls.

The EA concludes that within Cattai Precinct the increased density will not have a significant impact on scenic values and this impact can be mitigated by designing larger lots along the Cattai Road frontage from where this precinct is most visible.

### **Statements of Commitment**

The EA includes a compilation of mitigation measures identified during the environmental assessment of the proposal.

The EA also includes a number of other commitments principally relating to the detailed plans which will be required to accompany any future Project applications.

### **Future Applications**

The EA identifies future applications, the associated approval process and the suggested consent authority. In particular, the EA proposes that a future Project application be lodged

under Part 3A of the Environmental Planning and Assessment Act for the residential subdivision and associated works identified in this Concept Plan application.

Once the site is rezoned, the future development of Cattai Precinct may be undertaken either under Part 3A of the Environmental Planning and Assessment Act or under Part 4 by lodging a development application with Hawkesbury City Council.

Residential housing will be assessed by Hawkesbury City Council taking into account the proposed complying development controls under Part 3A.

### **Ecologically Sustainable Development**

The extensive range of studies into flooding and stormwater management, flora and fauna impacts, bushfire threats and cultural heritage have not revealed any uncertainty regarding potential impacts. Impacts identified can be appropriately managed and have not been found to result in serious or irreversible environmental damage as a consequence of this proposal. In contrast, the findings and recommendations of the flora and fauna report have identified opportunities that will improve the environmental attributes and qualities of the site, particularly in relation to the riparian corridor beside the River.

The Concept Plan has taken into consideration the range of issues and impacts which are to be addressed in the design and construction of the proposed residential development to ensure the proposal does not impose a burden on future generations. This EA has demonstrated how the relationship of the biophysical elements of the site in the development of the Concept Plan to minimise potential impacts.

### **Strategic Assessment of the Project and Associated Rezoning**

The EA provides a strategic assessment of the project and suggests that in addition to approving the Concept Plan, the map attached to HLEP be amended to reflect the proposed development.

The EA assesses the project against the provisions of the Metropolitan Strategy and the associated Subregional Strategy, Shaping Western Sydney, Section 117 Directions, Planning Circulars, State Environmental Planning Policies, Regional Environmental Plans, Local Environmental Plans and the Hawkesbury DCP. The EA concludes that the Concept Plan is consistent with, or at least not inconsistent with, the provisions.

### **Proposal Justification and Conclusion**

The EA has assumed the outcomes of the CW LES and gazettal of LEP Amendment No. 145 and then considered the additional development proposed by the Concept Plan.

This EA has considered the range of environmental impacts and other assessment requirements identified in the Director General's Requirements:

- Urban Design and Built Form – the proposed development will generally comply with the provisions of the Hawkesbury DCP, although some changes are suggested to the DCP to make it comply with the proposed layout and to building design guidelines;
- River Foreshore and Public Access – open space will be transferred to Council to ensure public access to this feature;
- Biodiversity – there will be no impacts on threatened species or communities. Vegetation adjoining Bona Vista Precinct will be retained, while a riparian corridor will be provided adjoining the Hawkesbury River. Water quality facilities will ensure no impacts on downstream users;
- Traffic and Transport – the Pitt Town Road improvement works will cater for the increased traffic resulting from the development with no further works required.
- Heritage – the increased density will have negligible impacts on the area already zoned for residential development under LEP Amendment No 145. Extensive



investigations into the European and Aboriginal heritage of the deferred area has shown that the proposed development can be managed and will have acceptable impacts.

- Utilities and Infrastructure – the proposed development can be serviced and construction is already under way to augment trunk water, sewerage, electricity and gas mains. Drainage and stormwater measures are proposed to minimise impacts on water quality;
- Ecologically Sustainable Development – the EA demonstrates how the development will commit to ESD principles;
- Bushfire – adequate asset protection zones will be provided around the retained vegetation adjoining Bona Vista Precinct. No other parts of the site are bushfire prone;
- Flooding – the EA assesses the proposed development and concludes that it meets the appropriate criteria, including the need to evacuate during major flood events;
- Planning Agreements – the proposal includes transfer of open space and construction of playing fields, playgrounds and community facilities. JPG is continuing to discuss the level of community facilities to be provided with Council and the Department of Planning;
- Statutory matters – the EA addresses the relevant statutory matters.

The increased density within the footprint of LEP Amendment No. 145 is considered to have negligible impacts, while development within the area deferred in the north-west of the site is considered to be acceptable with sufficient provision being made for the heritage values of Blighton as well as for Aboriginal archaeological and heritage values.

The development proposal is generally considered to have negligible and/or acceptable impacts and will result in a number of positive benefits including transfer of open space beside the Hawkesbury River, construction of a community centre near the Pitt Town Public School and recognition and preservation of historical fence lines.

## **1 Introduction**

### **1.1 Background**

In August 2002 Hawkesbury City Council commissioned Connell Wagner Pty Ltd to prepare a Local Environmental Plan (CW LES) which was subsequently adopted by Council. LEP 145 which amends Hawkesbury Local Environmental Plan 1989 (HLEP), and which resulted from the LES, was gazetted on August 18, 2006.

The Connell Wagner LES considered land generally above the 20 metre AHD contour which was considered to be free of major flooding. LEP Amendment No. 145 rezoned most of the land covered by the LES study area but omitted approximately 22.9 hectares north of Hall Street in the north-west of the study area, mainly because it was considered that further study was required of matters related to Aboriginal and European heritage.

Don Fox Planning (DFP) prepared an Environmental Investigation dated August 2006 (DFP Environmental Investigation) on behalf of Johnson Property Group (JPG), including a draft LEP amendment, which proposed increasing the development densities over land owned and/or controlled by JPG (JPG Land). Hawkesbury City Council resolved on 31 July 2007 to request a Section 54 Certificate from the Minister of Planning to place the draft LEP amendment on exhibition. The Minister declined to issue the Section 54 Certificate, however has agreed to consider the proposal as a Major Project under Part 3A of the Environmental Planning and Assessment Act 1979.

Pursuant to the gazettal of LEP Amendment No 145, development consent has been granted for development of 225 lots on Bona Vista (Consent DA 0557/06, approval date 3 May 2007). The road layout for the approved development within Bona Vista takes into account the location of the existing fence lines as required by Clause 26 of HLEP 1989. Construction of these lots has commenced

The Minister has since declared the Pitt Town Investigation Area to be a Major Project under Part 3A of the EP&A Act and has authorised the submission of a Concept Plan for the site.

JPG has prepared concept plans for the development showing a total of 739 allotments, comprising 390 conventional residential lots and 349 lots for rural housing. Including 176 rural housing lots already zoned under LEP Amendment No 145, a total of 915 lots will be permitted in the Pitt Town Investigation Area.

This Environmental Assessment (EA) supports a rezoning for 739 lots (including 80 lots on land not owned or controlled by JPG) and a Concept Plan Application for JPG Land comprising 659 lots.

### **1.2 Purpose of Environmental Assessment**

The purpose of this Environmental Assessment (EA) is to address the Director General's Requirements (DGRs). This will involve reviewing the Connell Wagner LES (CW LES) and the resulting LEP Amendment No. 145, as well as considering the impacts of increasing the density of development and of extending the development footprint to the north of Hall Street. In detail, the objectives of this EA are:-

- To address the DGRs as issued for the Pitt Town Investigation Area;
- To review the CW LES and its supporting studies;
- To review additional reports prepared during the CW LES assessment process where relevant;
- To review further technical reports prepared with the DFP Environmental Investigation. In particular, to address the Aboriginal and European heritage matters

which led to the exclusion of part of the CW LES study area north of Hall Street from LEP amendment No 145;

- To take account of comments received from Government agencies as part of preliminary consultations undertaken during the preparation of the DFP Environmental Investigation;
- To assess the impacts of the proposed increased densities and larger footprint of development;
- To prepare the Concept Plan Application for consideration by the Minister;
- To undertake a Strategic assessment to support rezoning of land identified on **Figure 1** by the Minister gazettement an Order under Section 75P(2)(d) of the Environmental Planning & Assessment Act to rezone the land, or via a Schedule 4 amendment to the State Environmental Planning Policy (SEPP) Major Projects 2005.

### **1.3 Preliminary Assessment Submission to Minister**

The Minister resolved to declare the project a Major Project under Part 3A of the Environment Planning and Assessment Act 1979 on 12 October 2007 based on a submission prepared by JPG and dated September 2007. A copy of the Minister's declaration is attached at **Appendix A**.

The September 2007 preliminary assessment submission sought approval for:

1. Project Approval on land owned or controlled by Johnson Property Group in the study area for staged subdivision to create, subject to detail subdivision design:
  - a. Approximately 390 conventional residential allotments;
  - b. Approximately 269 lots for rural housing;
2. Associated roads, drainage and service infrastructure;
3. Project Approval on land external to the site and not owned or controlled by Johnson Property Group in the study area for the construction of roads, drainage, footpaths and service infrastructure.
4. Project Approval to demolish existing structures on the site.
5. Project Approval to construct agreed recreation facilities in accordance with an approved work program.
6. Approval to amend Part E – Chapter 4 of the Hawkesbury City Council Development Control Plan (as the current DCP does not apply to lots under 750 square metres).
7. Approval for appropriate Complying Development provisions to apply specifically to the whole Pitt Town Residential Precinct.
8. Project Approval for the installation of signage, to market the development, on land external to the site but controlled by Johnson Property Group.

The Minister has authorised the submission of a Concept Plan for the site. A copy of the letter from the Department of Planning is attached as **Appendix A**.

Since the issue of the letter of 12 October, the Department of Planning has agreed to stage the planning process sought by JPG, so that the application is now for:

- Rezoning of lands defined in **Table 1** and shown in **Figure 1**.
- Concept Plan approval for the land owned and/or controlled by JPG; i.e. excluding Cattai Precinct, but including consideration of integrated development approvals. **Table 1** defines the land covered by the Concept Plan Application.

Upon finalisation of the Concept Plan for Pitt Town, JPG will lodge a Project Application under Part 3A covering the JPG Land.

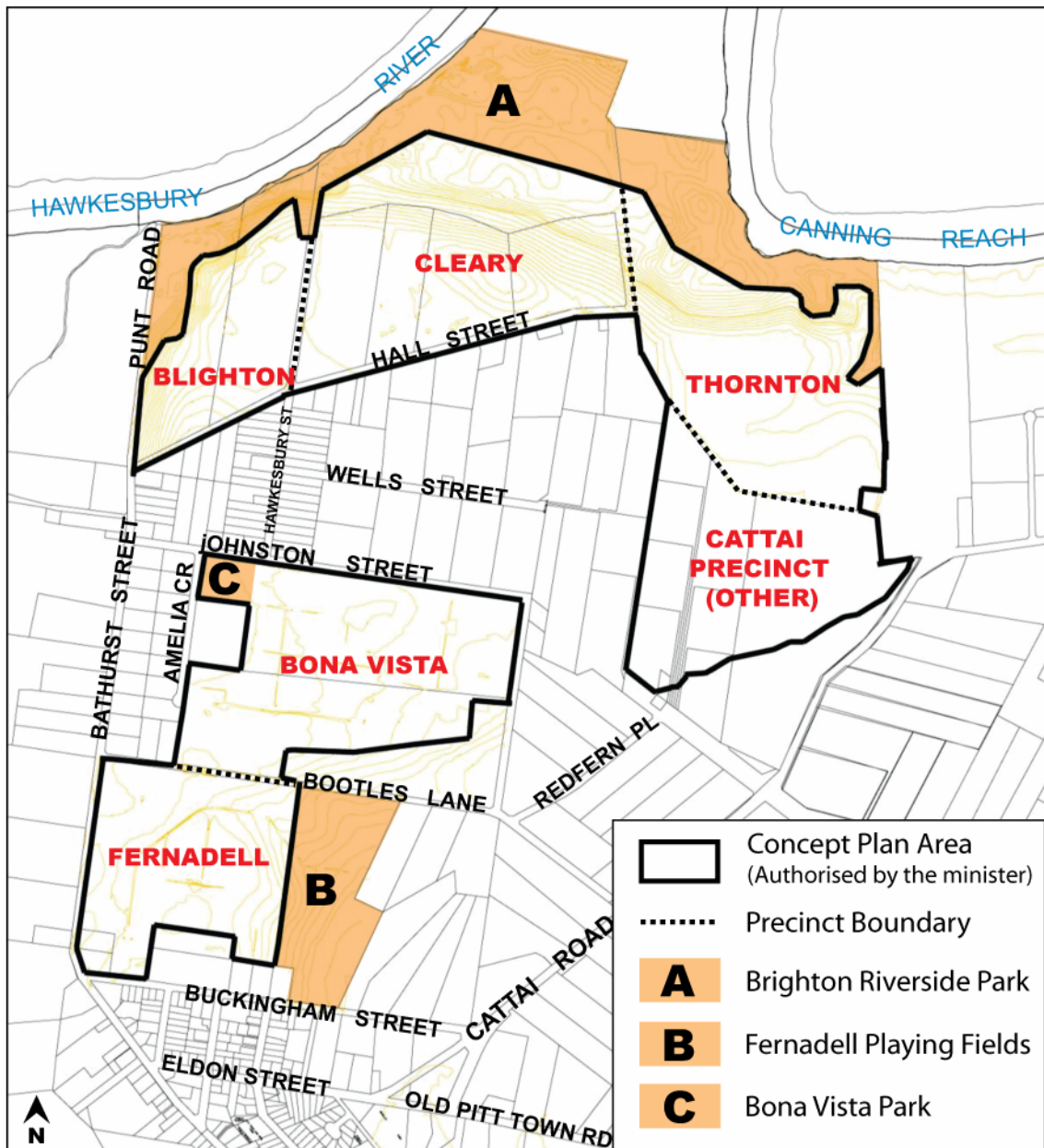


Figure 1 - Concept Plan Study Area Authorised by the Minister– Note Annotations added to Authorised Plan

#### 1.4 Location and Study Area

The study area is located to the north of Pitt Town, approximately 6 kilometres from Windsor. A general location of the study area is depicted on **Figure 2**.

The study area for this EA covers the land included in LEP Amendment No. 145 plus an area north of Hall Street omitted from LEP Amendment No. 145 but excludes land generally between Johnston Street and Hall Street.

The study area superimposed on an aerial photograph is shown on **Figure 3** and is more fully described in **Section 2**. **Figure 4** defines precinct names which are referred to in this EA.

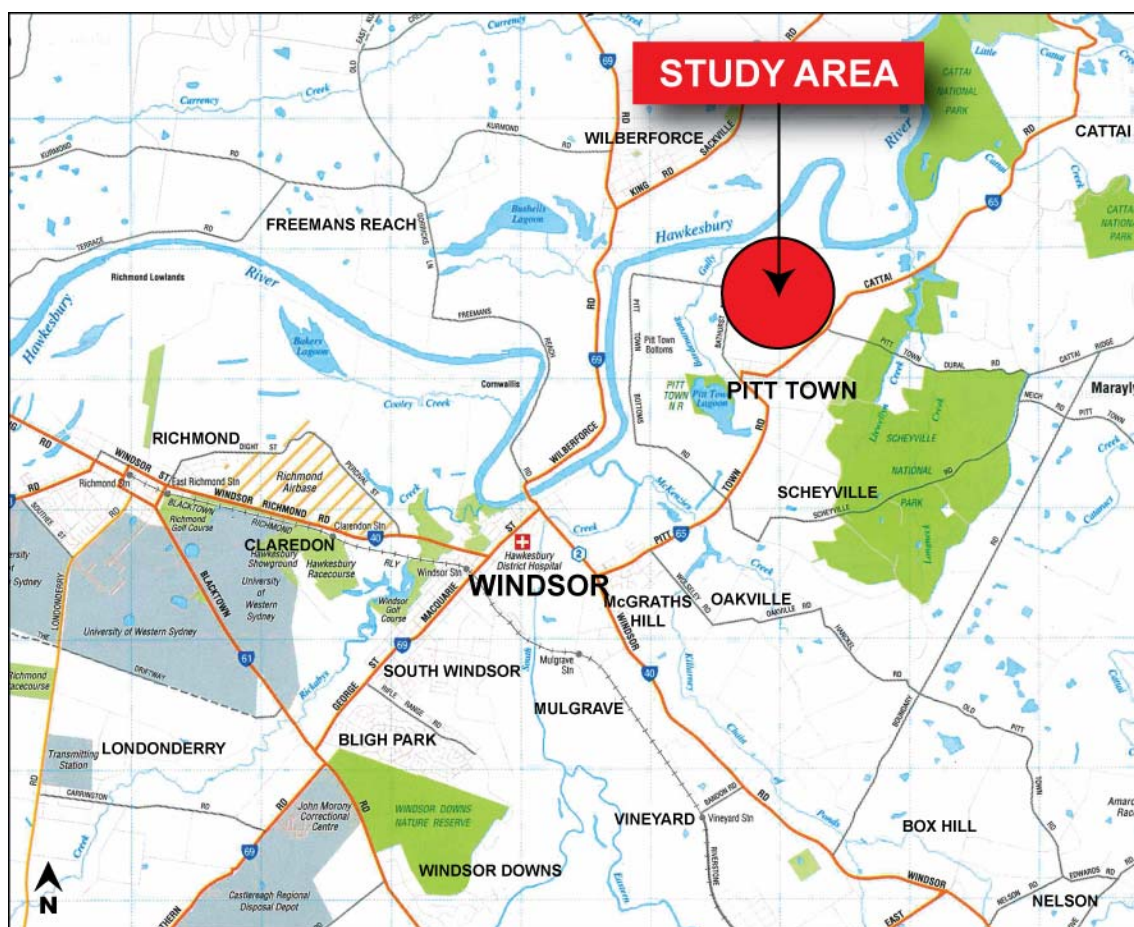


Figure 2 – Location



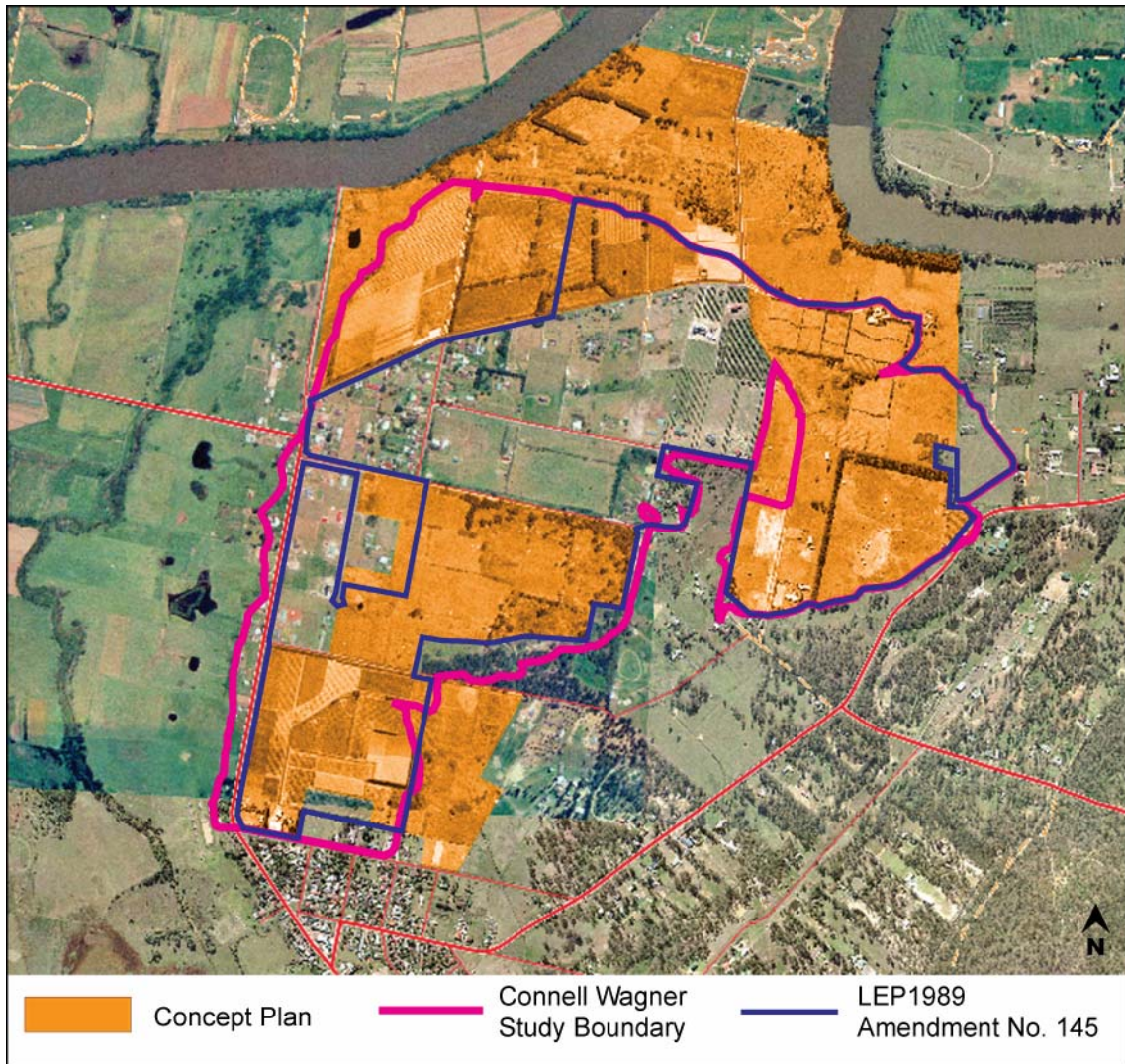


Figure 3 – Study Area

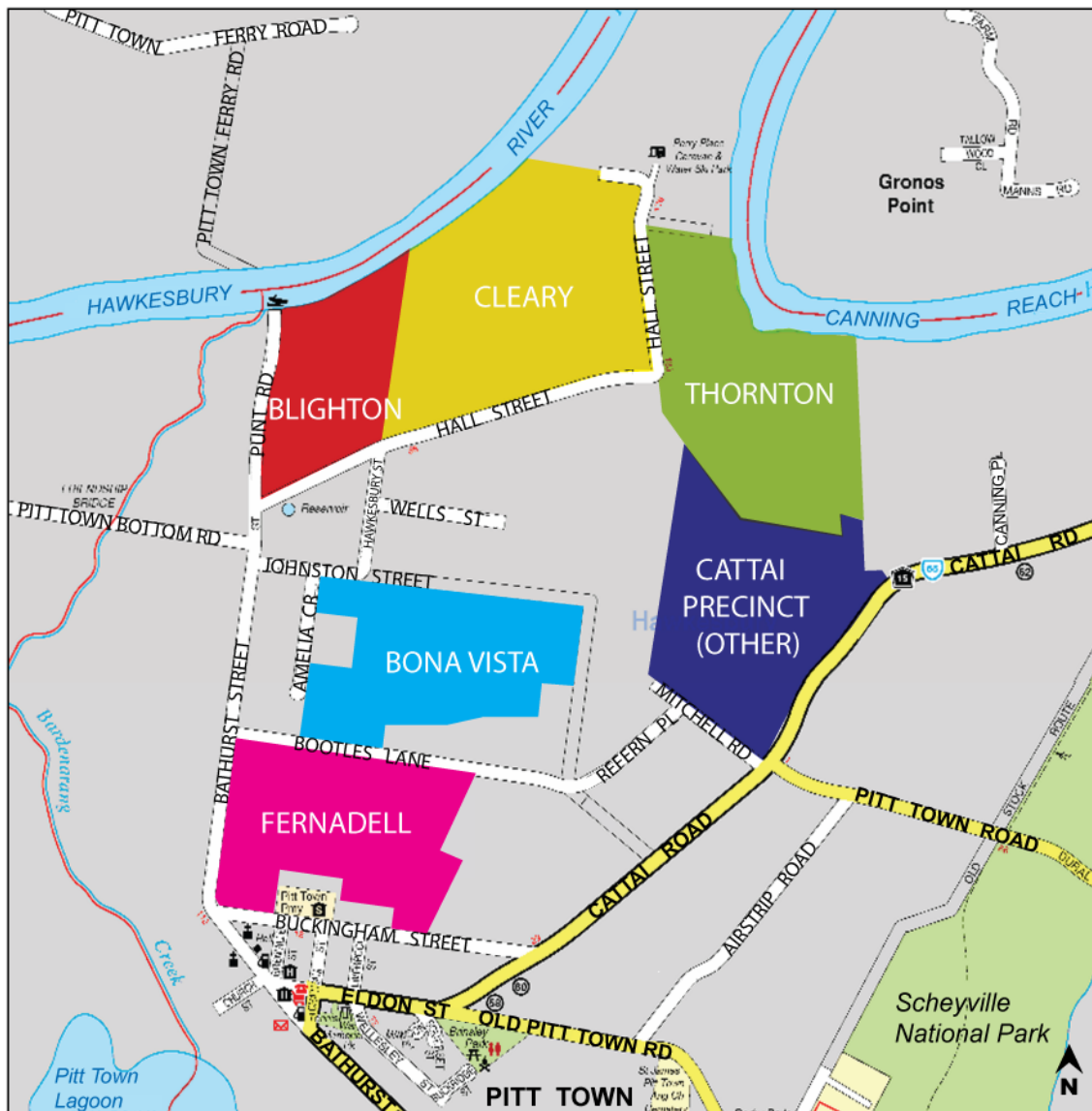


Figure 4 – Precincts

## 1.5 The Applicant

The applicant for this Major Project is:

Johnson Property Group

338 Kent Street

Sydney NSW 2000

Phone 8023 8888.

