REGROWTH

KURRI KURRI

PLANNING PROPOSAL

Hart Road Loxford, Cessnock Road Cliftleigh & Bowditch Avenue Loxford

ESS AUSTRALIA

QUALITY REVIEW AND DOCUMENT HISTORY

Version	Date	Prepared By	Reviewed By
Prelim Draft	30/03/15	S Sullivan	J Whiting
Draft