The applicant owns, or controls through options, a significant part of the study area. Details of the applicant's holdings and ownerships are provided in **Section 2.2**.

**Section 2.2** also provides details of other landholdings covered by this application.

## 1.6 Environmental Assessment Process

### 1.6.1 Major Projects

This Concept Plan is submitted for approval as authorised on 12 October 2007 by the Minister.

### 1.6.2 Environmental Assessment Requirements

The Director General has advised the requirements for the Environmental Assessment by letter dated 15 November 2007 and this Assessment has been prepared in accordance with those Requirements. A copy of the Director General's Requirements is attached as **Appendix A**.

### 1.6.3 EA Exhibition

In accordance with section 75H(3) of the EP&A Act, "*after the environmental assessment has been accepted by the Director General, the Director General must, in accordance with any guidelines published by the Minister in the Gazette, make the Environmental Assessment available for at least 30 days*".

Any person or public authority can make submissions to the Director General during this 30 day period.

## 2 The Site

### 2.1 Site Description

The site comprises the Concept Plan area as authorised by the Minister, plus the land shown on **Figure 3**, which comprises Blighton Riverside Park and Fernadell Playing Fields, all of which was identified in the Preliminary Assessment submission to the Minister and is reproduced in Table 1. This land is included in the study because, although it will not be subdivided, it is ancillary to the project and some works will be undertaken on it.

The site was used for many years for agriculture and orcharding, although most of the orchard trees have been removed. There are some areas of remnant bushland within and surrounding the site and there are also several windrows of predominantly pine trees.

There are houses scattered throughout the site, together with farm buildings and other improvements typical of land that has been farmed for many years.

The site is generally above the 100 year flood level (the 17.3 metre contour) and is considered to be flood free.

The site is bounded by the Hawkesbury River to the north, Cattai Road to the east, houses and the Pitt Town Public School fronting Buckingham Street to the south and Bathurst Street to west. As described in **Section 1.4**, the site excludes land generally between Johnston Street and Hall Street.

The existing village of Pitt Town lies beyond Buckingham Street to the south.

### 2.2 Land Ownership and Legal Description

**Table 1** shows the property descriptions of the land covered in this Concept Plan Application. **Figure 1** depicts the Concept Plan study area authorised by the Minister.

Lot	Deposited Plan	Ownership	Size (ha)
101	1113833	Fernadell Properties Pty. Ltd (JPG entity)	21.13 (Portion Only)
132	1025876	Bona Vista Properties Pty. Ltd (JPG entity)	18.04
14	865977	Bona Vista Properties Pty. Ltd (JPG entity)	11.81 (Portion Only)



Lot	Deposited Plan	Ownership	Size (ha)
11	1021340	Coral Elizabeth Cleary (JPG optioned)	8.68 (Portion Only)
12	1021340	Phillip Thomas Cleary (JPG joint venture)	8.30 (Portion Only)
13	1021340	Phillip Thomas Cleary (JPG joint venture)	9.58 (Portion Only)
14	1021340	Phillip Thomas Cleary (JPG optioned)	6.44
15	1021340	Phillip Thomas Cleary (JPG optioned)	3.89
16	1021340	Coral Elizabeth Cleary (JPG optioned)	6.17
17	1021340	Coral Elizabeth Cleary (JPG optioned)	6.01
18	1021340	Vermont Quays Pty. Ltd (JPG entity)	3.13 (Portion Only)
2	76375	David Robert Thornton & Christopher Michael Thornton (JPG optioned)	26.04 (Portion Only)
<b>Sub-total JPG land</b>			<b>129.22 ha</b>
1	1057585	Triston Pty Limited & Bassam John Gbantous & Merryne Lynette Gbantous	2.00
2	1057585	Triston Pty Limited & Bassam John Gbantous & Merryne Lynette Gbantous	2.00
3	1057585	Triston Pty Limited & Bassam John Gbantous & Merryne Lynette Gbantous	2.00
4	1057585	Triston Pty Limited & Bassam John Gbantous & Merryne Lynette Gbantous	1.98
2	555257	David Robert Burns	0.12 (Portion Only)
1	808945	Anthony Eurell & Elizabeth Anne Eurell	0.39 (Portion Only)
2	808945	Joseph George Cook	1.38
3	808945	Michael Joseph Carty & Victoria Rosalina Carty	4.41
1	551960	Colonia Pty Limited (the Weller brothers)	12.43 (Portion Only)
<b>Sub-total non-JPG land (Cattai Precinct)</b>			<b>26.71 ha</b>
<b>Total All land</b>			<b>155.93 ha</b>

Table 1: Property descriptions

## 2.3 Surrounding Development

**Figure 3** shows the site on an aerial photograph in the context of the surrounding land. A site analysis plan is attached at **Appendix C**.

To the north is the Hawkesbury River and beyond, the villages of Ebenezer and Wilberforce, which are surrounded by rural land uses. The River also passes to the west of the site, separated from it by the Pitt Town Bottoms.

To the east of the site, beyond Cattai Road there are rural residential style dwellings and beyond those is the Scheyville National Park.

Pitt Town village is located to the south of the site.

The site analysis plan, previous environmental investigations and existing zonings have all shaped the extent of the Project and the subdivision layout as discussed through this EA.

### 3 Project Description

#### 3.1 Concept Approvals

The Concept Plan seeks approvals for:

- Subdivision to create a total of 659 allotments, including
  - 390 conventional residential allotments;
  - 269 allotments for rural housing.
- The internal road network;
- Provision of a 4.1 metre wide boat ramp with 16 car and 14 car and trailer parking spaces adjacent to the Hawkesbury River;
- Provision of two playing fields, a 630 m<sup>2</sup> community centre and 50 car parking spaces proposed within the Fernadell Precinct;
- Provision of play grounds within the Bona Vista and Fernadell Precincts;
- Provision of related infrastructure comprising water supply mains, sewerage mains, road works, stormwater mains and water quality control and detention works. Note that some of the infrastructure works are outside the land to which the Concept Plan Application applies.

The Concept Plan layout for the development is shown on **Figure 5**.

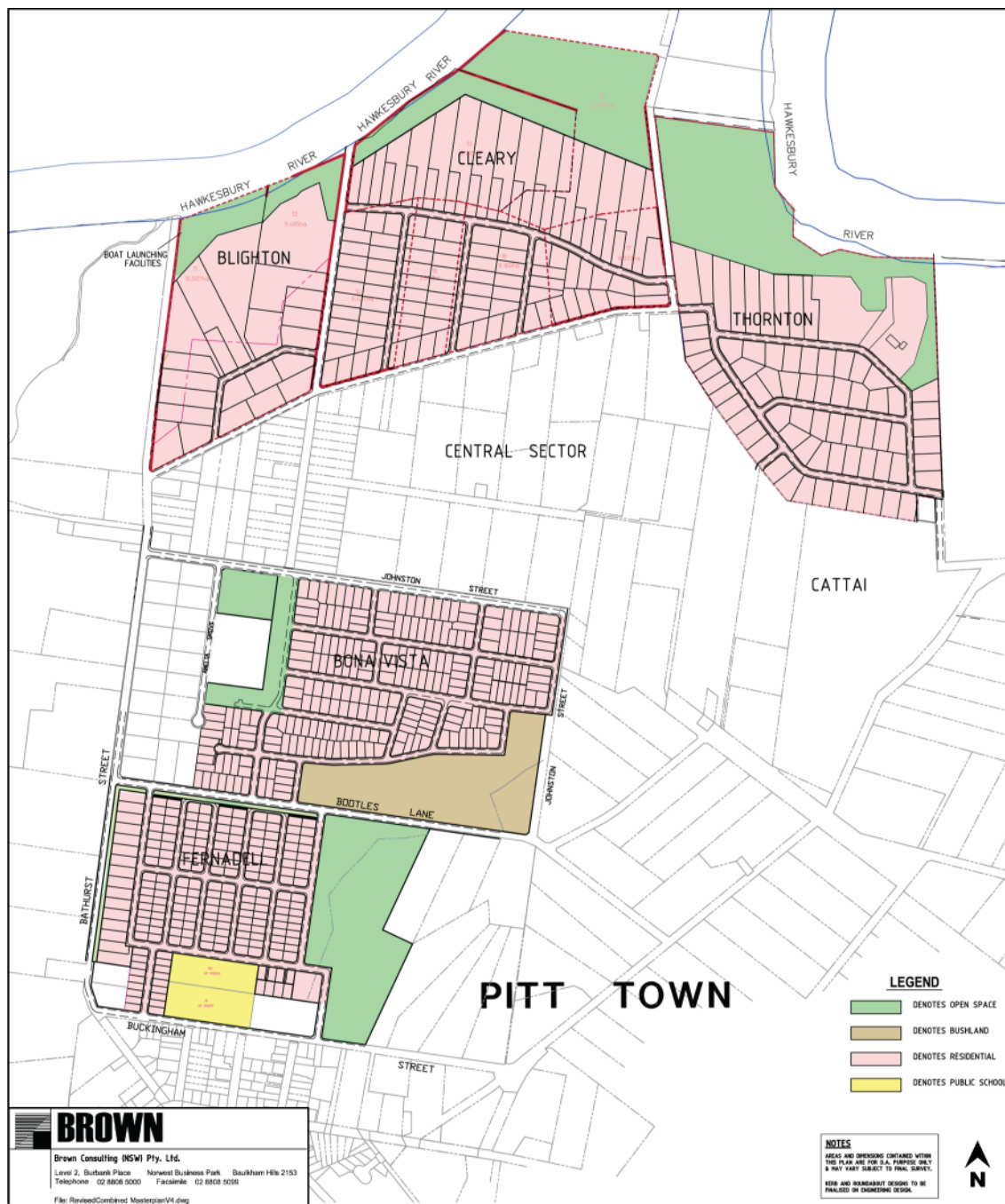


Figure 5 – Proposed Concept Plan

**Table 2** shows the expected yields from each of the development precincts, compared to the yields which can be obtained under LEP Amendment No 145.

Land Holding	Yield which could be achieved under LEP 145 Lots		Yield available under Concept Plan Application	
	Lot Sizes	Yields	Lot Sizes	Yields
Fernadell	750m <sup>2</sup> and 4000m <sup>2</sup>	154	550m <sup>2</sup> to 2400m <sup>2</sup>	210
Bona Vista	750m <sup>2</sup> and 1500m <sup>2</sup>	195	650m <sup>2</sup> to 1400m <sup>2</sup>	246
Blighton	Deferred	0	3600m <sup>2</sup> to 2.6ha	22
Cleary	3 lots per ha	22	2000m <sup>2</sup> to 1.2ha	112
Thornton	2 Lots per ha	30	2000m <sup>2</sup> to 1.8ha	69
	3 Lots per ha			
	5 Lots per ha			
<b>Sub-total JPG lots subject to Concept Plan approval</b>		<b>401</b>		<b>659</b>
Cattai	2 lots per ha	45	2500m <sup>2</sup> minimum	80
<b>Sub-total lots within study area subject to rezoning</b>		<b>446</b>		<b>739</b>

Table 2 – Development Yields

**Table 2** excludes open space lots.

**Table 2** shows that within the study area, a total of 446 lots would be available if all development within LEP Amendment No 145 is completed. The proposed rezoning will result in a total of 739 lots, an increase of 293 lots, including 80 lots within Cattai Precinct on land not controlled by JPG.

**Table 2** also shows that within the study area, the Concept Plan will result in 659 lots, an increase of 258 lots over the number available under LEP Amendment No 145

## 3.2 Project Details

### 3.2.1 Site preparation works

There are no extensive site preparation works required for this project. The site is relatively flat and will require minimal reshaping, including providing a level area for the playing fields.

Excavations will be required to construct roads but will be typical of standard subdivision works. It is expected that minimal earthworks will be required to provide building platforms for houses as part of the subdivision works. It is not anticipated that any bulk filling will be imported to the site.

Topsoil will be stockpiled and kept for spreading over completed work areas to facilitate revegetation and landscaping.

As is the case with the works already underway on Bona Vista, it is not anticipated that the future contamination investigations will require significant earthworks to treat or remove contaminated soil – refer to **Section 8.7**.

No broad acre clearing of native or exotic vegetation will be required, although isolated trees will be removed to allow for construction of roads and services.

Detailed plans showing contours and proposed finished levels will be submitted with the Project Application.

### **3.2.2 Subdivision**

This Concept Plan Application seeks approval for the subdivision of 659 allotments generally as shown on **Figure 5** and detailed in **Table 2**.

As noted in **Section 1.1**, construction has commenced within Bona Vista Precinct under Consent DA 0557/06. Within Bona Vista Precinct, the Concept Plan follows the same road layout as the roads approved under Consent DA 0557/06 and accordingly will result in no additional disruption to the existing fence lines which are protected under HELP 1989 as heritage items.

All allotments for sale will be created as Torrens allotments.

Covenants and easements will be established where appropriate to provide for inter-allotment stormwater drainage and to protect heritage items.

Land to be transferred to Council will be created as public open space. Note that the lot numbers shown in **Table 2** exclude the open space land.

Council has agreed to accept and be responsible for the management and maintenance of the three areas of public open space, comprising:

- Fernadell Park having an area of approximately 9.1 hectares;
- Bona Vista Park, having an area of approximately 1.3 hectares; and
- Blighton Riverside Park, having an area of approximately 26.9 hectares.

JPG will embellish Fernadell and Bona Vista Parks. Council has agreed to undertake the embellishment works on Blighton Riverside Park.

Detailed plans showing lot numbering, dimensions and areas, as well as easements and draft covenants will be provided with the Project Application.

### **3.2.3 Staging**

The development of JPG land is intended to proceed in the five precincts known as Bona Vista, Fernadell, Blighton, Cleary and Thornton. The other land within the Concept Plan area is known as the Cattai Precinct and is not under JPG ownership.

Development will commence in Bona Vista, providing lots ranging in size from 650m<sup>2</sup> to over 1300m<sup>2</sup>. It is the current intention that the 246 lots within Bona Vista be developed prior to proceeding to other areas.

Once Bona Vista is completed and depending on market conditions Fernadell and Cleary lands will be developed concurrently, providing a variety of lots ranging from 550m<sup>2</sup> to over 1 hectare.

As the development of Cleary concludes, the 22 larger lots on Blighton will be developed, followed by Thornton Precinct.

Since the Cattai Precinct is dependant on services being provided through the other precincts (see below), it is envisaged that Cattai Precinct will not proceed until the remaining precincts are complete. Cattai Precinct is not under the control of JPG and the owners of the land might decide to proceed earlier but in that case would need to provide funds to extend the services.

### **3.2.4 Utilities and Infrastructure**

Infrastructure will be provided as necessary to service each stage of the development. Brown Consulting, who is providing the engineering consultants for the project, has provided the following advice in relation to infrastructure:

- New trunk water supply and sewerage mains are under construction from McGraths Hill and will service the entire Pitt Town expansion area;
- Telstra has advised that there is sufficient telecommunications capacity to service the proposed development;
- A new high voltage line will be required to service the development; and
- A new gas main will be extended to the site.

A copy of the letter from Brown Consulting is shown in **Appendix Q**.

Water, sewer, electricity, telecommunications and gas will initially be provided along Bootles Lane to service the Bona Vista development. The Fernadell land will also utilise the services provide along Bootles Lane.

Blighton, Cleary, Thornton and the Cattai Precinct will be serviced by progressively extending the infrastructure along Bathurst Street and Hall Street.

As noted above, development of Cattai Precinct is not likely to proceed until after the other precincts are developed because of the need to extend infrastructure precinct by precinct. If the owners of this land intend to commence earlier, they will have to fund the extension and provision of services along Hall Street.

### **3.2.5 Alternatives Considered**

The Pitt Town Residential Precinct has been the subject of a number of investigations, including a proposal to extract sand.

The CW LES considered a range of development options from "Low Growth" yielding 495 additional lots to "High Growth" yielding 1405 additional lots, although these numbers include development of land outside the subject site between Johnston Street and Hall Street. Full implementation of LEP Amendment No 145 would result in an additional 446 lots on the subject site.

JPG proposed an additional 1032 lots on the subject site, excluding Cattai Precinct, in the DFP Environmental Investigation.

In 2007, Council requested approval to exhibit a plan which would have resulted in an additional 1182 lots on the subject site.

All the above alternatives have been investigated in detail and have been the subject of submissions to Council and/or the Department of Planning.

## **4 Planning Agreements and/or Developer Contributions**

### **4.1 Existing Voluntary Planning Agreement (VPA)**

JPG has entered into a State VPA with the Minister for Planning. A copy of the VPA is attached as **Appendix B**. The VPA covers:

- Transfer of land for expansion of Pitt Town Public School - \$2,000,000;
- Pitt Town Road Intersection Works - \$1,700,000;
- The shoulder works (Pitt Town Road) - \$11,200,000;

- A monetary contribution to Department of Conservation (now Department of Environment and Climate Change) - \$630,000; and
- A monetary contribution to school building - \$976,000.

To date, JPG has transferred land for the expansion of Pitt Town Public School and other items are pending.

## **4.2 Community Facilities**

The provision of other infrastructure, including roads and community facilities is under negotiation with the Department of Planning and Council.

## **5 Statutory Matters**

### **5.1 Commonwealth Matters**

#### **5.1.1 Environment Protection and Biodiversity Conservation (EPBC) Act 1999**

Within the area covered by the CW LES, the proposed rezoning will not result in any greater disturbance to species listed under the EPBC Act 1999 than would result from development permissible under LEP Amendment No 145.

The DFP Environmental Investigation dated August 2006 included assessments of the flora (Anne Clements and Associates March 2006) and fauna (Ambrose Ecological Services March 2006) within the extended study area to the north of Hall Street.

These investigations concluded that species covered by the EPBC Act would be unlikely to be impacted by the proposed rezoning.

Therefore, within the whole of the study area, the development proposal is unlikely to result in impacts on species covered by the EPBC Act.

Both ACA and AES have confirmed that their assessments are current and are suitable for assessment of the Concept Plan under Part 3A of the EP&A Act – refer to **Appendices G** and **H** respectively.

In addition a separate aquatic study by The Ecology Lab has been carried out in respect of the boat ramp, which is attached at **Appendix I**. Their searches have review of previous studies indicate two threatened amphibians: the Giant Burrowing Frog (*Heleioporus australiacus*) and the Redcrowned Toadlet (*Pseudophryne australis*). They states that *“both species are associated with vegetation of the Hawkesbury Sandstone formation in the local area, however, as the survey area occurs on alluvial and clayey soils, it is considered unlikely that these species have any potential habitat in the survey area.”*

### **5.2 State Matters**

#### **5.2.1 State Environmental Planning Policy (SEPP) 2005 (Major Projects)**

The Minister has declared the Pitt Town Investigation Area to be a Major Project under Part 3A of the EP&A Act and has authorised the submission of a Concept Plan for the site. A copy of the Minister’s declaration is attached as **Appendix A**.

#### **5.2.2 SEPP 11 – Traffic Generating Developments**

SEPP 11 rationalises consultation required in relation to traffic-generating developments and establishes the Roads and Traffic Authority as the sole traffic management authority to be consulted, ensuring it is given the opportunity to make representations on development applications before the local council decides whether to approve a proposal.

Traffic issues are addressed in Section 8.2, with reference to a study prepared by Masson Wilson & Twiney – refer to **Appendix F**.

### **5.2.3 SEPP No. 19 - Bushland in Urban Areas**

SEPP 19 aims to protect and preserve bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when LEPs for urban development are prepared. When considering an application for development, SEPP 19 also requires a public authority to consider the need to retain bushland and the effect of the development on the bushland zoned or reserved for open space, in particular matters such as soil erosion, siltation of waterways and spread of weeds and exotic plants.

Flora and fauna assessments have been prepared for the study area (refer to **Appendices G and H**) and are discussed later in this report. The proposed rezoning and subdivision would be consistent with SEPP 19.

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

SEPP 55 introduces state-wide planning controls for the remediation of contaminated land and provides that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, appropriate remediation is to be undertaken before the land is developed.

Contamination assessments have been undertaken by Geotechnique and Golder Associates and these are appended to this EA.

### **5.2.5 Draft SEPP 66 – Integrated Land Use and Transport**

Clause 2 of Draft State Environmental Planning Policy 66 – Integrated Land Use and Transport (SEPP 66) sets out the aims of the Policy which are “*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 distance travelled, especially by car,*
- (d) *supporting the efficient and viable operation of public transport services,*
- (e) *providing for the efficient movement of freight.”*

This draft Policy sets out a number of matters that consent authorities are to consider in determining applications for developments with a gross floor area in excess of 1000m<sup>2</sup> including (but not limited to) residential subdivisions that create more than 500 lots and residential flat buildings containing more than 300 dwellings.

Clause 8 requires a number of matters to be considered in preparing a master plan or precinct plan. These matters are set out in the **Table 3** below.

<b>Matter for Consideration under Clause 8</b>	<b>Comment</b>
(a) the instrument or plan will further the aim and the planning objectives of this Policy, and	Future housing will be proximate to Pitt Town village with higher densities on land closest to Pitt Town village and the public school.  The roads are suitable for a



<b>Matter for Consideration under Clause 8</b>	<b>Comment</b>
	bus route to provide public transport choice within the area. Further public transport options are available at Mulgrave Railway Station approximately 6km.  Future housing will be proximate to Pitt Town village to assist in achieving the objectives of the SEPP.
(b) the instrument or plan is consistent with the policy on the location of specific land uses and the general policies in the Integrated Land Use and Transport Policy Package or complies with Clause 10, and	Densities are maximised on land closest to Pitt Town village and the public school. The roads are suitable for a bus route.
(c) adequate consultation with the Director-General of Transport NSW and any appropriate planning agency, transport agency and transport provider takes place in accordance with Clause 11, and	
(d) the transport implications are considered in accordance with Clause 12, and	
(e) the instrument or plan makes, or will enable or facilitate the making of, appropriate planning provisions that will minimise the demand for travel and the use of cars, including provisions for:	
(i) an urban form and structure that encourage walking, cycling and public transport use, and	High density development is located closer to Pitt Town village
(ii) parking standards that set maximum limits in order to discourage car use in areas with good public transport access,	Not applicable to standard residential lots.
(iii) minimum residential densities that will help to achieve viable public transport services especially in accordance with Cause13 for new residential release areas, and	Higher residential densities are proposed in proximity to Pitt Town village
(iv) employment or floorspace densities in commercial or employment areas that reflect the accessibility of the area by suitable public transport services and faculties, and	Not Applicable
(f) the access needs of intermodal terminals and other places that generate or attract freight trips are taken into account.	Not Applicable

Table 3 – Matters for Consideration under Clause 8 of draft SEPP 66

The proposed residential subdivision outlined in this Concept Plan is considered to be consistent with the broad objectives of the SEPP.

Further discussion on traffic related issues is provided in **Section 8.2** of this report.

**5.2.6 National Parks and Wildlife Act 1974 (NPW Act)**

The provisions of the NPW Act in relation to the proposed rezoning are assessed in **Section 8.3** of this EA.

**5.2.7 Threatened Species Conservation Act 1995 (TSC Act)**

The provisions of the TSC Act in relation to the proposed rezoning and boat are assessed within **Section 8.1** of this EA.

**5.2.8 NSW Heritage Act**

The provisions of the NSW Heritage Act are addressed in **Section 8.3** of this EA.

**5.2.9 City of Cities – Metropolitan strategy**

The Metropolitan Strategy is a broad framework to secure Sydney's place in the global economy by promoting and managing growth. It is a strategic document that outlines a vision for Sydney over the next 25 years. The strategy indicates that more detailed planning will be developed in the form of regional strategies and subregional strategies. The Metropolitan Strategy has five main aims:

1. Enhance Liveability
2. Strengthen Economic Competitiveness
3. Ensure Fairness
4. Protect The Environment
5. Improve Governance

The Metropolitan Strategy comprises seven strategy documents as follows:

1. Economy And Employment
2. Centres And Corridors
3. Housing
4. Transport
5. Environment And Resources
6. Parks And Public Places
7. Implementation And Governance

The Metropolitan Strategy anticipates that Sydney's population will grow by 1.1 million people between 2004 and 2031, from a current population of 4.2 million to 5.3 million by 2031. To cater for this growth, it is predicted that the following will be required:

- 640,000 new homes;
- 500,000 more jobs;
- 7,500 hectares of extra industrial land, if current trends continue;
- 6.8 million square metres of additional commercial floor space; and
- 3.7 million square metres of additional retail space.

The Strategy also indicates that valued rural and resource lands extending to the Nepean–Hawkesbury will be recognised and protected and that new land will not be released for urban development unless it meets the Government's sustainability criteria.

The Hawkesbury LGA is included in the Northwest Metropolitan subregion, together with the Baulkham Hills, Blacktown, Blue Mountains and Penrith LGA. The 2031 Planning targets for this subregion include:

- 60,000 new dwellings in existing areas;
- 60,000 new dwellings in the Northwest Growth Centre (includes dwellings to be built after 2031);
- 20,000 new dwellings in other Greenfield; and
- 99,000 new jobs.

The proposed LEP amendment would assist in achieving the housing target for “*other Greenfield areas*” in the subregion. Of these seven strategies, those relevant to the proposal are Environment and Resource Strategy, Housing Strategy and Governance and Implementation Strategy which are discussed below.

### **Environment and Resources Strategy**

The Environment and Resources Strategy outlines that, amongst other things, aboriginal cultural heritage will be protected. Areas of regional cultural significance will be identified, commencing with the Hawkesbury-Nepean catchment to provide a context for future land use planning and decision making.

This issue is addressed in this investigation.

### **Housing Strategy**

The Housing Strategy describes how development will be concentrated to strengthen centres, towns, villages and neighbourhoods focused around public transport. It also outlines that there will be a balanced approach to growth with opportunities to provide more housing in both new land release areas as well as within existing areas, ensuring a continuing supply of new detached housing with some medium density housing while preserving agricultural and resource lands and land for urban development after 2031 if needed.

The Housing Strategy further outlines that 30–40 per cent of new housing will be provided in land release areas, with detailed planning for up to 7,000–8,000 lots per year and infrastructure from 2007–2008. Proposed land release areas will be assessed against sustainability criteria and infrastructure funding. The remaining 60–70 per cent of new housing will be provided in existing urban areas in line with subregional housing capacity targets, which will be set through subregional planning with local government. In the North West Sub-Region, including Hawkesbury LGA, an additional 70,000 dwellings are envisaged by 2031, a 28% increase over the 2004 level of housing.

The strategy provides that all councils will be required to undertake a housing market demand and supply analysis, under the guidance of the Department of Planning, to consider the needs of an ageing population, changing demographics and household formation, housing affordability, adequacy of supply, development economics and feasibility and market trends. Subsequently, councils will be required to review existing and proposed planning controls in terms of their effect on housing supply and mix.

The proposed housing is located on the periphery of the existing Village of Pitt Town, and will both support existing facilities and services and facilitate the provision of additional facilities and services. For the reasons outlined later in this submission, the proposed rezoning will provide the economic justification to ensure the delivery of additional facilities and services, required by the community.

### Governance and Implementation Strategy

The Governance and Implementation Strategy sets out that subregional planning will be undertaken in partnership with local government and State agencies and that local planning and assessment will be improved by ensuring that LEPs are consistent with subregional plans. The additional housing opportunities that will be facilitated by the proposed rezoning could provide an important contribution towards the achievement of subregional housing targets.

#### 5.2.10 Draft North-West Subregional Strategy

The DGRs require the EA to address the draft North West Subregional Strategy. This draft strategy is not publicly available. The Department of Planning has been consulted regarding this requirement and the proponent has been directed to address the following components which are common to all of the subregional strategies:

- How the proposal fits within the centres hierarchy of the Metropolitan Strategy;
- Housing Chapter of the subregional strategies; and
- Appendix 1 – Objectives and Actions – Section C.

The objectives and actions in Section C of Appendix 1 to the subregional strategies are more related to strategic actions for the Department of Planning or local councils, or are similar to those contained in the Housing Chapter. Therefore only the centres hierarchy and housing chapter are addressed in Section 12 of this EA.

#### 5.2.11 Shaping Western Sydney

Shaping Western Sydney was the NSW Government's planning strategy for western Sydney. While effectively superseded by the current Metropolitan Strategy ("*City of Cities*") it is a relatively recent planning document pertaining specifically to western Sydney.

The function of *Shaping Western Sydney* is likely to be superseded by a new subregional strategy in line with the current Metropolitan Strategy, its policies are generally consistent with the seven strategies of the Metropolitan Strategy in that they aim to create employment and economic growth, a cleaner environment, better transport, safe neighbourhoods and affordable homes. One of the key considerations of Shaping Western Sydney is that the westward expansion of Sydney should not cross the Hawkesbury River, which is consistent with the Metropolitan Strategy which aims to recognise and protect the valued rural and resource lands extending to the Nepean–Hawkesbury. The proposed contained expansion of Pitt Town represent only a minor alteration to the urban footprint established by LEP 145 and would not be inconsistent with this objective, or the strategy in general.

#### 5.2.12 Section 117 Directions

There are several Ministerial Directions under Section 117 of the Environmental Planning and Assessment Act, 1979 that are specifically relevant to this particular study for Pitt Town and these are briefly described below.

**Direction 1.2 Rural Zones** –The objective is to protect the agricultural production value of rural land. The Direction generally requires draft LEPs to maintain rural zones, not increase permissible densities and control access of traffic generating development from classified roads. A draft LEP may be inconsistent if justified by a strategy, and environmental study, regional or sub-regional strategy prepared by the Department of Planning or is of minor significance.

**Direction 2.1 – Environmental Protection Zones** - The objective is to protect and conserve environmentally sensitive areas. The Direction generally requires draft LEPs to include provisions that protect and conserve environmentally sensitive areas that do not

reduce standards of existing environmental protection zones including subdivision controls. A draft LEP may be inconsistent if justified by a strategy, and environmental study, regional or sub-regional strategy prepared by the Department of Planning or is of minor significance.

**Direction 2.3 – Heritage Conservation** - The objective of the direction s to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance. The Direction requires a draft LEP to contain provisions that facilitate the conservation of items of such significance. A draft LEP may be inconsistent where the Director-General of the Department of Planning is satisfied that the draft LEP complies with the Heritage Act, 1977 and the heritage item is conserved through an existing or draft EPI or legislation, or if the inconsistency is of minor significance.

**Direction 2.4 – Recreation Vehicle Areas** - The objective is to protect sensitive land or land with significant conservation values from adverse impacts from recreational vehicles. A draft LEP shall not enable land to be development for the purpose of a recreational vehicle area, in this instance where the land is within an environmental protection zone.

**Direction 3.1 – Residential Zones** - The objective is to encourage housing variety and choice, make efficient use of existing infrastructure, and minimise the impact of residential development on environment and resource land. A draft LEP is to include provisions that will encourage the provision of housing that will broaden housing choice and location of housing, make more efficient use of infrastructure, reduce consumption of land for urban development on the urban fringe, be of good design and contain provisions that will not enable land to be developed until adequately serviced. Further, a draft LEP may not reduce the permissible residential density of land. A draft LEP may be Inconsistent where justified by a strategy, and environmental study, regional or sub-regional strategy prepared by the Department of Planning or is of minor significance.

**Direction 3.4 – Integrated Land Use and Transport** - The objective is to ensure that subdivision and street layouts achieve planning objectives in relation to improving access to housing, jobs and services by walking, cycling and public transport; increasing choice of available transport and reducing dependence on cars; reducing travel demand generated by the development and distances travelled and; supporting public transport. A draft LEP is to be consistent with the aims, objectives and principles of *Improving Transport Choice – Guidelines for planning and development (DUAP 2001)* and *The Right Place for Business and Services. – Planning Policy (DUAP 2001)*. A draft LEP may be inconsistent if justified by a strategy, and environmental study, regional or sub-regional strategy prepared by the Department of Planning or is of minor significance.

**Direction 4.1 – Acid Sulphate Soils** - The objective is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulphate soils. In preparing a draft LEP for land identified on the Acid Sulphate Soils Planning Maps consideration must be given to the *Acid Sulphate Soils Planning Guidelines* adopted by the Director-General of the Department of Planning. A draft LEP shall not propose an intensification of land uses on land identified on the Maps, unless an assessment of the land has been undertaken. A draft LEP may be inconsistent if justified by a strategy or is of minor significance.

The proposed rezoning is considered to be consistent with the above directions. Specific issues are addressed later in this submission.

**Direction 4.3 – Flood Prone Land** - The objectives are to ensure that the development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the *Floodplain Development Manual 2005*; and to ensure that the provisions of a LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land. A draft LEP is to contain provisions that give effect to the above documents. A draft LEP shall not rezone

land within the flood planning areas from Special Use, Special Purpose, Recreation, Rural or Environmental Protection Zones to a Residential, Business, Industrial, Special Use or Special Purpose Zone. Further, a draft LEP shall not contain provisions which permit development in floodways, permit development that will result in a significant flood impacts to other properties; permit a significant increase in the development of that land, are likely to result in a substantially increased requirement for government spending on flood mitigation measures, infrastructure or services or permit development to be carried out without development consent, except development for the purposes of agriculture, minor development or other specified works. A draft LEP may be inconsistent if in accordance with a floodplain risk management plan prepare in accordance with the principles and guidelines of the *Floodplain Development Manual 2005*.

**Direction 4.4 –Planning for Bushfire Protection** - The objectives are to protect life, property and the environment from bush fire hazards by discouraging the establishment of incompatible land uses in bush fire prone areas, and to encourage sound management of bush fire prone areas. In preparing a draft LEP, the council is required to consult with the Commissioner of the NSW Rural Fire Service and take into account any comments so made, have regard to *Planning for Bushfire Protection 2006*, ensure that bushfire hazard reduction is not prohibited within the APZ. Where development is proposed, A draft LEP is comply with various provisions relating to Asset Protection Zones, access roads, water supply, minimising interfaces with the hazard and introduce controls of the placement of combustible materials in the Inner Protection Area. A draft LEP may be inconsistent where written advice has been obtained from the Commissioner of the NSW Rural Fire Service raising no objection to the draft LEP.

The proposed draft LEP is considered to be consistent with the above directions.

#### 5.2.13 Planning Circulars

##### **PS 05-008 – Changes to Parts 3 and 4 of the EP&A Act**

Planning Circular PS 05-008 provides that in order to achieve a single plan for each local government area, both the Department and councils need to direct effort to strategic planning and preparation of new principal instruments and that councils should avoid, where possible, resolving to prepare minor amendments to existing plans. The Circular notes that the intention of this is not to impose a moratorium on amendments to LEPs, but to implement a rational approach to managing available resources, to achieve planning reform objectives and good planning outcomes. It is recognised, that there will be instances where it is necessary to prepare a draft amending plan in advance of the new Standard LEP such as:

- the amendment is to facilitate an employment generating activity;
- existing provisions jeopardise or undermine State government policy;
- the amendment implements an agreed strategic direction for development in the area, including land release or preservation of strategic corridors; and
- matters where the council has completed strategic work and delays in implementing recommendations would be unreasonable and inefficient.

Any LEP amendment will need to be consistent with the Standard LEP as far as possible to facilitate consolidation into the new instrument at a later date. Councils should determine exceptions on a case by case basis in consultation with the Department.

In respect of DCPs, PS 05-008 indicates that under Section 74D of EP&A Act, 1979, an EPI may require a DCP to be prepared for a site before development may be carried out. The provision also provides for land pooling, by allowing an EPI to specify the number of owners within a defined area, who must jointly prepare a DCP before development can be carried out. DCPs can be prepared by, or on behalf of, an owner of land and the applicant

may also request that a staged development application be lodged as an alternative to preparing a DCP, where this is required by an EPI.

#### **PS 06–005 – Local Environmental Plan Review Panel**

Planning Circular PS 06-005 sets out the role of the new LEP review panel and provides advice on procedures relating to, amongst other things, information that is required from council in notifying the Department of a decision to prepare a draft LEP (under Section 54(4) of the Act). For “Precinct” LEPs, which involve part of a LGA and include a review of general and specific planning policy and provisions, the Circular sets out a pro forma evaluation sheet containing the following criteria:

- “1. Will the LEP be compatible with agreed State and regional strategic direction for development in the area (eg land release, strategic corridors, development within 800 metres of a transit node)?*
- 2. Will the LEP be consistent with agreed centres and sub-regional planning policy for development in the area?*
- 3. Is the LEP located in a global/regional city, strategic centre or corridor nominated within the Metropolitan Strategy or other regional/subregional strategy?*
- 4. Will the LEP facilitate a permanent employment generating activity or result in a loss of employment lands?*
- 5. Will the LEP facilitate the provision of public transport?*
- 6. Will the LEP implement studies and strategic work consistent with State and regional policies?”*

An evaluation of the proposed rezoning against these criteria is provided below at **Section 12**.

### **5.2.14 Regional Environmental Plans**

#### **SREP 20 – Hawkesbury-Nepean River (No 2 – 1997)**

Sydney Regional Environmental Plan No 20 — Hawkesbury-Nepean River (SREP 20) applies to the Hawkesbury Local Government area. The aim of the Plan is to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context.

Part 2 of the plan sets out considerations, policies and strategies that must be taken into consideration for the preparation of an environmental planning instrument, development control plan or the assessment of an application for development. Part 3 of the SREP contains the development controls that are imposed by the plan and identifies types of development that are of particular concern due to their potential impacts.

The Map to SREP 20 identifies an area west of Bathurst Street and to the north of Hall Street as an area of local scenic significance. The Plan also identifies Pitt Town Lagoon and Longneck Lagoon, which both receive water shed from the study area, as significant wetlands of the Hawkesbury-Nepean River Valley. Scenic quality and heritage issues are addressed later in this report.

The specific planning policy and strategies contained in clause 6 of SREP 20 relating to agriculture/aquaculture and fishing are addressed in Section 12 of the EA report.

### **5.3 Integrated Development**

Section 91 of the EP&A Act sets out matters requiring approvals other than development consent (integrated development). Section 75U of the EP&A Act provides that for a project

approved under Part 3A of the EP&A Act, the matters covered in s91 do not require an authority.

Even if a project is approved under Part 3A, the relevant matters will still require to be assessed. For the proposed Concept Plan, the following authorities would be required if the project was not a Major Project and some investigations might be required to be undertaken prior to the Project Approval:

- Fisheries Management Act 1994, in relation to works associated with the boat ramp and car parking within 40 metres of the Hawkesbury River. Concept plans and design information is provided in Appendix C and an Aquatic Habitat Survey is included in Appendix I;
- National Parks and Wildlife Act 1974, in relation to destroy or damage a relic or Aboriginal place. Copies of relevant reports are included in Appendix O;
- Rural Fires Act 1997 in relation to that part of the site which is defined as bushfire prone. Parts of Bona Vista precinct are defined as bushfire prone and a Bushfire Hazard Assessment is attached a Appendix J. The remainder of the study is not defined as bushfire prone.
- Water Management Act 2000 in relation to excavation within 40 metres of a river. Concept plans and design information is provided in Appendix C.

## **5.4 Local Matters**

### **5.4.1 Hawkesbury LEP 1989**

In order to accommodate the proposed development, the map attached to HLEP 1989 will require to be amended to reflect the lot sizes and the new extent of development as described in this EA. The need and justification for a rezoning is discussed in **Section 12**.

## **6 Consultation**

The following consultations have been carried out, mainly in relation to the CW LES and the DFP Environmental Investigation dated August 2006.

### **6.1 Hawkesbury City Council**

Hawkesbury City Council has been closely involved with the project since JPG commenced action to rezone the site. Council has previously resolved to apply for a Section 54 Certificate to prepare a draft LEP for the site and has undertaken an assessment of the DFP Environmental Investigation upon which this EA is based.

Council also prepared LEP amendment No 145 and undertook extensive consultation, including public consultation, during the preparation of the CW LES and the LEP Amendment. A copy of a letter from Council to the then Department of Infrastructure Planning and Natural Resources outlining the consultation is attached as **Appendix U**.

### **6.2 NSW Rural Fire Service (RFS)**

The RFS provided comment to Council during preparation of the CW LES.

### **6.3 Department of Water and Energy (DWE) and Department of Environment and Climate Change (DECC)**

The former Department of Environment and Conservation were involved in informal consultations during the preparation of the DFP Environmental Investigations.



The former Department of Land and Water Conservation also provided comment during preparation of the CW LES.

**6.4 Hawkesbury Nepean Catchment Management Authority**

There has been no consultation to date with the HNCMA. Consultation is proposed during exhibition of the Concept Plan – refer to **Section 6.13**.

**6.5 NSW State Emergency Services (SES)**

The SES prepared a Flood Emergency Risk Management Analysis (Revision 1 dated April 2003) and was consulted during the preparation of the DFP Environmental Investigation.

**6.6 NSW Ambulance Service, Police and Fire Brigades**

The NSW emergency services were consulted during preparation of the CW LES.

**6.7 Railcorp**

Railcorp (Rail Estate) provided a response to the CW LES.

**6.8 NSW Department of Primary Industries (DPI)**

The DPI attended workshops run by Hawkesbury City Council during the preparation of the CW LES and also provided written comments.

**6.9 Heritage Office**

The Heritage Office provided a response to the CW LES and was also involved in informal discussions during preparation of the DFP Environmental Investigation.

**6.10 Utility Providers**

Sydney Water, Telstra, Hawkesbury City Council, Alinta and Integral Energy have all been consulted. Construction of trunk mains to service the first stage of development on Bona Vista is underway and these mains have capacity to cater for the proposed development. Further details are provided in **Section 3.2.4**,

**6.11 Roads and Traffic Authority (RTA)**

The RTA has been provided with a copy of the CW LES and has commented on a resulting TMAP prepared by Christopher Stapleton and Associates.

**6.12 Community and Aboriginal Community**

The Pitt Town and district community were extensively consulted during preparation of the CW LES, as well as in the lead up to Council requesting a s54 Certificate.

The Aboriginal community was involved in the archaeological investigations. These consultations were undertaken in accordance with *Interim Community Consultation Requirements for Applicants* (2004), which were the appropriate guidelines at that time. No fresh investigations requiring compliance with the “*Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*” as required by the DGRs. have been undertaken for this EA.

### 6.13 Consultation Strategy

The CW LES has been the subject of extensive consultation and exhibition. The CW LES considered a range of development scenarios, including options for development of 495, 710, 730 and 1405 new lots over the LES study area. These scenarios straddled the number of allotments proposed under this Concept Plan.

The DFP Environmental Investigation has been the subject of informal consultations with relevant government agencies, as noted above, but has not been publicly exhibited.

Although the current EA is closely based on the DFP Environmental Investigation and that study was discussed with some government agencies, it will require fresh notification and public exhibition. Because the level of previous consultation, it is suggested that no further consultation is required prior to the Concept Plan being placed on exhibition. During the exhibition period, the proponent proposes to consult with each of the nominated authorities, with relevant comments being incorporated into the Preferred Project.

## 7 Urban Design and Built Form

### 7.1 Hawkesbury Development Control Plan (DCP)

The DCP combines the various policies and guidelines affecting development proposals in the Hawkesbury Local Government Area into one document.

Part A outlines requirements for submission of applications and council's notification policy. Part B specifies Exempt and Complying Development. Part C outlines General Guidelines for development regarding matters such as landscaping, car parking, signs, soil and sediment control, bushfire prone land, energy efficiency and effluent disposal. Part D outlines guidelines for specific development types including residential, industrial, subdivision and landfill, amongst other things.

Part E sets out provisions relating to specific areas and Chapter 4 of this Part relates to Pitt Town. This chapter sets out guidelines relating to desired character, land use, lot design, street design, bus and cycle routes, community facilities, public open space and recreation, environmental protection, heritage conservation, stormwater management and utility services. Chapter 4 also sets out development standards in respect of building envelopes, building design, landscaping and fencing. The aspects of the Pitt Town Chapter of the DCP, which are relevant to this EA are detailed below.

#### 7.1.1 Desired Future Character

The desired Future Character for Pitt Town is stated in the DCP as follows:

*"Pitt Town provides a relaxed and comfortable lifestyle with a rural village character. New development is to maintain a rural village character with generous and landscaped building setbacks and open streetscapes within a modified grid urban structure. New development will have building designs and materials compatible with the rural setting and traditional housing forms. The public domain is to reinforce the rural character of Pitt Town."*

The DCP also includes the following general principles:

- *to provide a clear planning document that outlines requirements for development which meets community expectations and addresses the key environmental planning issues of the city.*
- *provide a clear framework for subdivision and development;*
- *ensure development adopts sound urban design and environmental planning practices;*

- ensure the orderly and proper development of the area;
- ensure that new development embraces water-sensitive urban design principles;
- ensure that new development contributes to the rural character;
- protect and enhance the important cultural heritage values;
- protect and enhance the important landscape and scenic values;
- conserve and manage areas of environmental significance;
- provide adequate physical and community infrastructure; and
- protect the health and safety of existing and future residents.

### 7.1.2 Land Use

Part 4.4 of the DCP relates to land use in Pitt Town and provides that the use of land must comply with the Pitt Town Development Plan presented as Figure E4. 2 in the DCP, reproduced here as **Figure 6**.

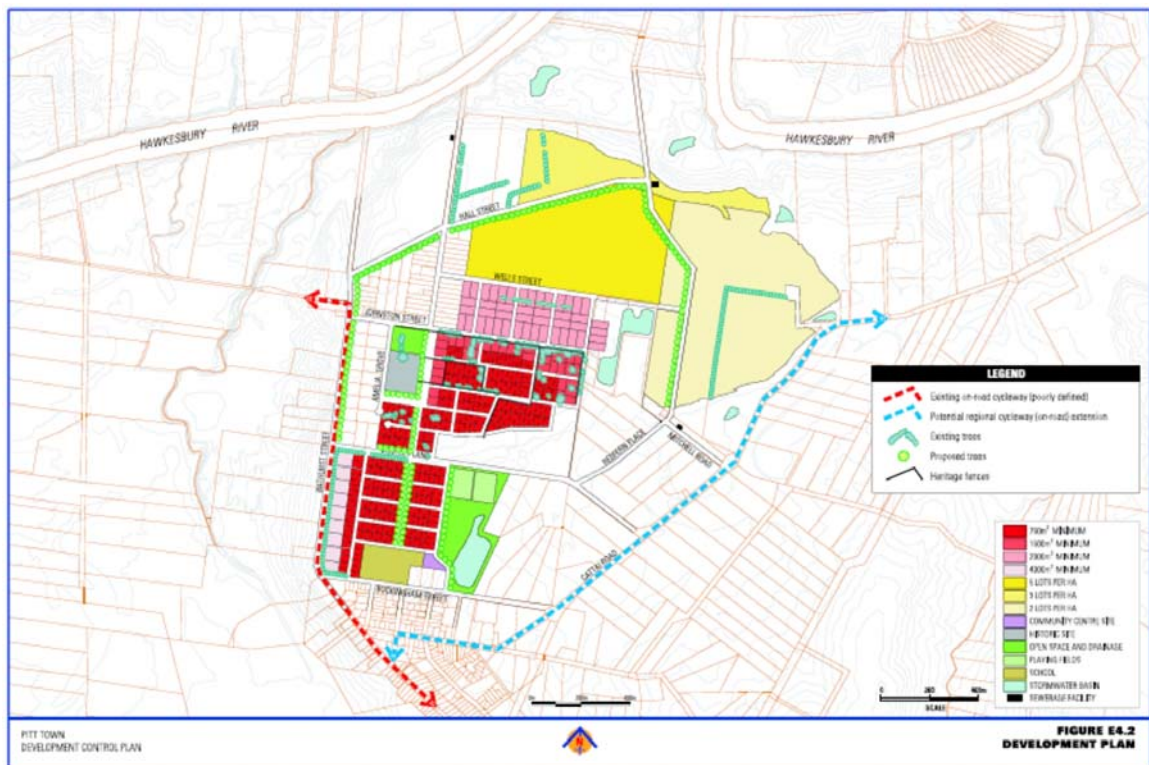


Figure 6 – DCP Figure E4.2 – Development Plan

### 7.1.3 Lot Design

Part 4.5.2 sets out the controls applicable to Lot Design in Pitt Town and states:

- Lot design must generally comply with the Pitt Town Development Plan.
- Lot design must comply with the provisions of Hawkesbury Local Environmental Plan 1989.
- Lot design must retain historic tree plantings and fence lines as shown in the Pitt Town Development Plan.

- d) Lot sizes and frontages must meet the requirements set out in **Table 4** below. The development precincts are shown on Figure E4.3.

Table 4 – DCP Table E4. 1: Minimum Lot Sizes and Frontages

Zone	Precinct	Minimum lot size	Minimum lot frontage
Housing	A	750m <sup>2</sup>	18m
Rural Housing	B	4000m <sup>2</sup>	40m
	C	2000m <sup>2</sup>	28m
	D	1500m <sup>2</sup>	25m
	E	3750m <sup>2</sup>	38m
	F	2400m <sup>2</sup>	30m

This part of the DCP also provides additional controls for development in the Precincts D, E and F, for which detailed subdivision patterns are not shown on the Development Plan. These additional controls generally pertain to the provision of street access to lots, consideration of existing lot boundaries, development and vegetation. The development precincts referred to in the DCP are displayed in **Figure 7** below.

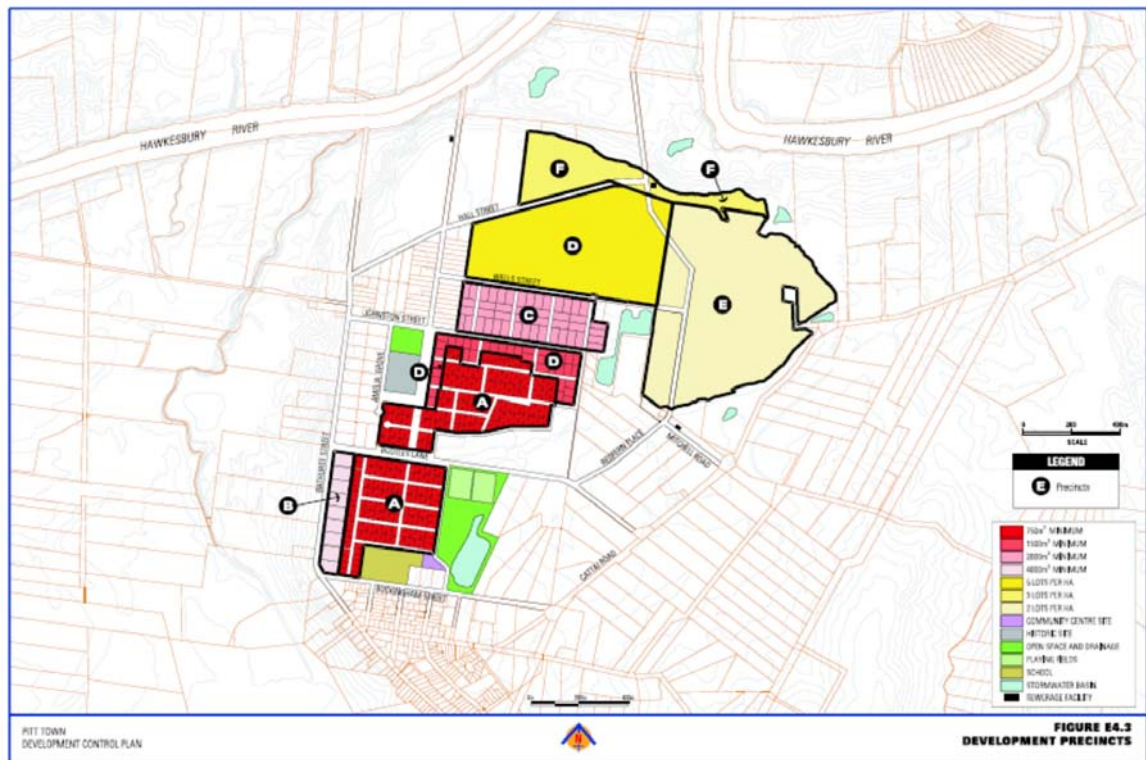


Figure 7 – DCP Figure E4.3 – Development Precincts

#### 7.1.4 Street Design

Part 4.6 sets out the road hierarchy for Pitt Town, which is reproduced below as **Figure 8**:



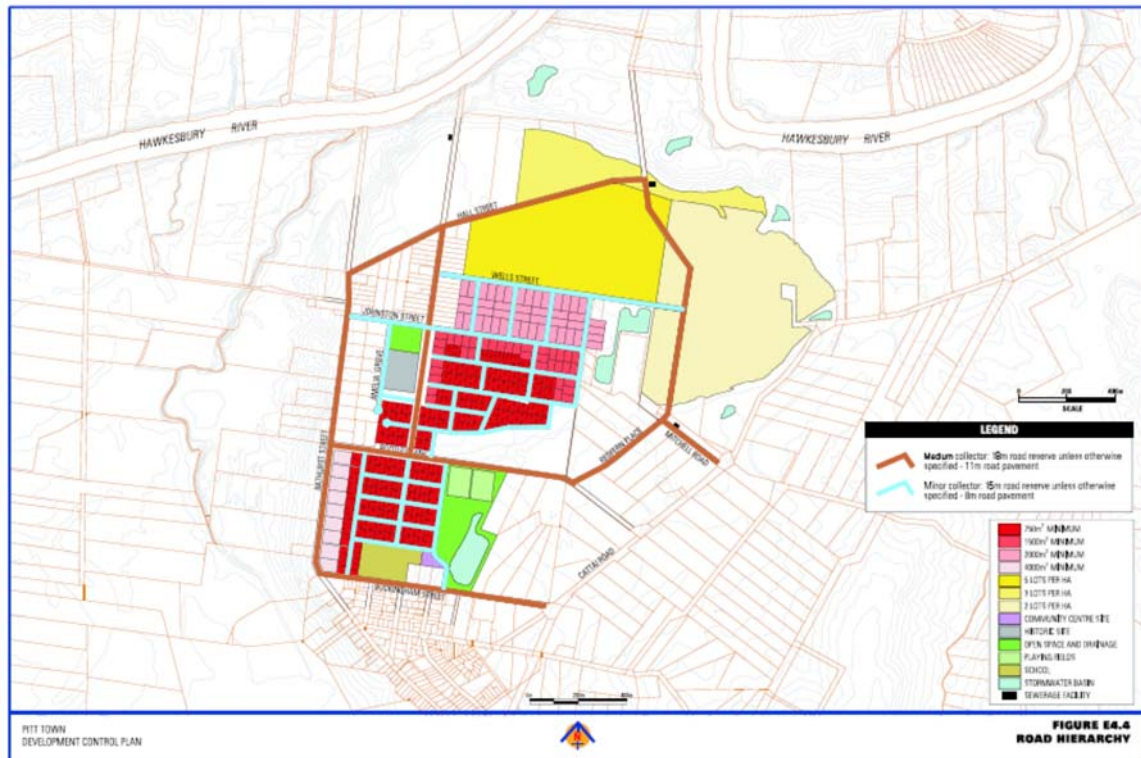


Figure 8 – DCP Figure E4.4 – Road Hierarchy (Amended as per Council Motion)

#### 7.1.5 Bus and Cycle Routes

Part 4.7 of the DCP states that Pitt Town is serviced by a local bus route connecting with regional bus routes and to Windsor and Mulgrave train stations. The Rules to this Part require that a local bus service is to be provided through the development area when feasible by contributions under the Contributions Plan.

#### 7.1.6 Community Facilities

Part 4.8 of the DCP requires that a community centre is to be provided on the approximately 4000 square metre site indicated on the Pitt Town Development Plan by contributions under the Contributions Plan.

#### 7.1.7 Public Open Space and Recreation

Part 4.9 requires that public open space in Pitt Town is to be set aside as indicated on the Pitt Town Development Plan. This includes a 1.32 hectare park on the corner of Johnston Street and Amelia Grove ("Bona Vista" Park) and a 9.84 hectare area between Bootles Land and Buckingham Street ("Fernadell" Playing Fields) for public recreation and stormwater management purposes. This latter area is to contain a minimum of two playing fields with sufficient parking and other ancillary facilities such as a children's playground and public toilets. Furthermore, subject to agreement between Council and potential developers, a greater area (than 9.84 hectares) of active recreation land and ancillary facilities may be provided at an alternative location within the Pitt Town locality.

#### 7.1.8 Building Envelopes

Part 4.14 relates to building envelopes and Tables E4.4 and E4.5 set out the setback and site coverage requirements for the various Precincts and lot sizes in Pitt Town as follows:

Table 5 - DCP Table E4. 4: Minimum Building Setback Requirements

<i>Precinct</i>	<i>Minimum lot size</i>	<i>Minimum front setback</i>	<i>Minimum rear setback</i>	<i>Minimum side setback</i>
<i>North-south orientated lots</i>				
<i>A</i>	<i>750</i>	<i>8m</i>	<i>8m</i>	<i>3m one side 1m other side</i>
<i>B</i>	<i>4000</i>	<i>20m</i>	<i>20m</i>	<i>10m both sides</i>
<i>C</i>	<i>2000</i>	<i>12m</i>	<i>15m</i>	<i>5m one side 3m other side</i>
<i>D</i>	<i>1500</i>	<i>10m</i>	<i>15m</i>	<i>5m one side 3m other side</i>
<i>E</i>	<i>3750</i>	<i>18m</i>	<i>20m</i>	<i>10m both sides</i>
<i>F</i>	<i>2400</i>	<i>15m</i>	<i>20m</i>	<i>5m both sides</i>
<i>East-west orientated lots</i>				
<i>A</i>	<i>750</i>	<i>7m</i>	<i>7m</i>	<i>4m north side 1m south side</i>
<i>B</i>	<i>4000</i>	<i>20m</i>	<i>18m</i>	<i>10m both sides</i>
<i>C</i>	<i>2000</i>	<i>12m</i>	<i>12m</i>	<i>8m north side 3m south side</i>
<i>D</i>	<i>1500</i>	<i>10m</i>	<i>12m</i>	<i>8m north side 3m south side</i>
<i>E</i>	<i>3750</i>	<i>18m</i>	<i>15m</i>	<i>10m both sides</i>
<i>F</i>	<i>2400</i>	<i>15m</i>	<i>12m</i>	<i>8m north side 5m south side</i>

Table 6 – DCP Table E4. 5: Maximum Site Coverage

<i>Precinct</i>	<i>Minimum lot size</i>	<i>Maximum site coverage</i>
<i>A</i>	<i>750</i>	<i>45%</i>
<i>B</i>	<i>4000</i>	<i>20%</i>
<i>C</i>	<i>2000</i>	<i>30%</i>
<i>D</i>	<i>1500</i>	<i>40%</i>
<i>E</i>	<i>3750</i>	<i>25%</i>
<i>F</i>	<i>2400</i>	<i>35%</i>

Figure E4.17 sets out the controls for building height, including set backs for second storeys. Figure E4.17 is reproduced here as **Figure 9**.

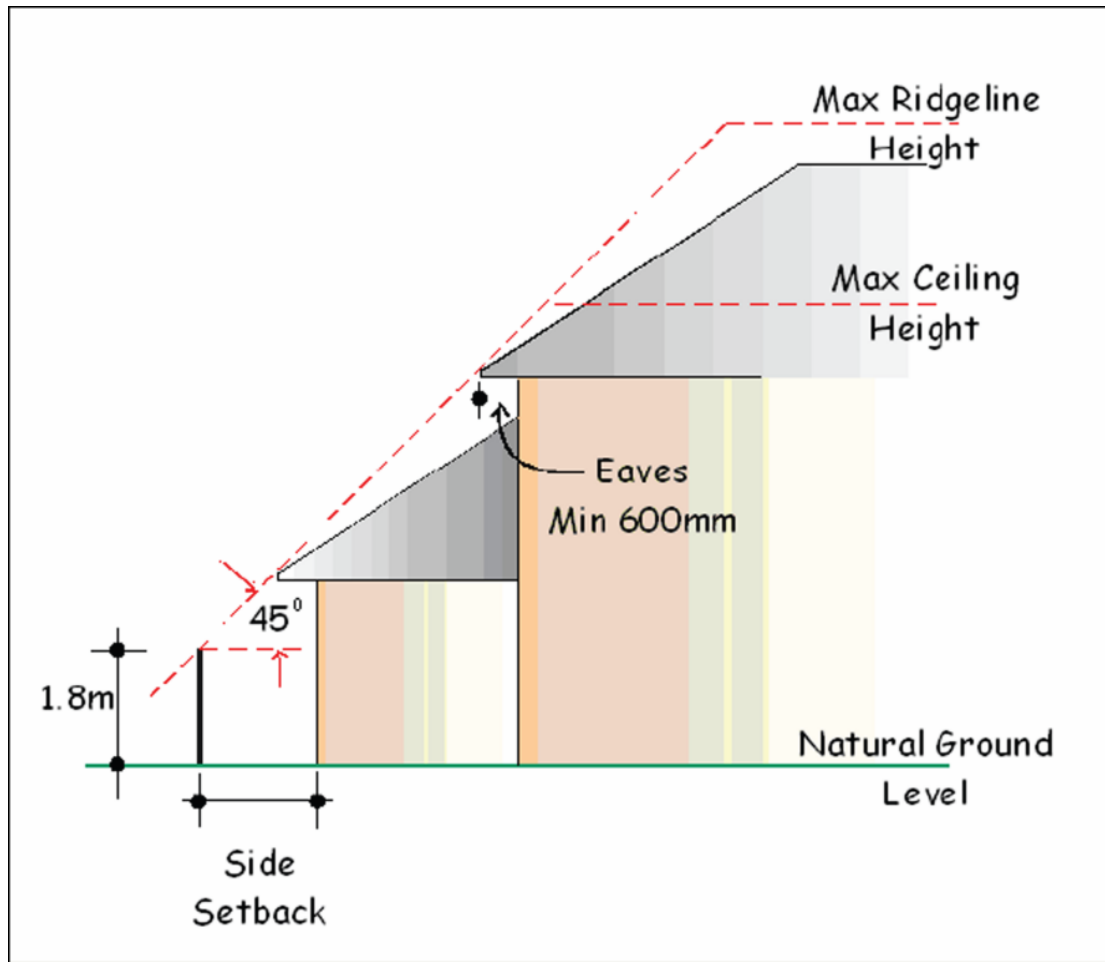


Figure 9 – DCP Figure E4.17 Diagrammatic Plane Representation of Building Height

#### 7.1.9 Proposed Changes to Hawkesbury DCP

It is proposed that the DCP be modified to incorporate Design Guidelines for future housing. Example Guidelines for a 750m<sup>2</sup> lot, including a comparison to the current draft DCP requirements, are attached as **Appendix V**. It is proposed to develop controls for all lot sizes, with variations to account for the requirements of each type of lot.

Other elements of the DCP will require to be amended to accommodate the proposed development, but these amendments are relatively minor.

The changes generally include:

- Amending the boundary of the Pitt Town Residential Precinct as proposed in this EA. This will involve replacing Figures 4.1, 4.2, 4.3, 4.4 and 4.11 of the DCP;
- Amending the density controls and lot sizes to correspond with the development as proposed in this EA. Table E4.1 will require to be replaced;
- Amending Figure E4.12 of the DCP to show the proposed configuration of the Community Centre;
- Amending the site coverage, set back provisions and building details of the DCP for the full range of proposed lots in a manner similar to that shown in **Appendix V**.

Proposed amendments to the DCP will be submitted with the Project Application.

#### 7.1.10 Proposed Exempt and Complying Controls

A new set of exempt and complying provisions of HELP 1989 will be developed to complement the proposed changes to the DCP as noted in **Section 7.1.9**. These changes

will replace the existing exempt and complying provision of HLEP 1989 and will accompany the first Project Application.

## **7.2 Subdivision Design, Character and Landscaping**

### **7.2.1 Subdivision Layout and Road Design**

The subdivision layout shown in **Figure 5** is based on similar concepts to the layout adopted for the Pitt Town DCP and includes the following features:

- The rectangular grid pattern is retained;
- The historical fence lines previously identified are preserved;
- Larger lots are retained along the existing roads (Bathurst Street, Bootles Lane, Johnston Street, Hall Street and Punt Road);
- There will be no direct access to Bathurst Street or Punt Road from the adjoining lots;
- The heritage of the area is recognised and areas have been set aside for conservation;
- Substantial areas of open space will be provided along the Hawkesbury River for embellishment by others;
- Ample provision is made for walking and cycling;
- The Plan provides for a bus route;
- The village structure is extended in a logical fashion. Larger lots are provided along the northern fringe of the urban area as a soft edge to the village;
- Provision is made for a community centre and playing fields in close proximity to the expanded public school; and
- All proposed lots have flood free access (above the 100 year flood level) and have an emergency evacuation route leading uphill from approaching flood waters.

The proposed layout plan is considered to adequately reflect the opportunities and constraints identified in this study and in the CW LES.

### **7.2.2 Landscaping**

The landscaping to be provided as part of the Pitt Town development will compliment the environmental quality of Pitt Town and create consistent and attractive streetscapes. Significant trees and the historic windbreaks throughout the area will be retained and recognition of the previous land uses will be acknowledged by appropriate species selection.

Water use for landscaping will be minimised through appropriate species selection.

Landscape plans, including details of planting themes for each Precinct, proposals for each road type and species will be provided with the Project Application.

### **7.2.3 Access to River foreshore**

Approximately 20 hectares of land fronting the Hawkesbury River will be transferred to Hawkesbury City Council as public open space.

Access to the future public land will be available via Punt Road, Hawkesbury Road extension and Hall Street, thus assuring excellent access to this public asset.

JPG intends to construct a boat ramp with car and boat trailer parking at the end of Punt Road, but no embellishment work is included in this project.



#### 7.2.4 Safer by Design Guidelines

The Crime Prevention through Environmental Design Guidelines has been considered in the design of the subdivision. The roads and public footpaths are designed to meet Hawkesbury City Council's standards. The road pattern is regular providing good sight lines. The majority of the allotments are designed to have full frontage to the street. These attributes create a subdivision layout that maximises opportunities for natural surveillance.

The pedestrian and cycleway connections provided through the subdivision to the existing established residential areas to the south will formalise public access and encourage pedestrian activity through the subdivision to the Hawkesbury River and to Pitt Town village. Whilst pedestrian volumes are not high, the defined routes will create a level of pedestrian activity to aid in natural surveillance.

All streets will be provided with street lighting. Where practical, roads will front areas of open space, thus improving surveillance.

##### 7.2.4.1 Mitigating Measures

Landscaping plans, including details of planting themes for each Precinct, proposals for each road type and species will be provided with the Project Application.

The Project Application will need to incorporate pathways and cycleways as described above.

## 8 Environmental Assessment

LEP 145 was based on the CW LES as well as further detailed investigations, mainly related to the JPG land. The extent of the additional work has varied, with for example fully detailed investigations being complete on Bona Vista such that Construction Certificate plans are approved, while for the Cattai Precinct, the only investigation has been the CW LES.

This section of the EA considers the level of investigation and assesses the proposed development for each precinct.

### 8.1 Biodiversity

#### 8.1.1 Connell Wagner LES

##### 8.1.1.1 Flora

The CW LES found:-

- Remnants of two ecological communities; Shale Gravel Transition Forest and Shale Plains Woodland, both listed as endangered ecological communities under the TSC Act. The remnants were described as being disturbed by farming activities;
- Of the locally occurring threatened species, only *Acacia bynoeana*, *Acacia pubescens*, *Dillwynia tenuifolia*, *Grevillea*, *Juniperina*, *Sub Juniperina* and *Micromyrtus minutiflora*, *Persoonia newtans* and *Pultenaea parviflora* are considered to have the potential to occur on the study area;
- Only *Acacia pubescens* was located in the vicinity of, but outside the study area;
- The study area contains large areas of low ecological value, which has been cleared in the past and contain few conservation values; and
- The study area was also considered to contain some areas of moderate and high ecological value occurring within the Bona Vista property.

Anne Clements & Associates Pty Ltd (ACA) undertook a supplementary investigation and produced a report dated 30 April 2003. This report found:-

- Vegetation in the south-east of the Bona Vista site, generally corresponding to the area mapped by Connell Wagner as being of high ecological value and considered to meet the criteria for shale gravel transition forest. This community is degraded and will require assisted natural regeneration in order to be a self sustaining ecological community in the long term.
- ACA also found several *Acacia pubescens* within the area of high ecological value;
- The vegetation in the north-east part of the Bona Vista property, generally corresponding to the area mapped by Connell Wagner as being of no ecological value, was not considered to meet the criteria for shale gravel transition forest and was considered unlikely to regenerate so as to be self-sustaining.

The boundary of residential development on the map for LEP Amendment No. 145 excluded development from the area mapped by Connell Wagner as being of high ecological value. No other areas were set aside from development to preserve flora.

No further investigation has been undertaken or is considered necessary within the study area of the Connell Wagner LES, since the boundary of residential development is considered to adequately accord with the findings of the CW LES and the supplementary studies by ACA. The additional density now proposed will have no impact on the vegetation to be retained.

ACA has confirmed that the investigation remains current and relevant to this proposal – refer to **Appendix G**.

#### **8.1.1.2 Fauna**

The Connell Wagner LES found:-

- 16 of the 28 threatened species known to occur in the local area were found to have habitat within the study area;
- Only 2 of these threatened species, the Eastern False Pipistrelle (and *Falsasstreelus tasmaniensis*) and the Large Land Snail (*Meridolum corneopirens*) were located in the study area; and
- Any future development should be required to protect and enhance vegetation providing habitat for threatened species.

The map associated with LEP Amendment No. 145 adequately addresses retention of the vegetation providing habitat for threatened flora species and no additional work is considered to be required within the Connell Wagner LES study area. The increased density currently proposed will not impact on the retention of habitat.

#### **8.1.2 Blighton and part Cleary Precincts**

##### **8.1.2.1 Flora**

Anne Clements & Associates (ACA) was engaged to investigate the flora characteristics of that part of the study area outside the CW LES study area; i.e. land below RL 20 to the north of Hall Street. A copy of the ACA report is attached as **Appendix G**.

ACA concluded as follows:

- The Site has a long history of disturbance from agricultural activities, with settlement of the Pitt Town Area in the early 1800s and the earliest aerial photograph of the Study Area (1947) showing it almost completely cleared of tree vegetation;
- A total of 111 species (32 native and 79 exotic) were recorded in the Study Area;

- No Endangered Ecological Communities listed on the schedules of the EP&BC Act or the TSC Act were recorded;
- No threatened species listed on the EP&BC Act or the TSC Act were recorded;
- Ten species considered regionally vulnerable, including one species considered to be of particular significance in Western Sydney (James *et al.* 1999) were recorded;
- Twelve noxious weeds were recorded.

The findings of the ACA report have been taken into account in the design of the open space areas, particularly the riparian corridors, where existing vegetation will be retained and reinforced.

ACA was asked to confirm that the report attached as **Appendix G** remains valid. ACA responded by letter dated 7 November 2007 and confirmed that the report is valid and relevant to the current proposal. A copy of the letter is attached in **Appendix G**.

#### 8.1.2.2 Fauna

Ambrose Ecological Services (AES) was engaged to assess potential impacts of the proposed development on fauna species in the area to the north of Hall Street outside the CW study area. A copy of the AES report is attached as **Appendix H**.

AES found:

- Much of the site is already disturbed and/or cleared, but there is remnant vegetation in the riparian zone along the banks of the Hawkesbury River and this should be retained and enhanced;
- There will be no impacts on wildlife corridors if a 40 metre wide riparian zone is retained and reinforced;
- No threatened species were recorded, but there is potential for 12 threatened species to occur. Seven part tests conclude that the proposed development would not significantly impact on these species, provided the recommendations in the AES report are implemented;
- One nationally vulnerable species may potentially occur on the site and two nationally endangered species may very occasionally occur. An assessment under the EPBC Act concluded that there will be no significant impact on these species;

In addition to the recommendation for retention of the riparian zone, AES made two other recommendations relating the design of the subdivision:

- Where possible, retain as many remnant canopy trees on other parts of the subject site by incorporating them into the subject site's landscape plan. This will help maintain the natural tree heritage of the locality, provide habitat for urban-tolerant native fauna species, and help maintain the local gene pool for CPW tree canopy species.
- Maintain a buffer zone of at least 40 metres in width from the top of the bank of the Hawkesbury River along the northern boundary of the subject site. This will help protect the Hawkesbury River and its associated native fauna from the direct impacts (e.g. bank erosion) and indirect impacts (e.g. weed invasion, sediment and excessive water runoff) of the proposed subdivision.

These recommendations have all been adopted in design of the development and the landscaping. Other recommendations related to construction of the development (i.e. minimal disturbance, check for nests when clearing, mulch cleared vegetation etc), which can be addressed at the Project Application stage.

### 8.1.3 Cattai Precinct

The CW LES did not identify any vegetation communities or other threatened species within Cattai Precinct (Fig 3.6 of LES).

The CW LES resulted in rezoning of the Cattai Precinct to permit development at a density of 2 lots per hectare and no unacceptable impacts are likely to result from increasing the density as proposed in this EA.

### 8.1.4 Boat Ramp

An assessment of the boat ramp has been carried out by The Ecology Lab. Their report is attached at **Appendix I**. As stated in Section 5.1.1, there are no threatened species or ecological communities in the vicinity of the study area. In general the study concludes

*“The riparian vegetation within the survey area consisted mainly of exotic grass and weeds (privets and lantana) and dropped off steeply into the river. Bank erosion was minimal due to the extensive cover of couch grass down to the river’s edge. Minimal in-stream aquatic vegetation was present and only located upstream of the boat ramp. The aquatic vegetation included small patches of the introduced plant Elodea, and small patches of Common Rush and Reed. Two dead timber snags were present on either side of the boat ramp.*

*At present, due to the nature of the un-sealed road and dirt car-parking alcove, there is a potential for sedimentation in the immediate vicinity of the river due to run-off and erosion of the boat ramp edge due to car and trailer activities. However, this area of the Hawkesbury River is prone to high turbidity levels anyway (see section 2.2).”*

The study has identified two key threatening process of relevance to the proposal including removal of large woody debris and the degradation of native vegetation. The study recommends measures to mitigate potential impacts associated with the construction and the ongoing operation of the new boat ramp which are itemised in the **Appendix I**. These measures relate to the construction and operational phase of the Project and can be further addressed as part of the Statements of Commitment for the Project application.

### 8.1.5 Mitigation Measures

The Project Application is to include a landscape plan showing retention of as many existing canopy trees as practical within the residential area, taking into account the risks of retaining large native species close to dwellings.

Within the Blighton, Cleary and Thornton Precincts, the Project Plan is to include details of landscaping works to ensure that a 40 metre wide riparian corridor is provided along the Hawkesbury River. The landscaping plan is to ensure retention and regeneration of native species within the riparian corridor.

No specific mitigation measures are required within the Cattai Precinct.

Mitigation measures identified in The Ecology Lab Aquatic Habitat Survey can be adopted as part of the Statements of Commitment for the Project application.

## 8.2 Traffic Management and Access

### 8.2.1 Access and Traffic Impact

Masson Wilson and Twiney (MWT) had previously assessed the traffic impacts of developing 1250 additional lots within the Pitt Town Investigation Area and concluded that if the project included works to improve intersections within Pitt Town and Pitt Town shoulder improvement works (both works included in the State VPA between JPG and the

Minister – refer to **Section 4**), then the additional lots then proposed would have an acceptable impact. A copy of the MWT assessment is attached as **Appendix F**.

MWT has now assessed the impact of the revised yield of 915 lots within the Pitt Town Investigation Area. MWT conclude that the lower lot yields within the Pitt Town Investigation Area as sought in the Concept Plan would generate a lower transport demand than previously assessed and provided that the agreement for infrastructure provision is maintained, the conclusions reached in the Traffic and Transport Assessment (MWT, July 2006) remain valid with regard to traffic and transport demand and infrastructure provision.

#### **8.2.2 Key Connections to Pitt Town and the River**

MWT consider that the proposed layout features good permeability for road users including private vehicles, emergency vehicles, cyclists and pedestrians. As defined by the Pitt Town DCP the existing on-road local cycle path along Bathurst Street is to be upgraded / better defined and extended through Pitt Town.

Both the local bus and bicycle routes through Pitt Town are identified by the Pitt Town DCP. The proposed development as represented in the Concept Plan would facilitate the provision of both the local bus and bicycle routes.

Implementation of the Concept Plan will result in the transfer of an extensive area along the Hawkesbury River foreshore to Council with access provided at Punt Road, Hawkesbury Street and Hall Street. The Concept Plan also proposes a boat ramp and car park at Punt Road.

The combination of the open space and the proposed walking and cycling paths will result in much improved access to the River for both existing and future residents.

#### **8.2.3 Package of Public Transport Measures**

The provision of other infrastructure, including roads and community facilities is under negotiation with the Department of Planning and Council.

#### **8.2.4 Mitigation Measures**

No further mitigating measures beyond the items already included in the State VPA are considered necessary.

### **8.3 Aboriginal and European Heritage**

#### **8.3.1 CW Study Area**

The original work undertaken within the CW study area has been supplemented by additional studies, particularly within the deferred area of LEP Amendment 145. LEP Amendment 145 deferred coverage of Lots 11, 12, 14 and 15, located between Hall Street and the Hawkesbury River at Pitt Town, NSW, on the basis of advice received from the NSW Heritage Office. The deferment was to allow time to develop an understanding of the heritage significance of the subject land as an archaeological site and an historic cultural landscape. It was anticipated at the time that future development potential would be governed by the results of the significance assessment.

#### **8.3.2 Deferred Area (Blighton and part Cleary Precincts)**

The information in this section (**Section 8.3.2**) is attributed to Graham Brooks and Associates.

Additional research and investigation has now been undertaken into the Aboriginal and European archaeological and heritage aspects of the site and these studies have been discussed with the NSW Heritage Office.

The detailed historic documentary research and results of extensive field research, consultations and test excavations, which are contained in the Conservation Management Strategy (CMS), have been drawn from various reports prepared by:

- Archaeological & Heritage Management Solutions, Archaeologists:
  - Lots 11-18 Hall Street Pitt town NSW Aboriginal Archaeological Test Excavation Report, AHMS, February 2004 (**Appendix O**) and
  - Historical Archaeological Assessment Research Design & Test Excavation Methodology for Lots 11-18 in DP1021340 Land East of Punt Rd and north of Hall Street Pitt Town NSW, AHMS June 2005 (**Appendix P**);
- Heritage Landscape and Visual Assessment of Part of the site of Governor Bligh's 'Model Farm' Blighton near Pitt Town, NSW, Mayne-Wilson & Associates, November 2005 – **Appendix R**.

The final outcome of the research into the heritage significance of the subject lands was the preparation of a draft CMS by Graham Brooks & Associates attached as **Appendix S**. The draft CMS, once it is finalised and endorsed by the NSW Heritage Council, will guide the future conservation management and further development of the parcels of land known as Lots 11, 12, 14 and 15.

A copy the following report is also attached as **Appendix T**:

- Pitt Town Cultural Landscape Management of Heritage Values – Report of the Working Group, October 2003;

The general locality has been occupied more or less continuously for several thousands of years by both Aboriginal and European people. Evidence of Aboriginal occupation dates back to earlier than 6000 years ago, whereas European occupation of the area began with exploration of the Hawkesbury region in c1788 and the locality has been a farming settlement since c1794. As will be demonstrated, it has close historical associations with Governors Phillip, Bligh and Macquarie.

In 1807, Bligh, who has the most prominent historical associations with the area, established a "Model Farm" on an Estate that incorporated all of the study area. It was named 'Blighton' and was an extensive farmstead, consisting of at least nine major buildings plus ancillary structures, yards, fenced paddocks, gardens and plantings. The farm was a diverse and integrated endeavour that had its origins within the Model Farm system that developed in Britain during the Eighteenth Century. As such, it combined animal husbandry with broad acre horticulture. Cattle and sheep were grazed, but the farm also had a strong focus upon both dairying and pig breeding.

'Blighton' was farmed under Bligh's direction for only twelve months (in 1807) and land that once formed the Estate has been subdivided many times since then. The study area incorporates most of the northern half of the former Blighton Estate, as depicted upon **Figure 10**.

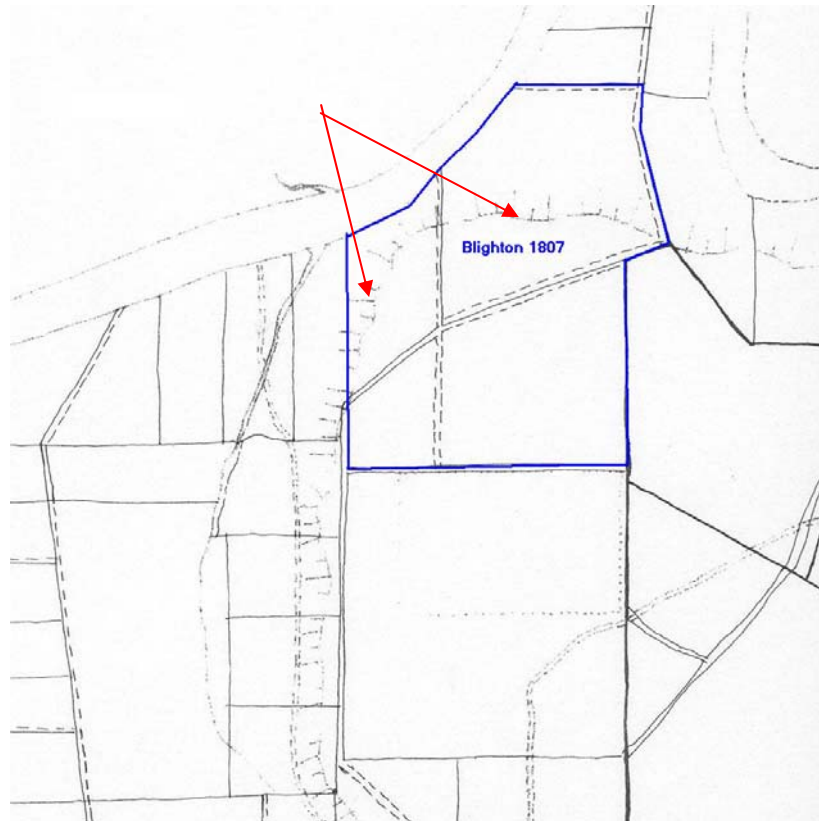


Figure 10 - Plan showing the boundaries of the Blighton Estate.

(Base Map Graham Brooks & Associates P/L August 2003).

The agricultural history of the place since the early Nineteenth Century is characterised by cyclic development and replacement of the field systems and farm buildings. During the late Nineteenth Century the structures associated with Blighton were allowed to decay, as pastoral activity became the focus of land use in the area. During the Twentieth Century, removal of old, redundant features and buildings accelerated with the introduction of orcharding and the subsequent removal of these orchards in the 1980s and 1990s.

Cultural occupation in the locality incorporating the study area therefore has a lengthy history that comprises many discrete phases, each linked by subtle and often unseen associations. Aboriginal people lived there for thousands of years before the British arrived in Australia and the locality was the site of early historic contact between Europeans and Aboriginal people. The lowland was developed in the mid-1790s as the principal food source for the colony at Port Jackson. Bligh's Model Farm sought to improve and extend the rudimentary and inefficient farming practices that characterised agricultural activity to that date.

Subsequent political events saw the farm pass through the hands of a number of tenant farmers and eventually to the Hall family who worked the land for three generations (1814-1882). Thereafter the property continued to operate as a pastoral enterprise until the introduction of orcharding in the late-1930s by the Cleary family.

Today there are limited visible remains of this occupation sequence, but the study area contains scattered physical 'relics' associated with occupation and land use over the last 210 years. The purpose of this report is to attempt to identify the location, condition, and significance of these relics so that this information can be used to devise a management strategy for conservation of historic sites and/or their archaeological investigation and documentation before future development takes place.

### 8.3.2.1 Consolidated Statement of Significance

#### Aboriginal Heritage Significance

Prior to European settlement on the Hawkesbury River at Pitt Town the subject land was occupied by Aboriginal people. At least two separate phases of Aboriginal occupation are preserved within alluvial sands deposited on an elevated terrace that extends across Lots 11, 12, 13 & 14. The upper sand levels correspond with a typical Bondaian industry currently dated from 6,000 years to the present. The lower levels are characterised by large, tuff flaked pieces that are presumably pre-Bondaian ie. older than 6,000 years BP. With the exception of plough disturbance identified in the top 20-30cm of soil, the remains are intact and stratified. They indicate that the subject land was targeted by Aboriginal people for the manufacture of stone tools over a long period of time. Further archaeological investigation, however, is required to learn more about stone implement manufacturing techniques, finished tool forms and the sourcing of stone by Aboriginal people travelling and living along the Hawkesbury River. Dating of early phases of occupation using thermoluminescence or optically-stimulated luminescence techniques may also provide evidence for earliest occupation in the area.

Buried open sites dating to more than 6,000 years B.P are rare in the Sydney Region. Geomorphic and soil analysis indicates that the preservation of such sites requires a unique set of taphonomic<sup>1</sup> conditions. Finding similar sand terraces with the potential to contain intact, stratified archaeological deposits has become increasingly difficult, as many have been destroyed by mining or their integrity compromised by historic development. Accordingly, evidence of Aboriginal occupation within the alluvial terrace on the subject land is considered to be Regionally (State) significant for its heritage values to both the Aboriginal and Scientific community.

#### Historical Archaeological Significance

Following European settlement of Pitt Town, the subject land was for a brief period the site of one of the earliest Model Farms in NSW. It was established by Governor Bligh as a venture designed to yield capital for his personal gain and as an exemplar of the most efficient means of undertaking agricultural production in a new land. Bligh is a figure of indisputable historical importance in Australia's history and Blighton is well known by those with an interest in that history. His tenure of the place was brief, but the way Bligh undertook the commercial agricultural venture at Blighton had significant ramifications for Australia's history. His commercial activities in association with Blighton were directly related to his dismissal as Governor and this in turn affected British Imperial policy in regard to the Colony. The historical events associated with the place therefore extend beyond NSW at a geo-political level.

In terms of the archaeological remains of the Model Farm, this significance is contingent upon the integrity of any relics associated with the place and the degree to which it can be demonstrated that they are directly associated with Bligh's occupation and tenure of the land. The test results from an investigation have shown that, at least within the 300mm deep plough zone across the site, basal courses of Eighteenth and/or Nineteenth century brickwork, in addition to any occupation deposits enclosed within a former structure, are likely to have been extensively disturbed to a point where the remains of significant occupation is barely detectable. Occupation deposits associated with the main historic structures on the site have in all probability been redistributed by Twentieth Century farming activities, with any artefacts being scattered through the plough zone in the immediate vicinity of their structures.

Survival of deposits and structural remains is likely to be limited to deep structures such as wells and cesspits. Unfortunately there is no way of determining the precise location of

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<sup>1</sup> The study of the conditions and processes by which organisms become fossilized.



these structures, particularly when the location of the complex's principal structures is still equivocal despite exhaustive documentary research and the application of remote sensing technology to the areas of archaeological potential within Lots 11-18 at Hall St, Pitt Town. Accordingly, while any surviving relics associated with Blighton are considered to be of State significance, their heritage values as such is entirely contingent upon their integrity.

### **Historic Cultural Landscape**

The Historic Cultural Landscape significance is limited to the view, or 'prospect' from the northern end of the site - and most particularly from the north-eastern ridge on Lot 12 - looking across and along the Hawkesbury River toward Wilberforce and the Blue Mountains. This prospect has a high degree of contemporary aesthetic value, reinforced by its depiction by three artists in the early nineteenth century. The fact that these paintings all clearly indicated that they were made of, or from, Governor Bligh's farm, adds substantially to their significance.

In terms of landscape heritage on the site, there are no items of landscape fabric remaining on it that date back to the time of Governor Bligh's occupation and use of it. As the general public do not have ready access to the northern ridge on Lots 11 or 12, and are not able to appreciate the views or prospect from it, it cannot be said that the historic cultural landscape has acquired social significance.

### **8.3.2.2 Conservation Policies**

The key Conservation Policies that arise from the Conservation Management Strategy can be summarised as follows:

#### **Differing Heritage Values across the Subject Land**

Conservation management of Lots 11, 12, 14 and 15 shall recognise that the overall area can be divided into four portions, each with differing heritage values:

- The high ground along the northern portion of Lots 11 and 12 has a confluence of Aboriginal, Historical Archaeological and Historic Cultural Landscape values of State Significance. This area has been identified within a proposed Conservation Zone.
- The low-lying river flats land to the north of the proposed Conservation Zone, on Lots 11 and 12, is important for its surviving open landscaped character, but it has no Aboriginal or Historical Archaeological values and relatively limited Historic Cultural Landscape values. It may also have Aboriginal associational values. This area has been identified within a proposed Open Space Conservation Zone that is contiguous with the proposed Conservation Zone.
- The open ground in the southern portions of Lots 11 and 12 has very limited Aboriginal or Historical Archaeological value and only limited Historic Cultural Landscape value. It does not need to be contained within the proposed Conservation Zone.
- Land within Lots 14 and 15 has no defined heritage values that warrant special heritage management.

Each of these components of Lots 11 and 12, and all of Lots 14 and 15 should be managed and developed in accordance with their recognised values.

#### **NSW State Heritage Register Nomination**

Land within the proposed Conservation Zone and its contiguous Open Space Conservation Zone should be nominated to the NSW Heritage Council for inclusion in the NSW State Heritage Register. None of the other sections of the subject land warrant SHR listing

### **Hawkesbury LEP Heritage List Nomination**

In recognition of the local significance of the subject land, the same area as is nominated for the NSW State Heritage Register should also be nominated to Hawkesbury City Council for inclusion as a Heritage Item on the Hawkesbury Local Environmental Plan.

### **Creation of a Conservation Zone on Lots 11 and 12 (Blighton Precinct)**

The high ground along the northern portion of Lots 11 and 12, which has a confluence of Aboriginal, Historical Archaeological and Historic Cultural Landscape values that are of State Significance, should be managed by the creation of a Conservation Zone as recommended within the Test Results reports for the initial archaeological investigations of both Aboriginal and Historical Archaeology. (Refer to **Figure 11**).

### **Creation of an Open Space Conservation Zone on Lots 11 and 12 (Blighton Precinct)**

The low-lying land riverfront land to the north of the proposed Conservation Zone, on Lots 11 and 12, which is important for its surviving open landscaped character, should be managed by the creation of an Open Space Conservation Zone that is contiguous with the northern boundary of the proposed Conservation Zone and which extends to the river edge across the entire frontage of Lots 11 and 12. It will extend south along the Punt Road frontage of Lot 11 and be contiguous with the proposed Conservation Zone in that location. (Refer to **Figure 11**). The conservation zone is depicted on the proposed LEP map as a hatched area.

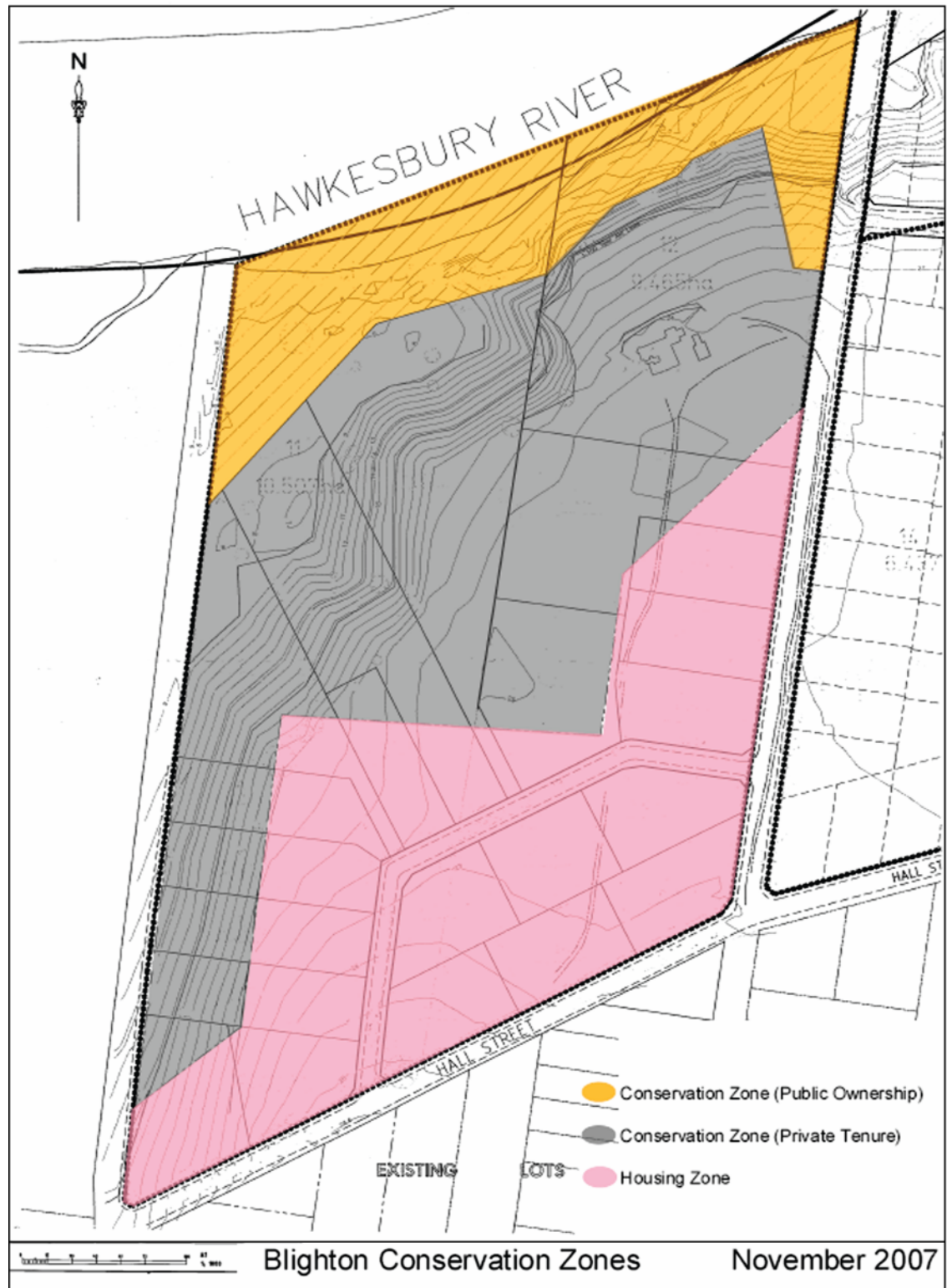


Figure 11 - Proposed Conservation Zone (Cream) and Open Space Conservation Zone (Orange) to protect the Blighton Heritage Resources

#### Protection of Aboriginal Archaeological Relics

Known or potential Aboriginal Archaeological relics, particularly those within the proposed Conservation Zone, shall generally be left undisturbed. The installation of any underground services or other works within the Conservation Zone should be avoided. If any is required,

consent under the relevant legislation must first be obtained from the NSW Department of Environment and Conservation.

Development of land beyond the proposed Conservation Zone, where previous investigations have indicated the likely presence of Aboriginal relics, and which is likely to disturb or destroy those relics, shall proceed only with consent under the relevant legislation.

#### **Protection of Historical Archaeological Relics**

Known or potential Historical Archaeological relics, particularly those associated with the Bligh period of occupation, within the proposed Conservation Zone shall generally be left undisturbed. The installation of any underground services or other works within the Conservation Zone shall be avoided. If any excavation is required, consent under the relevant legislation must first be obtained from the NSW Heritage Council.

Development of land beyond the proposed Conservation Zone, where previous investigations have indicated the likely presence of Historical archaeological relics, and which is likely to disturb or destroy those relics, shall proceed only with consent under the relevant legislation.

#### **8.3.2.3 Guidelines for land within the Conservation Zones**

Detailed Heritage Management Guidelines for the proposed Conservation Zone and the proposed Open Space Zone are recommended in the CMS. These guidelines generally include the following:

##### **Future Development of the Remainder of Lots 11 and 12 (Blighon Precinct)**

Development of the remainder of the subject land within Lots 11 and 12 shall be permitted in accordance with the Concept Plan as shown on **Figure 5**.

##### **Future Development of Lots 14 and 15 (Cleary Precinct)**

Development of the subject land within Lots 14 and 15 shall be permitted in accordance with the Concept Plan as shown on **Figure 5**.

##### **Future Development of Lots 13, 16, 17 and 18 (Cleary Precinct)**

Development of Lots 13, 16, 17 and 18, which are outside the subject land, shall be permitted in accordance with the Concept Plan as shown on **Figure 5**.

There shall be no heritage or Historic Cultural Landscape restrictions relevant to the future development of Lots 13, 16, 17 and 18, with the possible exception of the retention of the visually significant stands of wind break trees along Hawkesbury Street alignment.

#### **Heritage Interpretation**

An Interpretation Plan shall be prepared and implemented that communicates the complementary and overlapping Aboriginal and Historic heritage values of the subject land to the public and to those who will live in close proximity to the land.

#### **8.3.3 Lot 2 DP 76375 Hall Street (Thornton Precinct)**

Although not proposed for housing development, part of Lot 2 DP 76375 which is outside the CW study area will be affected by stormwater ponds and the rear of large residential lots. Accordingly, AHMS were engaged to undertake a preliminary desktop assessment of that part of Lot 2 lying outside the CW study area. The assessment was based on the findings of the detailed studies and investigations into the deferred area described above.

AHMS defined three landforms comprising;

1. Terrace slopes (up to 60% of the site);

2. Floodplain (30% of the site); and
3. River bank (less than 10% of the site).

The site is heavily grassed with low visibility for surface objects.

AHMS developed a predictive model of artefact density across the landforms based on the findings of the earlier study. The model is reproduced as **Figure 12** and shows that artefact density is predicted to vary from low to nil on the river bank to moderate to low on the Terrace slopes.

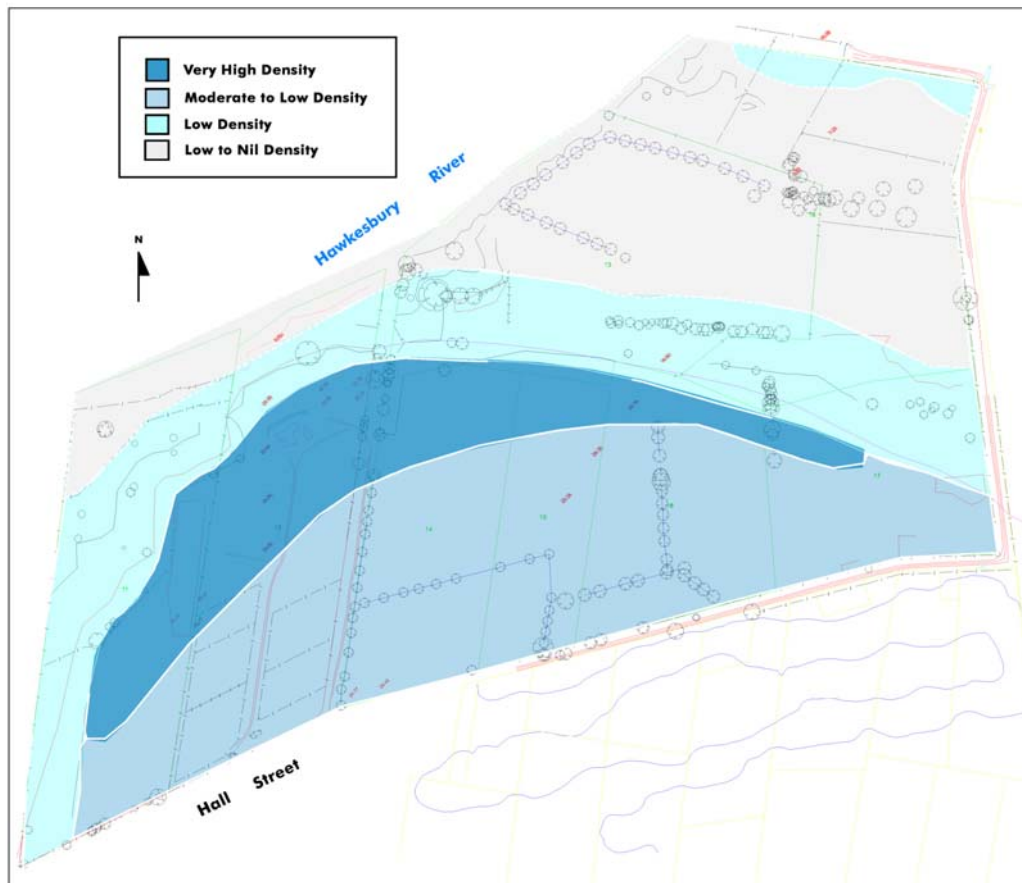


Figure 12 – Prediction Model of Artefact Density

AHMS conclude that there is little purpose in undertaking more detailed studies since the ground visibility is so poor. AHMS recommends that if development of Lot 2 occurs as an integrated component of the broader Hall Street development, salvage of a significant sample of the artefacts within Lot 2 can be undertaken in conjunction with the salvage program for the remainder of the site.

#### 8.3.4 Summary of Heritage Issues, excluding Cattai Precinct

The increased density of the current proposal will not alter the impacts of development on land within the CW study area. Additional studies have been undertaken to provide information on the deferred area and on that part of Lot 2 DP 76375 outside the CW study area.

The detailed studies undertaken to prove the information requested by the Heritage Office NSW for the deferred area have demonstrated that, provided a conservation zone and a separate but contiguous Open Space Conservation Area are established to protect an area on Lots 11 and 12, development can occur on the remainder of the deferred area.

A separate preliminary desktop study has concluded that artefacts can be recovered from Lot 2 DP 76375 in conjunction with recovery from the remainder of the study area and that no further archaeological investigation is necessary at this time.

### **8.3.5 Cattai Precinct**

#### **8.3.5.1 Aboriginal Archaeology**

The CW LES included a predictive model for Aboriginal archaeology, which identified Cattai Precinct as having either low, low to moderate or moderate potential. The recommended management strategies for all areas is for "Surface archaeological survey and sample sub-surface testing prior to development" and "Conserve significant sites and deposits where and if found".

Given the recommendations of the CW LES, it is suggested that a surface survey and sub-surface testing be undertaken prior to lodging a Project Plan for the Cattai Precinct.

#### **8.3.5.2 European Heritage**

The CW LES identifies a weatherboard cottage on non-JPG land (Table 3.16 Item 7) which requires "Heritage assessment of the building and its context". Also shown on Fig 3.9 of the CW LES is a windbreak.

These potential heritage items should be assessed and if necessary taken into account as part of any application for subdivision development of the Cattai Precinct.

### **8.3.6 Mitigation Measures**

The Project Plan is to include details of the Conservation Zone and Open Space Conservation Zone, including measures to protect the identified Aboriginal, Historical Archaeological and Historic Cultural Landscape values as apart of any rezoning of the site.

The proponent is to nominate the land within the Conservation and Open Space Conservation Zones to NSW Heritage Council for inclusion on the NSW State Heritage Register and for inclusion as a Heritage item on the Hawkesbury LEP.

The Project Application is to include details of proposals to recover Aboriginal and/or European relics found during construction from the Hall Street and Hall Street East and the Cattai Precincts and particularly from the Conservation and Open Space Conservation Zones.

Construction Certificate plans are to include details of any excavations within the Conservation and Open Space Conservation Zones and shall include provisions that any relics found during excavation works shall be recovered in accordance with the Project Plan approvals.

Prior to the Project Application approval for the Cattai Precinct, details of an investigation covering surface archaeological survey and sample sub-surface testing are to be submitted.

Prior to release of the Subdivision Certificate for Hall Street Precinct, the proponent is to prepare and submit for approval a Heritage Interpretation Plan that communicates the complementary and overlapping Aboriginal and Historic heritage values of the land to the public and to those who will live in close proximity to the land.

## **8.4 Bushfire**

Australian Bushfire Protection Planners Pty Limited (ABPP), has undertaken an assessment of the bushfire protection requirements of the site.

The only bushfire prone land in the vicinity of the study area is the remnant vegetation on Bona Vista property, which is to be retained and the remnant vegetation in the north

eastern portion of Bona Vista property, for which clearing approval has been given. The vegetation on the south eastern part of Bona Vista appears to meet the criteria for Shale Gravel Transition Forest, an endangered ecological community under the NSW Threatened Species Conservation Act 1995.

The precincts to the north of Hall Street, namely Blighton, Cleary and Thornton are greater than 100 metres from the bushfire prone vegetation within Bona Vista and are therefore not within a bushfire prone area. Furthermore, whilst the land within the Fernadell precinct is impacted by the bushfire prone vegetation in Bona Vista, future residential development of the Fernadell precinct will be separated by a 34 metre width road reserve, exceeding the minimum setback required by Planning for Bushfire Protection 2006. Therefore, this precinct does not require further consideration.

A review of the Hawkesbury Bushfire Prone Land Map confirms the vegetation within the south-eastern and north-eastern portions of Bona Vista property as Category 1 Bushfire Prone Vegetation. Following construction of the residential lots on the site, the Shale Gravel Transition Forest retained in the south-eastern corner will contain an area greater than one hectare in area and will therefore remain classified as Category 1 Bushfire Prone Vegetation under the provisions of Section 146 of the Environmental Planning & Assessment Act 1979.

The lots within 100 metres of this vegetation are deemed to be within a bushfire prone area.

From the historical aerial photographs and previous and current flora surveys, the remainder of Bona Vista supports mainly cleared paddocks with remnant vegetation of varied intactness in the south-east and east, and some remnant trees in the north-east along Johnston Street.

The Director Generals Environmental Assessment Requirements includes, under subheading "Hazard Management and Mitigation", the advice that the Environmental Assessment must address the requirements of Planning for Bushfire Protection 2006 (RFS).

This report undertakes an assessment to determine the deemed-to-satisfy requirements of Planning for Bushfire Protection 2006 and provides recommendations on the provision of Asset Protection Zones to the buildings; emergency access/egress; fire-fighting access and water supplies; construction standards of the buildings and the management of the Asset Protection Zones and residual vegetation so as to address the aim and objectives of Planning for Bushfire Protection 2006 and therefore Item 7 of the Directors Generals Requirements [DGRs].

#### **8.4.1 Mitigation Measures**

APBB recommend that a 25 metre wide Asset Protection Zone (APZ) is required between the retained vegetation and the nearby houses. This APZ is provided by means of a 15 metre wide road reserve and a 10 metre front set back within the lots.

Other recommendations include:

##### **Recommendation 2:**

The Asset Protection Zones and the landscape gardens within each lot so burdened shall be maintained as an Inner Protection Area in accordance with Appendix 5 of Planning for Bushfire Protection 2006 and the NSW Rural Fire Service's "Specifications for Asset Protection Zones".

Management of the landscaped gardens shall comply with the following:

- Maintain a clear area of low cut lawn or pavement adjacent to the buildings;

- Keep areas under fences, fence posts, gates & trees raked and clear of combustible fuels;
- Utilise non-combustible fencing and retaining wall structures; Maintain tree canopies and shrubs so that they are clear of the building by at least two metres;
- Utilise non-flammable materials such as Scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to buildings;
- Landscape species selection shall be drawn from those that are considered to be species which are "fire retardant" and do not promulgate the spread of fire.

**Recommendation 3:**

An 88B Covenant, in accordance with the provisions of the Conveyancing Act of 1919, shall be created on the title of the future residential lots, burdened by the Asset Protection Zone provision, to ensure the ongoing management of the landscaped gardens/residual vegetation within the development in accordance with the provisions of an Inner Asset Protection Zone [Curtilage to dwellings].

**Recommendation 4:**

The minimum construction standard to the future dwellings within Stages 2 & 5, with an exposure to the bushfire prone vegetation on the Public Reserve shall be Level 1 construction standard, in accordance with the specifications of Australian Standard A.S 3959 - Second Edition 1999 and Amendment 1, 2000, "Construction of Buildings in Bushfire Prone Areas".

**Recommendation 5:**

The future public access roads shall be constructed to the widths provided in the Masterplan for Bona Vista prepared by Brown Consulting (NSW) Pty Ltd.

**Recommendation 6:**

The Sydney Water Supply mains shall be extended, to service the future residential development, in accordance with the specifications of Australian Standard A.S 2419.2. Hydrants shall have a flow rate of 10 litres / second with blue pavement marks provided to locate hydrant positions.

Fire hydrants shall be accessible and located such that a tanker can park within a maximum distance of 20 metres from the hydrant and the habitable building must be located such that a fire at the furthest extremity can be attacked by fire-fighters using two 30 metre hose lines and a 10 metre water jet. A clear unobstructed path between the hydrant and the most distant point of the building cannot exceed 90 metres.

Blue hydrant markers shall be provided to locate the positions of the hydrants. The markers shall be positioned on the hydrant side of the centreline of the road pavement.

**8.4.2 Mitigation Measures**

Mitigation measures resulting from the assessment will included in the Statements of Commitment.

**8.5 Flooding and Emergency Access**

**8.5.1 Flood Heights**

The current proposal will result in rezoning of some land for residential development below the 100 year flood level, although all lots contain some land above the 100 year flood level. It is intended that all dwellings be located above the 100 year flood level of 17.3m and all proposed lots have sufficient area to comply with this requirement.



Most of the land lying below the 100 year flood level to be rezoned is along the northern fringe of the site where relatively long lots have been designed to extend down the escarpment above the river flats. These lots will adjoin the proposed open space and will form a soft edge to urban area.

All lots have been provided with access above the 100 year flood level to ensure that residents can evacuate safely, away from approaching flood waters.

The limit of the 100 year flood, and therefore the land available for building envelopes, is shown on **Figure 5**.

#### **8.5.2 SES Assessment (CW LES)**

The NSW State Emergency Service (SES) analysed the impacts of growth on the flood emergency risk management plan for Pitt Town for the CW LES.

The SES considered the requirements of a number of development scenarios in relation to the need for upgrading evacuation routes and the number of personnel required to manage evacuation.

Scenario 4, which considered 1000 additional lots, was found not to require upgrading of the evacuation route or to place unacceptable demands on SES resources.

#### **8.5.3 Molino Stewart Flood Risk Management Review**

Molino Stewart has assessed the impacts of the development proposed in this EA and a copy of both SES and the Molino Stewart reports are attached as **Appendix K**.

Molino Stewart's report concluded that the proposed 915 lot residential development in Pitt Town:

- Is consistent with the NSW Government's Flood Prone Land Policy as set out in the NSW Floodplain Development Manual, 2005;
- Will be above the 1 in 100 flood level, mostly above historical flood levels and some will even be above the PMF which means that the risks of flooding to the proposed properties would be tolerable and in accordance with the principles set out in the NSW Floodplain Development Manual;
- Is a land use and development type which is consistent with the flood risk;
- Will not take up significant flood storage capacity or create significant obstructions to flood flows and so will not significantly increase flood risks for existing properties in Pitt Town or elsewhere on the floodplain;
- Can be safely evacuated along with the existing Pitt Town community in the available time for the full range of floods when modelled using the SES evacuation timeline modelling;
- Will reduce the surplus evacuation time available for Pitt Town from three hours to a little under half an hour;
- Can be evacuated in a manner which integrates with the existing SES evacuation strategy for the area;
- Will not interfere with the evacuation of existing developments elsewhere;
- Can easily evacuate to a high point within Pitt Town above the PMF should residents be unable or unwilling to evacuate before the evacuation route out of Pitt Town is cut;
- Will require temporary accommodation for its residents should they be evacuated but that the additional 3,000 persons should be able to find such accommodation somewhere in Sydney;

- Will not increase risk to life elsewhere on the floodplain;
- Will require an additional 22 emergency service personnel to undertake doorknocking in Pitt Town which the NSW SES has previously indicated can be provided.

#### **8.5.4 Mitigation Measures**

No mitigation measures are required in relation to evacuation.

Building envelopes will be specified on the Project Plan and will be enforced through covenants to be included in s88B Instruments and through design guidelines.

### **8.6 Stormwater**

#### **8.6.1 JPG Land**

##### **8.6.1.1 General**

Brown Consulting (BC) assessed the impacts of the proposed development on the water management objectives set out in the Hawkesbury DCP. A copy of the assessment is contained in **Appendix L**.

##### **8.6.1.2 Water Quality & Detention**

BC proposed a series of detention facilities, similar to that proposed for development under LEP Amendment No 145 and concluded that the objectives of the DCP can be achieved. Generally, all stormwater will receive treatment so as to meet the water quality requirements of the DCP. Flows passing directly into the Hawkesbury River will not receive detention to reduce the coincidence of peak flows from the site and other flows in the River.

The treatment of the stormwater runoff is proposed to be by use of a combination of Gross Pollutant Traps (GPT), swales, wetlands and bioretention basins.

In all but major storms, runoff will be directed into one of the water quality basins. In the unlikely event of a spill, liquid will follow the stormwater system and also be directed into the basins, allowing time to take remedial action. It is considered unlikely that such spills will occur, since the area will become residential with no through route to attract trucks or other large vehicles to enter.

All lots will be connected to the sewerage system, which will be designed to Sydney Water standards. Spills and overflows are unlikely to occur from the sewerage system.

Weeds will be trapped in the wetlands, swales and/or the bioretention basins and may be harvested at regular intervals to prevent their uncontrolled spread.

**Appendix L** contains figures and tables showing the proposed facilities.

**Figure 13** shows the proposed water quality and detention facilities.

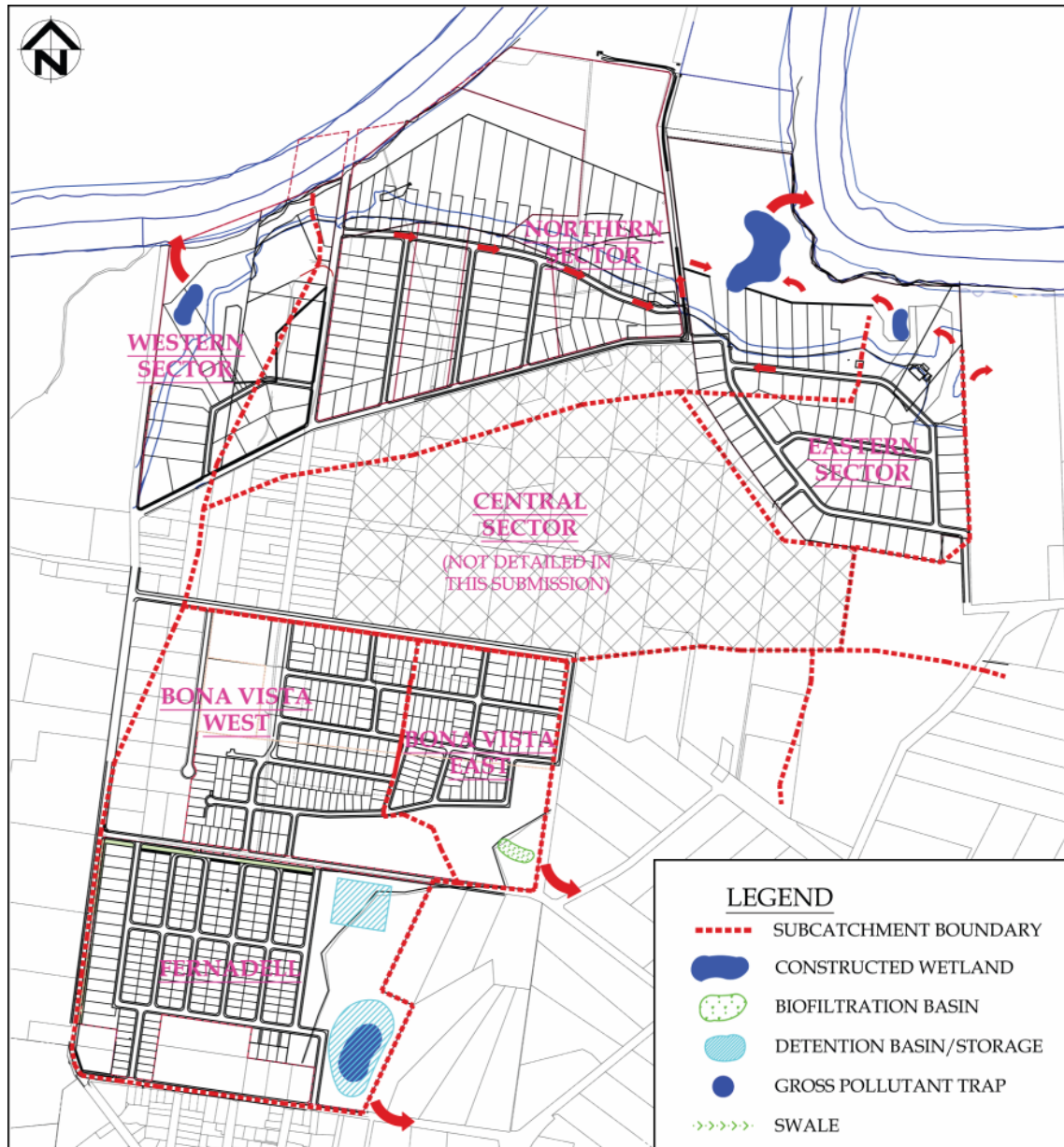


Figure 13 - General Layout of Detention and Water Quality Facilities (Plan by Brown Consulting)

### Riparian Corridors and Amenity

BC assessed the impacts of the proposed development on riparian corridors and advised that the bulk of the channels within the development area do not have defined riparian corridors because they are near the top of their catchments and any corridors which might have existed have been disturbed by agriculture.

Nevertheless, BC considers that the proposed replanting and landscape works will provide a benefit to riparian corridors in Fernadell Park and Blighton Riverside Park.

### Total Water Cycle Management

BC discuss opportunities for total water cycle management, by storing and reusing stormwater for irrigation and aesthetic purposes and conclude that such schemes are worthy of more detailed assessment as part of the Project Application.

#### **8.6.1.3 Monitoring of stormwater flows**

BC suggest that a monitoring program be developed to measure the effectiveness of the proposed water quality and detention system to ensure no unacceptable impacts on downstream users.

#### **8.6.2 Cattai Precinct**

To be considered during Project Application.

#### **8.6.3 Mitigation Measures**

Provide details of the proposed water quality control and detention measures with the Project Application, including a Construction Environmental Management Plan. This Management Plan is to include consideration of impacts on groundwater.

### **8.7 Geotechnical Considerations**

#### **8.7.1 Connell Wagner LES**

The CW LES described the geology and soils of the study area. Within the LES study area, Connell Wagner concluded that the soils, geology and topography will pose generally low overall constraints to development.

Although the current proposal will result in increased density, the types of development will be essentially similar to that proposed in the CW LES and LEP Amendment No 145.

Some additional investigation to supplement the CW LES has been undertaken as described below.

#### **8.7.2 Fernadell and Bona Vista**

Since the adoption of the LES, JPG requested Golder Associates to proceed with a number of geotechnical investigations, including:

- A Remediation Action Plan (RAP) has been prepared for the Fernadell and Bona Vista sites. This RAP addresses minor contamination issues identified in previous reports prepared by Golders. Following remediation, Bona Vista is now suitable for residential development and no further investigations are considered necessary as a result of the proposed increased density;
- A Desktop and Limited Field Study of Salinity on the Fernadell and Bona Vista properties. This study concluded that the risk of salinity being a constraint to development is low;
- A preliminary Acid Sulphate Soils Investigation on Fernadell and Bona Vista. This investigation included sampling and testing and found one sample which returned results higher than the adopted guidelines, although the remaining samples returned acceptable results. It was concluded that the potential for acid sulphate soils is low, but that further sampling should be undertaken in the affected area once the final layout of roads, drainage and structures is known.
- A Geotechnical Investigation for Fernadell and Bona Vista. This investigation concluded that residential development is expected to involve routine practices and included a number of specific recommendations related to detailed construction matters.

The above studies relate to land already zoned for urban purposes and effectively address matters relevant at the Project Application stage. Accordingly, these studies have not been reproduced as part of this investigation report. Further, nothing in these geotechnical investigations precludes development within the Connell Wagner study area at the higher densities in the current proposal and no further investigations are considered necessary.

### **8.7.3 Blighton and Cleary Precincts**

The area between Hall Street and the Hawkesbury River (the Cleary property) was studied by Geotechnique in November 2000. The study comprised a preliminary environmental assessment, the purpose of which was to provide information on the contamination status of the land and recommendations for further investigations and, if necessary remediation.

The study included a site inspection, limited soil sampling, chemical analysis and a review of historical records.

The investigation found no obvious evidence of staining, odour or discoloration and the laboratory testing indicated predominantly negligible and/or low concentrations of potential contaminants, within the adopted thresholds.

Geotechnique concluded that the site is not likely to pose a threat to health and is suitable for residential development.

Geotechnique also studied the land north of Hall Street in June 2006 to investigate salinity and acid sulphate soils. This report concluded that in parts of the site, at depths exceeding 1.5 metres, the soils might produce some acid on oxidation, but that the soils are non-aggressive to mildly aggressive.

Accordingly it was recommended that an Acid Sulphate Soils Management Plan might be required if excavation depths will exceed 1.5 metres, but that no particular action is required in relation to salinity.

A copy of Geotechnique's report is attached as **Appendix M**.

### **8.7.4 Thornton Precinct**

Geotechnique were instructed to undertake a geotechnical investigation into the Thornton property to investigate contamination and the presence of saline or acid sulphate soils. Copies of the resulting report are presented in **Appendix M**.

#### **Contamination**

Geotechnique conducted a preliminary contamination assessment for part of the property registered as Lot 2 in DP76375, located on Hall Street, Pitt Town.

The objective of this assessment was to determine whether the site is likely to present a risk of harm to human health and/or the environment, as a result of any past and/or present activities within the site and/or the neighbouring properties and, in so doing, assess whether the site is suitable for the development proposed or requires further assessment to make that determination.

Based on the investigation, it is considered that the risk of soil contamination within the Thornton Precinct, with respect to the existing uses and proposed development, is low. Some localised soil contamination, not considered to pose a risk of harm to human health, may have occurred in the following areas:

- Former orchard farming areas
- Filled areas

Geotechnique considers it is unlikely that any significant contamination of the soil has resulted from the past use of the site and neighbouring properties for orchard farming. If contaminants have resulted, they are likely to be metals such as zinc and copper, at concentrations that do not pose a risk of harm to human health. Some plant impact may result.

Based on this preliminary contamination assessment, it is considered that the Thornton Precinct does not present a significant risk of harm to human health or the environment and is therefore environmentally suitable for the proposed residential and recreational

development. However, soil sampling and testing is recommended to assess the contamination status of the soils in and around former orchards and the identified filling area, particularly in relation to impact on future planting / landscaping. As stated earlier, no significant contamination is expected to be found in these areas.

#### **Acid Sulphate Soils**

The Acid Sulphate Soils Map of Wilberforce indicates that there is a low probability of Acid Sulphate Soils in the vicinity at depths below 3m. Geotechnique dug 15 test pits and took samples for testing. Based on the test results, Geotechnique concluded that:

- Soils to depth of about 1.5m are unlikely to be acid sulphate soils across the site. Therefore, an Acid Sulphate Soils Management Plan will not be required if proposed development works involves excavation to depths shallower than 1.5m from existing ground surface.
- Soils at depths exceeding 1.5m are potentially acid sulphate soils in some portions of the site, especially in vicinity of test pits TP3 and TP14. An Acid Sulphate Soils Management Plan may be required if proposed development works involves excavations to depths exceeding 1.5m in vicinity of test pits TP3 and TP14. Therefore, we suggest for additional sampling and testing of samples to delineate areas with potentially acid sulphate soils, if any, and provide recommendations on treatment of acid sulphate soils, if depths of excavation exceed 1.5m in vicinity of test pits TP3 and TP14.

#### **Salinity**

Soils are classified as saline if Electrical Conductivity ( $EC_e$ ) of the saturated extract exceeds 4.0dS/m or 4.0ms/cm (Reference 3 of Geotechnique Report).

Results of electrical conductivity tests on the 15 soil samples indicate that the soils from the site have  $EC_e$  values of less than 4.0dS/m and hence are non-saline in nature. Geotechnique concluded that the salinity of alluvial soils across the site is unlikely to affect plant growth.

Chemical tests also indicate that the clayey and silty soils across the site are non-aggressive to mildly aggressive. Therefore, Geotechnique recommends that construction materials, such as concrete, steel, brick etc. used for the proposed development should be appropriate for a mildly aggressive site.

### **8.7.5 Cattai Precinct**

Cattai Precinct was considered as part of the CW LES.

#### **8.7.5.1 Contamination**

No sub-surface testing was undertaken for the CW LES, which as part of general recommendation for the LES study area recommends further investigations, particularly for areas used for orcharding. There is nothing in the CW LES to preclude development at the densities in the current proposal, provided sub-surface testing and any required remedial action, is carried out before occupation of the lots.

#### **8.7.5.2 Acid Sulphate Soils**

The CW LES concluded that there are no Acid Sulphate Soils in the Pitt Town Study Area. It is noted that the potential acid sulphate soils described above are outside the LES study area.

#### **8.7.5.3 Salinity**

The CW LES found that the Berkshire Park soils, which are found on the south western fringe of the Cattai Precinct, may present a moderate salinity hazard.

The CW LES concluded that there are low overall constraints to development and it is recommended that further investigation of salinity be undertaken as part of any Project Application for the Cattai Precinct.

#### **8.7.6 Groundwater**

The CW LES described the groundwater under the study area and concluded that apart from localised area of salinity, as described above, groundwater is likely to be of good quality. The CW LES and the Golder Associates report on salinity described some areas as having high water tables. Appropriate measures to ensure subsurface drainage of water will be incorporated into Construction Certificate plans.

#### **8.7.7 Mitigation Measures**

##### **8.7.7.1 All Precincts**

Incorporate appropriate subsurface drainage measures into Construction Certificate plans.

##### **8.7.7.2 Blighton, Cleary and Thornton Precincts**

If excavations below 1.5 metres are proposed, prepare an Acid Sulphate Soils Management Plan prior to obtaining a Construction Certificate.

Within the Thornton property, undertake sampling and contamination testing to determine the contamination status around former orchard and filling areas prior to obtaining Construction Certificate.

##### **8.7.7.3 Cattai Precinct**

A geotechnical investigation covering sub-surface testing for contamination and salinity is to be included with the Project Application for Cattai Precinct. If the investigation reveals saline soils, the Project Application is to include measures for minimising impacts on groundwater.

### **8.8 Visual Sensitivity**

The scenic landscape assessment of the current proposal for increased density is based on:

- The Connell Wagner LES.
- Heritage advice from Graham Brooks and Associates during preparation of the master plan attached to the Don Fox Planning Environmental Study and the current Concept Plan. Graham Brooks has reviewed the Concept Plan and considers the impacts acceptable – refer to the CMS and letter dated 5 December 2007 in **Appendix S**.
- Urban design analysis by Architectus during preparation of the master plan attached to the Don Fox Planning Environmental Study.

#### **8.8.1 Connell Wagner LES**

Connell Wagner assessed the scenic and visual quality of the site and the existing urban character of Pitt Town. Based on this assessment, three visual sensitivity zones were defined and mapped on Figure 3.10 of the CW LES. These sensitivity zones were taken into account in the design of the current proposal, but were re-assessed where relevant by Architectus and Graham Brooks and Associates as described below.

#### **8.8.2 River and settlement context and visually sensitive catchment**

The heritage and urban design analysis identified two categories of important views:

- Major outward views from elevated land over the low lands of the Hawkesbury River.

- Major inward views toward elevated land from the low lands of the Hawkesbury River.

The analysis of views and their significance was synthesised and evaluated. **Figure 14** summarises the assessment depicting visually sensitive areas.

The Visually Sensitive Catchment (**Figure 14**) external to the site on the river side was defined by acknowledging that the open rural character of the river plains can be mainly appreciated from being in the low lands or on the edge of the escarpment of the elevated land. The grander views are from the higher land.

The conclusions that can be drawn from these views and analysis are that:

- It is critical that the land in the Pitt Town Bottoms remain in a rural zoning to protect the scenic character of the area. The Concept Plan does not propose any change to the Pitt Town Bottoms.
- Houses on the western parts of the elevated land need to be visually buffered. That is, houses along Bathurst St need to be screened by trees.
- Houses on the northern parts of the elevated land should not be located below the upper parts of the elevated land and that there should be landscape and fencing style controls to ensure compatibility with the open rural character of the lowlands and slopes.



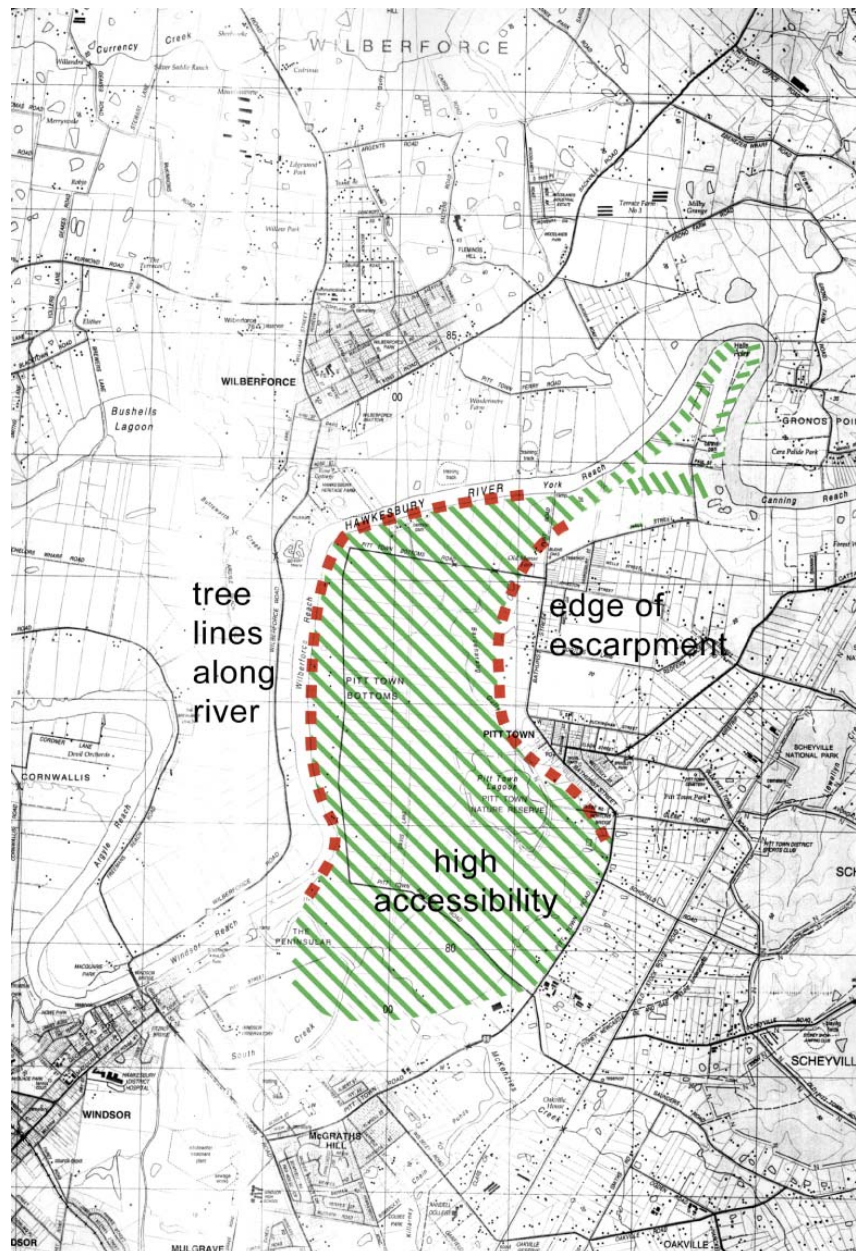


Figure 14 – Visually Sensitive Lands

### 8.8.3 Visually sensitive areas within the concept plan area

Visually sensitive areas within the Concept Plan area essentially derived from the heritage values of the area which are:

- The Bona Vista homestead and its curtilage
- Blighton archaeological area
- Early circulation roads (Johnston, Hall and Bathurst, Hawkesbury St and Bootles Lane
- Historical rectilinear farm lot pattern and fence line pattern.

### 8.8.4 Development Considerations

The development considerations arising from the scenic landscape assessment for each major property holding is described below.

#### **8.8.4.1 Bona Vista & Fernadell Precincts**

The increased density within the Fernadell and Bona Vista properties will have acceptable impacts on the scenic and visual quality of the area because:

- All of the development except for the Bathurst St frontage is visually separate from the visually sensitive catchment. The smaller lots are screened from external views.
- The Bathurst St frontage responds appropriately to the visually sensitive catchment by:
  - Retention of the existing Casuarina trees in the existing street reservation.
  - Location of larger lots along Bathurst St with access denied to new lots fronting Bathurst Street
- Within the development area the proposed increase in density responds appropriately to visually sensitive areas by the:
  - Larger lots proposed along the historical roads of Johnston Street,
  - Retention of the curtilage around Bona Vista homestead and buildings.
  - Retention of the park adjacent the Bona Vista homestead.
  - Retention of the rectilinear street layout pattern

#### **8.8.4.2 Thornton Precinct**

The increased density within the Thornton property will have acceptable impacts on the scenic and visual quality of the area because little or none of the development can be seen from the visually sensitive catchment.

#### **8.8.4.3 Blighton and Cleary Precincts**

The potential scenic and visual quality impacts associated with the increased density north of Hall Street are mitigated by the following design measures;

- Large lots are located along the historical roads of Hall Street and Punt Road,
- The houses edging the elevated land cannot build below RL 17.3m AHD;
- The houses edging to elevated land are to have landscape and fencing style controls (open style rural fencing) for their lots extending northwards down the slope,
- The proposed open space on the low land is consistent with the existing open landscape character.

Subject to the above being incorporated into the proposal, it is considered that the increased density facilitated by the LEP amendment would not result in any unacceptable scenic and visual quality impacts in the area north of Hall Street.

#### **8.8.5 Cattai Precinct**

CW LES ranks land within Cattai Precinct as 3 Moderate with "Limited development permitted, Some rural residential development". TRACT who did the visual analysis only say that the area is flat and visible from Cattai Road although views are interrupted by a row of pine trees.

LEP 145 allows 2 lots per hectare (approximately 4000 to 4500 m<sup>2</sup>) compared to the proposed 2000m<sup>2</sup> lots. The proposed lots are still relatively large compared to residential densities.

It is concluded that the proposed change in development density will not have a significant impact on scenic values and this impact can be mitigated by designing larger lots along the Cattai Road frontage.

### 8.8.6 Mitigation Measures

#### 8.8.6.1 Bona Vista and Fernadell

The Project Plan for Bona Vista and Fernadell Precincts is to provide for:

- Retention of the existing Casuarina trees in the existing street reservation;
- Location of large lots along Bathurst St with access denied to new lots fronting Bathurst Street;
- Screen trees along the Bathurst Street frontage;
- Larger lots along the historical roads of Johnston Street;
- Retention of the curtilage around Bona Vista homestead and buildings;
- Retention of the park adjacent the Bona Vista homestead; and
- Retention of the rectilinear street layout pattern.

#### 8.8.6.2 Blighton and Cleary Precincts

The Project Plan for Blighton and Cleary Precincts is to include:

- Large lots located along the historical roads of Hall Street and Punt Road,
- The houses edging the elevated land cannot build below RL 17.3m AHD; and
- The houses edging to elevated land are to have landscape and fencing style controls (open style rural fencing) for their lots extending northwards down the slope.

#### 8.8.6.3 Thornton Precinct

There are no mitigation measures required for the Thornton Precinct.

#### 8.8.6.4 Cattai Precinct

The Project Plan is provide for larger lots along the Cattai Road frontage.

## 9 Statements of Commitment

The following mitigation measures have been identified in this EA.

IMPACT	NATURE OF POTENTIAL IMPACT	MITIGATION MEASURES / ENVIRONMENTAL SAFEGUARDS
Flooding	Need to ensure that houses are built on flood free land	Building envelopes will be specified on the Design Guidelines to be submitted with the Project Plan and will be enforced through covenants to be included in s88B Instruments.
Water quality	Possibility of increased levels of nutrients and contaminants in stormwater runoff.  Likelihood of increased flow rates of stormwater in some catchments.  Possibility of groundwater contamination	Provide details of the proposed water quality control and detention measures with the Project Application, including a Construction Environmental Management Plan. This Management Plan is to include consideration of impacts on groundwater.

<b>IMPACT</b>	<b>NATURE OF POTENTIAL IMPACT</b>	<b>MITIGATION MEASURES / ENVIRONMENTAL SAFEGUARDS</b>
Geotechnical	Possibility of disturbing acid sulphate soils if excavations are deeper than 1.5 metres	If excavations below 1.5 metres are proposed within Blighton, Cleary or Thornton Precincts, prepare an Acid Sulphate Soils Management Plan prior to obtaining a Construction Certificate.
	Possibility of contamination associated with previous orcharding within Thornton Precinct	Within the Thornton property, undertake sampling and contamination testing to determine the contamination status around former orchard and filling areas prior to obtaining Project Approval.
	Need to identify geotechnical requirements for residential development within Cattai Precinct	Within Cattai Precinct, include a geotechnical investigation covering sub-surface testing for contamination and salinity with the Project Application. If the investigation reveals saline soils, the Project Application is to include measures for minimising impacts on groundwater.
	Need to ensure appropriate construction materials within Blighton, Cleary, Thornton and Cattai Precincts	Within Blighton, Cleary, Thornton and Cattai Precincts, the Construction Certificate Application should specify that construction materials, such as concrete, steel, brick etc. used for the proposed development should be appropriate for a mildly aggressive site
Groundwater	Need to ensure adequate subsurface drainage	Incorporate appropriate subsurface drainage measures into Construction Certificate plans.
Air Quality	Need to minimise air quality impacts	The Project Application is to include provisions for walking and cycling paths and for bus routes to reduce car usage
Flora and fauna	Need to ensure the existing limited environmental values of the site are retained and enhanced.	The Project Application is to include a landscape plan showing retention of as many existing canopy trees as practical within the residential area, taking into account the risks of retaining large native species close to dwellings.
	Need to ensure that the riparian corridor along the River is retained and enhanced.	<p>Within the Blighton, Cleary and Thornton Precincts, the Project Application is to include details of future landscaping works (by others) to ensure that a 40 metre wide riparian corridor is provided along the Hawkesbury River. The landscaping plan is to ensure retention and regeneration of native species within the riparian corridor.</p> <p>Mitigation measures identified in The Ecology Lab - Aquatic Habitat Survey dated 29 November 2007 associated with the construction and operation of the boat ramp will form part of the Statements of</p>

IMPACT	NATURE OF POTENTIAL IMPACT	MITIGATION MEASURES / ENVIRONMENTAL SAFEGUARDS
		Commitment for the Project Application.
Heritage	Need to ensure that the heritage values of the site are protected during construction and in the longer term	<p>The Project Application is to include details of the Conservation Zone and Open Space Conservation Zone, including measures to protect the identified Aboriginal, Historical Archaeological and Historic Cultural Landscape values.</p> <p>The proponent is to nominate the land within the Conservation and Open Space Conservation Zones to NSW Heritage Council for inclusion on the NSW State Heritage Register and for inclusion as a Heritage item on the Hawkesbury LEP.</p>
		The Project Application is to include details of proposals to recover Aboriginal and/or European relics found during construction from the Hall Street and Hall Street East and the Cattai Precincts and particularly from the Conservation and Open Space Conservation Zones.
		Construction Certificate plans are to include details of any excavations within the Conservation and Open Space Conservation Zones and shall include provisions that any relics found during excavation works shall be recovered in accordance with the Project Application approvals.
		Prior to the Project Plan approval for the Cattai Precinct, details of an investigation covering surface archaeological survey and sample sub-surface testing are to be submitted.
		Prior to Project Approval, the proponent is to prepare and submit for approval a Heritage Interpretation Plan that communicates the complementary and overlapping Aboriginal and Historic heritage values of the land to the public and to those who will live in close proximity to the land.
Visual Impacts	Mitigating the visual impacts of development	<p>The Project Applications for Bona Vista and Fernadell Precincts are to include:</p> <ul style="list-style-type: none"> <li>Retention of the existing Casuarina trees in the existing street reservation;</li> <li>Location of large lots along Bathurst St with access denied to new lots fronting</li> </ul>

IMPACT	NATURE OF POTENTIAL IMPACT	MITIGATION MEASURES / ENVIRONMENTAL SAFEGUARDS
		<p>Bathurst Street;</p> <ul style="list-style-type: none"> <li>• Larger lots along the historical roads of Johnston Street</li> <li>• Retention of the curtilage around Bona Vista homestead and buildings;</li> <li>• Retention of the park adjacent the Bona Vista homestead; and</li> <li>• Retention of the rectilinear street layout pattern</li> </ul> <p>The Project Applications for Blighton and Cleary Precincts are to include:</p> <ul style="list-style-type: none"> <li>• Larger lots are located along the historical roads of Hall Street and Punt Road,</li> <li>• The houses edging the elevated land cannot build below RL 17.3m AHD; and</li> <li>• The houses edging to elevated land are to have landscape and fencing style controls (open style rural fencing) for their lots extending northwards down the slope.</li> </ul> <p>The Project Plan is provide for larger lots along the Cattai Road frontage.</p>
Safer by Design	Need to ensure public surveillance	The Project Application is to include provision of pathways and cycleways in accordance with the Safer by Design Guidelines

*Table 7 – Mitigating Measures*

Other commitments made in this EA include:

- Lodge contour and design plans with the Project Application;
- Lodge plans showing lot numbers, dimensions and areas, together with details of easements and covenants with the Project Application;
- Providing a draft DCP including Design Guidelines for future housing prior to or concurrent with lodging any Project Applications;
- JPG must lodge a draft VPA with Hawkesbury City Council to construct the works agreed with the Council with Project Applications for any Precinct except Cattai Precinct;
- Consideration of Total Water Catchment Management schemes, particularly for use of stormwater caught in water quality and detention ponds for irrigating playing fields;

- The Pitt Town DCP will include restrictions on the types of development permitted in the rear of lots on or below the escarpment within Blighton, Cleary and Thornton Precincts to reduce visual impacts; and
- Landscape plans, including themes for each Precinct, proposals for each road type, species lists and pathway and cycleway layouts will be submitted with the Project Applications.

## 10 Future Applications

This application seeks approval of the Concept Plan and gazettal of an amending LEP. The approvals processes intended for future stages of the project are set out below:

Future Development	Approval Process	Consent Authority
Residential subdivision inclusive of boat ramp and parking, infrastructure provision, together with amendments to the Pitt town DCP on JPG land.	Part 3A Project Approval including supporting complying development controls.	Minister for Planning
Residential subdivision of Cattai Precinct	Part 3A Concept Plan and Project Approval, or Part 4 Development Consent	Minister for Planning for Part 3A or Hawkesbury City Council for Part 4
Residential housing and other development permissible in the residential zones, including the Community Centre, playing fields and playgrounds.	Part 4 – Complying Development Certificate for development that complies with Hawkesbury LEP 1989 or other complying development controls approved under Part 3A.	Hawkesbury City Council or an accredited certifier
	Part 4 – development consent if the development does not meet the complying development criteria of Hawkesbury LEP 1989	Hawkesbury City Council
Subdivision Certificates	Part 4A Certificates	Hawkesbury City Council or an accredited certifier

*Table 8 – Future Applications*

## 11 Ecologically Sustainable Development (ESD)

The following assessment adopts the contents of the EPA Regulation 2000 in relation to the preparation of an Environmental Impact Assessment (EIS), although the proposed development is not classified as an “activity” under Part 5 of the EPA Act.

### 11.1 Precautionary Principle

The extensive range of past studies and current studies into flooding and stormwater management, flora and fauna impacts, bushfire threats and Aboriginal cultural heritage have not revealed any uncertainty regarding potential impacts. Impacts identified can be appropriately managed and have not been found to result in serious or irreversible

environmental damage as a consequence of this proposal. In contrast, the findings and recommendations of the flora and fauna report have identified opportunities that will improve the environmental attributes and qualities of the site, particularly in relation to the riparian corridor beside the River, that would not otherwise be realised without redevelopment and the elements incorporated into this Concept Plan.

The findings and recommendations of the suite of specialist studies have not revealed the need to adopt the precautionary principle from an ecological point of view to either delay or prevent the Concept Plan application from proceeding.

## **11.2 Intergenerational Equity**

The Concept Plan has taken into consideration a range of issues and impacts which are to be addressed in the design and construction of the proposed residential development to ensure that the proposal does not impose a burden on future generations.

In particular stormwater management, water quality measures, bushfire management, traffic management and pedestrian and cycleway networks are all integrated into the design of the Concept Plan to ensure that these are delivered as part of the project.

The existing Planning Agreement sets out how and when some of these public benefits are to be provided by the development.

The proposal also delivers benefits such as provision of open space alongside the Hawkesbury River, through which pedestrian pathways and cycleways can be constructed in the future that will provide a benefit and right of access to the River for the benefit of future generations.

## **11.3 Biological Diversity and Ecological Integrity**

This EA has demonstrated how the relationship of the biophysical elements of the site has been considered in the development of the Concept Plan to minimise potential impacts. In particular this EA demonstrates how:

- Flood evacuation can be managed without adversely impacting upon the safety of the future or existing residential areas;
- stormwater is managed to control water quality;
- flora and fauna attributes of the site are not adversely affected and improved where possible with the establishment of riparian corridors;
- bushfire risks can be appropriately managed having regard to existing and proposed vegetation characteristics of the site;
- land use constraints of past uses and potential for contamination can be managed without compromising the future capacity for residential development; and
- cultural heritage can be addressed.

In addition the EA demonstrates how potential impacts arising from the physical aspect of the proposed development such as traffic management, built form and visual amenity of the proposed residential development are acceptable.

## **11.4 Valuation and Pricing of Environmental Resources**

To undertake the pricing of environmental resources would require environmental factors to be included in the valuation of assets and services.

It is difficult to assign a monetary value to the environment of a locality, or environmental resources not exploited for commercial use. A monetary value could not be placed against the greatest proportion of environmental attributes of the site which may be affected. The



more appropriate approach adopted for this project is to manage environmental impacts by identifying appropriate safeguards to mitigate adverse environmental impacts. This cost of implementing these safeguards is included in the total project cost as a means of pricing the protection of the environmental attributes of the site.

## 12 Strategic Assessment of the Project and Associated Rezoning

This section provides a strategic assessment of the Project. Although the Concept Plan can be implemented as a Major Project without modifying zonings, it is suggested that the map attached to HLEP 1989 be amended to reflect the proposed development and this section of the EA justifies the proposed rezoning. **Figure 15** compares the existing and proposed draft LEP. **Appendix D** is a larger scale draft LEP Map.

It is suggested that this amendment to HLEP be made by the Minister gazetted either:

- an Order under Section 75P(2)(d) of the Environmental Planning & Assessment Act; or
- an amendment to Schedule 4 to the Major Project SEPP.

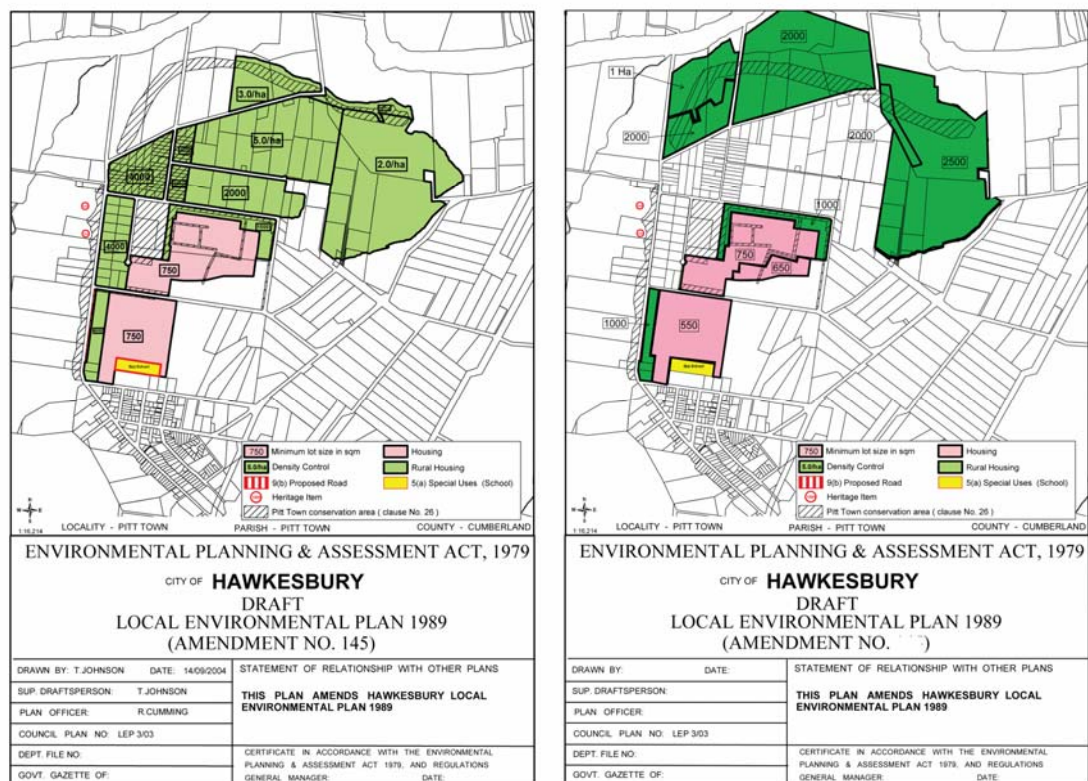


Figure 15 – Draft LEP showing comparison to LEP 145

**Figure 15** also shows the map for LEP Amendment No 145 for comparison and it can be seen the proposed amendments are not significant. In summary, the amendments involve:

### Reducing the minimum lot sizes within Fernadell and parts of Bona Vista Precincts;

LEP Amendment 145 provided for the bulk of the lots within the Fernadell Precinct to be minimum 750 m<sup>2</sup> size lots, with 4000m<sup>2</sup> lots fronting Bathurst Street, compared to the current proposal which provides for minimum 550m<sup>2</sup> lots, except for lots fronting Bathurst Street which are to be minimum 1000m<sup>2</sup>.

Within Bona Vista Precinct, LEP amendment 145 provided for minimum 750m<sup>2</sup> lots over most of the precinct, except for 1500m<sup>2</sup> lots fronting Johnston Street and Bona Vista homestead. The current plan reduces the size of the fringing lots from 1000m<sup>2</sup> to 1500m<sup>2</sup> and reduces the size of the lots in the south eastern part of the precinct to 650m<sup>2</sup>.

**Increasing the densities within Thornton, Cattai and parts of Cleary Precincts;**

Within Thornton and Cattai Precincts, the density is increased from 2 lots per hectare under LEP Amendment 145 (effectively 4000m<sup>2</sup> to 4500m<sup>2</sup> lots once road areas are deducted), to minimum 2500m<sup>2</sup> lots.

The density within the eastern part of Cleary Precinct is increased from 3 lots per hectare (effectively 3000m<sup>2</sup> lots) to minimum 2000m<sup>2</sup> lots.

**Extending the Rural Housing zone over Blighton and parts of Cleary Precincts;**

The Rural Housing Zone with a 2000m<sup>2</sup> minimum size lot provision (as described above for the eastern part of Cleary Precinct) is extended over the remainder of Cleary Precinct.

The Rural Housing Zone is also extended over Blighton Precinct with a minimum 1 hectare lot size, combined with the Conservation Zone) in the northern part of the Precinct and 2000m<sup>2</sup> lots over the remainder.

The resulting lot numbers compared to those that would have been achieved under LEP Amendment 145 are set out in **Table 2**.

The following provides a summary of the assessment of the proposed rezoning and consequent development with regard to the relevant planning context.

**Table 9** provides a summary of state, regional and local statutory and policy planning provisions relevant to the proposed LEP amendment and implications for the redevelopment of Pitt Town. The proposal also provides an assessment in respect of each provision and a conclusion as to the consistency of the proposal with those provisions.

<b>Metropolitan Strategy</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
Environment and Resource Strategy	As detailed under the heading of SREP 20 in this Table the proposal does not affect any rural or resource land.  Aboriginal and European heritage has been addressed in Section 8.3 of this EA. Generally, the proposal protects items and areas of significance and recommends additional items be added to LEP.	Consistent
Housing Strategy	The proposal involves additional housing on land approved for urban purposes in close proximity to an urban centre, with potential for improved access thereto. For further details refer to Section 5.2.9 of this EA.	Consistent
Governance and Implementation Strategy	Refer to Section 5.2.9.	Consistent
<b>Subregional Strategy</b>		
Centres Hierarchy	The land is not identified as a centre within the Metropolitan Strategy. The land is indicated as being rural and resource land on the Metro Strategy Map, although the majority of the land is either not used for agricultural purposes or is zoned for housing of varying densities under LEP	Consistent

<b>Metropolitan Strategy</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
	Amendment No. 145 that would preclude productive agricultural activities.	
Housing Chapter: The housing chapter of the exhibited subregional strategies within the Sydney region contain objectives specific to each particular subregion which at the time of preparing this EA are unknown. The general actions relating to housing are		
C1.1 30-40% of new housing in land release areas.	The housing targets for the north west subregion are not available. The number of new lots to be created in addition to that already permitted under LEP Amendment No. 145 will not jeopardise these percentage targets.	Consistent
C1.2 Apply sustainability criteria for new urban development	BASIX will continue to operate for new housing.	Consistent
C1.3 Plan for increased housing capacity targets in existing areas	The housing targets for the northwest subregion are not available. Nonetheless, the proposal can assist in achieving the targets.	Capable of consistency
C1.4 Improve monitoring of future housing and employment supply	The monitoring of land supply is a state or local agency responsibility.	Not applicable.
C1.5 Facilitate redevelopment of existing apartments and higher occupation of existing dwellings	There are no existing apartments. Occupancy rates are not within the control of the proponent.	Not applicable
C2.1 Focus residential development around centres, town centres, villages and neighbourhood centres	Local services are available in Pitt Town. The proposal relates to land already zoned for housing of varying densities.	Consistent
C2.2 Promote self care housing for seniors and people with a disability	SEPP (Housing for Seniors or People with a Disability) 2004 will apply to appropriately zoned land to assist in achieving this action.	Consistent
C2.3 Provide a mix of housing	In the context of its location and the Hawkesbury DCP to preserve a village character, different forms of housing is not necessarily appropriate. The lots sizes will provide for a mix of detached housing.	Not inconsistent
C3.1 Renew local centres to improve economic viability and amenity	The additional population will support the existing Pitt Town centre.	Consistent
C4.1 Improve the affordability of housing	These actions apply to State government. The additional supply of land delivered by the proposal can assist in meeting the objectives of the State Plan.	Capable of consistency
C4.2 Redevelop and regenerate Department of Housing Stock	Not applicable.	Not applicable

<b>Metropolitan Strategy</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
C4.3 Use planning mechanisms to provide affordable housing	As noted above, the additional supply of land delivered by the proposal can assist in meeting the objectives of the State Plan.	Capable of consistency
C5.1 improve the design quality of new development	The existing Hawkesbury DCP controls are proposed to be amended which will assist in achieving this action.	Consistent

<b>Shaping Western Sydney</b>		
<b>Planning Policy/Plan and Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
Western expansion of Sydney not to cross Hawkesbury River	One of the key considerations of Shaping Western Sydney is that the westward expansion of Sydney should not cross the Hawkesbury River. The proposal is entirely east of the River. This is consistent with the Metropolitan Strategy which aims to recognise and protect the valued rural and resource lands extending to the Nepean–Hawkesbury. The proposed contained expansion of Pitt Town represent only a minor alteration to the urban footprint established by LEP 145 and would not be inconsistent with this objective, or the strategy in general.	Consistent

<b>Section 117 Directions</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
1.2 –Rural zones Objective – To protect the agricultural production value of rural land	<p>The density of the rural zone is proposed to be amended. Whilst the zone description is rural, the current densities would probably see the land nominated as Zone R5-Large Lot Residential under the Standard Instrument (Local Environmental Plans) Order 2005. The current zone is therefore more akin to a residential zone than a rural zone.</p> <p>Much of the land affected has been considered as part of the CW LES relating to LEP Amendment No. 145. Additional land has been addressed in the DFP Environmental Investigation for a proposed rezoning which received support from Hawkesbury City Council with a resolution to prepare a draft LEP.</p> <p>In terms of the objective of the Direction, the current housing densities of the rural zone do not encourage lots which are of a size viable for agricultural purposes. Further the land in the northern portions of the Cleary, Blighton and Thornton precincts is zoned Environmental Protection (Agricultural Protection) and adjoins</p>	Not inconsistent with the objective of the Direction.

<b>Section 117 Directions</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
	either existing Rural Housing zone or the Hawkesbury River both of which are likely to constrain the range of potential agricultural activities to which the land could be used.	
2.1 – Environmental protection zones Objective – To protect and conserve environmentally sensitive areas.	<p>The proposed rezoning involves changing part of the Environmental Protection – Agricultural Protection (Scenic) zone to a rural housing zone in the Blighton precinct and northern parts of Cleary and Thornton precincts. This is supported in part by the CW LES and by the DFP Environmental Investigation for a proposed rezoning which received support from Hawkesbury City Council. Larger lots of 1ha, 2500m<sup>2</sup> or 2000m<sup>2</sup> are proposed in these precincts to account for flooding constraints. Building zones will therefore be further south on each allotment and setback from the small escarpment. Residential development will be restricted by provisions to be included in the Pitt Town DCP on the remainder of these lots, thus providing a visual buffer to housing when viewed from the River or its northern bank providing similar protection given by the current zoning.</p> <p>The environmental protection provisions of the Hawkesbury LEP will be maintained for the land between the Rural Housing zone and Hawkesbury River. In addition this land is proposed to be transferred to Council which will also provide for its long term protection. The proposal is therefore consistent with the objective of the Direction.</p>	Not inconsistent with the objective of the Direction.
2.3 – Heritage conservation	<p>The existing Pitt Town Conservation Area and surrounding heritage items are not proposed to be altered.</p> <p>In addition, the identified Aboriginal, Historical, Archaeological and Historical Archaeological Landscape values will be recognised through a proposed Conservation Zones and Open Space Conservation Zone as for inclusion on the NSW State Heritage Register and as a heritage item under Hawkesbury LEP.</p>	Consistent
2.4 – Recreational vehicle areas	Rezoning of the land can incorporate appropriate provisions to protect environmental zones and preclude recreational vehicles if required.	Capable of consistency
3.1 – Residential zones	Proposal provides a range of allotment sizes from 550m <sup>2</sup> to 2500m <sup>2</sup> providing housing choice balanced with	Not inconsistent

<b>Section 117 Directions</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
	<p>environmental protection measures.</p> <p>There is no reduction in permissible residential densities in existing residential zones, with a marginal reduction in minimum lot sizes in part of Bona Vista and Fernadell Precincts.</p> <p>The proposal will provide for additional housing and thereby make better use of existing utilities infrastructure currently available to service the area. Roads and community infrastructure already exists and will be progressively augmented as set out in Section 3.2.3.</p>	
3.4 – Integrated land use and transport	<p>Future housing will be proximate to Pitt Town village with higher densities on land closest to Pitt Town village and the public school.</p> <p>The proposal will provide for pathways and cycleways to reduce car dependency. As far as possible, the road layout is permeable.</p> <p>The roads are suitable for a bus route to provide public transport choice within the area. Further public transport options are available at Mulgrave Railway Station approximately 6km from the study area.</p>	Consistent
4.1 - Acid sulphate soils	<p>Studies have indicated the potential for impact on ASS if excavation occurs below 1.5m. The proposal will not require excavation to these depths.</p> <p>If excavations below 1.5 metres are proposed within Blighton, Cleary or Thornton Precincts an Acid Sulphate Soils Management Plan can be prepared in accordance with existing provisions in Hawkesbury LEP.</p>	Consistent
4.3 –Flood prone land	Proposal does relate to flood liable land. No housing is proposed below the 100 year flood level.	Consistent
4.4 – Planning for bush fire protection	The proposal has been assessed under the provisions of Planning for Bushfire Protection 2006 – refer to <b>Section 8.4.</b>	Consistent

<b>Planning Circulars</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
<p>PS 05-008</p> <ul style="list-style-type: none"> <li>- LEP Amendments to be consistent with Standard LEP as far as possible;</li> <li>- EPIs may require DCP to be prepared for a site/s before development is carried out</li> <li>- DCPs may be prepared by, or</li> </ul>	<p>Proposal does not include any additional zones or provisions inconsistent with Standard LEP. Proposal includes amendments to LEP to:</p> <ul style="list-style-type: none"> <li>- Amend lot size averaging provisions</li> <li>- incorporate lot size provisions as</li> </ul>	Consistent

<b>Planning Circulars</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
on behalf of owner of land	text on the LEP map, consistent with the <i>Standard Technical Requirements for LEP maps</i> - require DCP to be prepared for specified land holdings prior to development	
PS 06-005 – Information required by Department of Planning when requesting LEP amendments	See separate comments in <b>Table 9</b> below.	Consistent

<b>State Environmental Planning Policies</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
SEPP 11 – Consultation with Roads and Traffic Authority	Refer to Traffic Report by MWT ( <b>Appendix F</b> ). Consultation can proceed as part of the Concept Plan Application referral procedures.	Consistent
SEPP 19 – Consideration of policy aims in relation to bushland protection	Refer to Flora and Fauna Assessments ( <b>Appendices G and H</b> ).	Consistent
SEPP 55 – Consideration of land contamination and remediation	Refer to Preliminary Contamination Assessment ( <b>Appendix M and N</b> ).	Consistent

<b>Regional Environmental Plans</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
SREP 20 Impact on environment and heritage items  Impact on scenic quality  Agriculture/aquaculture and fishing to be protected from adverse impacts of other forms of development. (a) Give priority to agricultural production in rural zones.	Proposal retains items and areas of significance and recommends additional items be added to LEP Issues of scenic quality are addressed in Section 8.8 of this EA report  The site analysis presented in <b>Section 2</b> illustrates that the majority of the land within or adjoining the study area is not used for agricultural production. The nearest agricultural activities are well removed being located in Pitt Town Bottoms or on the opposite side of the Hawkesbury River in Freemans Reach or Wilberforce. LEP Amendment No.145 has already reviewed lot sizes for the majority of the site permitting lot sizes that would not be capable of supporting agricultural uses.	Consistent  Mitigation measures achieve consistency  Consistent
(b) Ensure zone objectives and minimum lot sizes support the continued agricultural use of Class 1, 2 and 3 Agricultural Land (as defined in the Department of Agriculture's Agricultural Land Classification Atlas) and of any other rural land that is currently sustaining agricultural production. (c) Incorporate effective separation between intensive agriculture and adjoining uses to mitigate noise, odour and visual impacts.	The majority of the additional lands to be reviewed in terms of density are not presently used for agricultural purposes. The majority of land is already zoned for residential development of varying densities through LEP Amendment No. 145. The Blighton and Cattai Precincts are the main areas of land in	Consistent

<b>Regional Environmental Plans</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
(d) Protect agricultural sustainability from the adverse impacts of other forms of proposed development.	which the dwelling density is proposed to be amended. There are no agricultural uses carried out on land surrounding the Blighton or Cattai Precincts that would create a conflict between land uses. Given physical constraint of the land surrounding these precincts (lots sizes, flooding and vegetation) it is unlikely that adjoining lands would be used for agricultural purposes in the future thereby ensuring consistency with this objective in the medium – long term. As noted there is little agricultural activity either within or adjoining the study area. If agricultural activities are established in the future, then the proposed residential development would have a very low potential for impacts upon surrounding agricultural land. Water quantity and quality mitigations measures would assist in this regard which are discussed in Section 8.6 of this EA report.	Consistent
(e) Consider the ability of the site to sustain over the long term the development concerned.	This strategy appears to be more applicable to other land uses such as extractive industries or agricultural activities. The proposed residential land use is considered to be sustainable over the long term.	Consistent
(f) Consider the likely effect of the development concerned on fish breeding grounds, nursery areas, commercial and recreational fishing areas and oyster farming.	Although there is no evidence of such activities within or adjoining the study area, the water quality mitigations measures outlined in Section 8.6.1.2 of this EA report will address this strategy of the SEPP. Aquatic impacts from the boat ramp can be managed as addressed in Section 8.1.4.	Consistent

<b>Local Environmental Plans</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
Hawkesbury LEP 1989 - Overriding Objectives - Zoning of land - Land Subdivision - Heritage items	Proposal will allow for the orderly and economic development and conservation of land, protect landscapes, protect heritage and allow opportunities for a variety of housing.  Proposal involves only changes to the distribution of zones and does not involve any additional zones.  Proposal does not alter the minimum residential lot size permissible in the LGA.  Proposal retains items and areas of significance and recommends additional items be added to LEP.	Consistent



<b>Development Control Plans</b>		
<b>Key Issues</b>	<b>Assessment/Comments</b>	<b>Conclusion</b>
<p>Hawkesbury DCP</p> <ul style="list-style-type: none"> <li>- Desired Future Character for Pitt Town</li> <li>- Land Use</li> <li>- Lot Design</li> <li>- Street Design</li> <li>- Bus and Cycle Routes</li> <li>- Community Facilities</li> <li>- Public Open Space and Recreation</li> </ul>	<p>Proposal will retain rural village character and does not alter existing building siting or design provisions.</p> <p>Proposal involves minor adjustments to location and land uses and does not include any additional land uses.</p> <p>Proposal reduces minimum residential lot size consistent with other parts of the LGA that will not detrimentally impact on desired character.</p> <p>Proposal maintains general street pattern and design standards.</p> <p>Proposal retains provisions relating to bus and cycle routes.</p> <p>Proposal introduces additional public open space and community facilities consistent with council accepted rates.</p>	Consistent

*Table 9 – Planning and Policy Provisions*

As indicated in **Section 5.2.13** of this report, Planning Circular PS 06–005 sets out evaluation criteria for proposed LEP amendments. The proposed amendments to Hawkesbury LEP 1989 would constitute a “Precinct” LEP as described by PS 06-005 as they involve only part of the LGA and are essentially a review of existing planning provisions. An assessment of the proposal against the evaluation criteria for a Precinct LEP is provided in **Table 10**.

<b>LEP Pro-forma Evaluation Criterion</b>	<b>Assessment</b>
Will the LEP be compatible with agreed State and regional strategic direction for development in the area (eg land release, strategic corridors, development within 800 metres of a transit node)?	<p>The proposal will enable additional housing to be constructed in an area zoned for urban development and rural housing. Additional land is also proposed for rural housing. The proposed rezoning is consistent with the Metropolitan Strategy by assisting in achieving 20,000 new dwelling housing target for “other Greenfield areas” in the northwest subregion.</p> <p>The proposal is wholly to the east of the Hawkesbury River and is therefore also consistent with the current regional strategic direction of Shaping Western Sydney.</p>
Will the LEP be consistent with agreed centres and sub-regional planning policy for development in the area?	Shaping Western Sydney is the current relevant strategy document pending the adoption of the Northwest Subregional Strategy. The proposal is considered to be consistent with the plan as it will enable additional safe and affordable housing to be provided to the east of the Hawkesbury River on existing urban land, whilst providing opportunities for economic growth, employment and protecting the environment.
Is the LEP located in a global/regional city, strategic centre or corridor nominated within the Metropolitan Strategy or other regional/subregional strategy?	The area subject to the proposal is not within a city, centre or corridor as nominated in the Metropolitan Strategy however, it is spatially proximate to the North West Growth Centre and in a Subregion nominated for substantial housing growth (28% increase by 2031)

<b>LEP Pro-forma Evaluation Criterion</b>	<b>Assessment</b>
Will the LEP facilitate a permanent employment generating activity or result in a loss of employment lands?	The proposal will not facilitate a major employment generating activity however, it will facilitate substantial short term employment opportunities during construction as well as long term employment opportunities associated with the proposed community and recreational uses within the study area. The proposal does not result in the loss of employment lands.
Will the LEP facilitate the provision of public transport?	The proposal will not directly facilitate the provision of public transport however, it is likely to improve the commercial viability for public transport provision in the locality given an increased catchment and this is likely to be beneficial to existing and future residents.
Will the LEP implement studies and strategic work consistent with State and regional policies?	The proposal will facilitate the implementation of the State's Housing Strategy by enabling additional housing to be provided either within land currently zoned for urban development or proximate to an existing urban area.

*Table 10 – Evaluation Criteria for Precinct LEP under PS 06.005*

Overall, the proposed planning controls and consequent development is considered to be generally consistent with the various specific planning policies, will not compromise the local planning strategies of Council or impede the ultimate adoption of a Standard LEP for Hawkesbury and will assist in achieving the broader objectives of the Metropolitan Strategy by facilitating further housing opportunities. These housing opportunities are to be substantially realised within the urban footprint established by LEP 145 with no significant environmental impacts as outlined and discussed below.

## **13 Proposal Justification and Conclusion**

### **13.1 Summary of Opportunities and Constraints**

This study has assumed the outcomes of the CW LES and gazettal of LEP Amendment No 145. This study has then considered the additional development now proposed and the impacts of that development.

In summary:

- The increased density proposed within the footprint of the Connell Wagner LES and LEP Amendment No 145 is considered to have negligible impacts, but will allow more efficient development;
- Development within the area previously deferred because of the need for additional heritage investigation is considered to be acceptable and sufficient provision has been made for the heritage values of Blighton and Governor Bligh's model farm, as well for the aboriginal archaeological and heritage values of the area;
- Conservation areas can be set aside to protect the heritage and scenic values;
- The historical boundary lines have largely disappeared with re-subdivision over the years. The tree windrows are not historical and were planted relatively recently;
- There are no threatened species or habitats impacted by the larger development footprint, although the relevant consultants made recommendations to enhance and reinforce riparian planting along the banks of the Hawkesbury River;
- The proposed development will have no unacceptable visual impacts;
- The increased density will reduce the cost per lot of infrastructure upgrading,
- The proposal includes dedication of open space beside the Hawkesbury River;

- The Connell Wagner LES proposed larger lots along the existing roads (Bathurst Street, Bootles Lane etc). This concept is considered to be desirable and has been extended to Hall Street and Punt Road in the current proposal;
- The rectangular street pattern adopted in the Connell Wagner LES is also considered desirable and has been extended through the current proposal;
- The existing flood evacuation route has sufficient capacity to evacuate the increased population without upgrade.

### **13.2 Justification and Conclusion**

The EA has assumed the outcomes of the CW LES and gazettal of LEP Amendment No. 145 and then considered the additional development proposed by the Concept Plan.

This EA has considered the range of environmental impacts and other assessment requirements identified in the Director General's Requirements:

- Urban Design and Built Form – the proposed development will generally comply with the provisions of the Hawkesbury DCP, although some changes are suggested to the DCP to make it comply with the proposed layout and to building design guidelines;
- River Foreshore and Public Access – open space will be transferred to Council to ensure public access to this feature;
- Biodiversity – there will be no impacts on threatened species or communities. Vegetation adjoining Bona Vista Precinct will be retained, while a riparian corridor will be provided adjoining the Hawkesbury River. Water quality facilities will ensure no impacts on downstream users;
- Traffic and Transport – the Pitt Town Road improvement works will cater for the increased traffic resulting from the development with no further works required.
- Heritage – the increased density will have negligible impacts on the area already zoned for residential development under LEP Amendment No 145. Extensive investigations into the European and Aboriginal heritage of the deferred area has shown that the proposed development can be managed and will have acceptable impacts.
- Utilities and Infrastructure – the proposed development can be serviced and construction is already under way to augment trunk water, sewerage, electricity and gas mains. Drainage and stormwater measures are proposed to minimise impacts on water quality;
- Ecologically Sustainable Development – the EA demonstrates how the development will commit to ESD principles;
- Bushfire – adequate asset protection zones will be provided around the retained vegetation adjoining Bona Vista Precinct. No other parts of the site are bushfire prone;
- Flooding – the EA assesses the proposed development and concludes that it meets the appropriate criteria, including the need to evacuate during major flood events;
- Planning Agreements – the proposal includes transfer of open space and construction of playing fields, playgrounds and community facilities. JPG is continuing to discuss the level of community facilities to be provided with Council and the Department of Planning;
- Statutory matters – the EA addresses the relevant statutory matters.

The increased density within the footprint of LEP Amendment No. 145 is considered to have negligible impacts, while development within the area deferred in the north-west of

the site is considered to be acceptable with sufficient provision being made for the heritage values of Blighton as well as for Aboriginal archaeological and heritage values.

The development proposal is generally considered to have negligible and/or acceptable impacts and will result in a number of positive benefits including transfer of open space beside the Hawkesbury River, construction of a community centre near the Pitt Town Public School and recognition and preservation of historical fence lines.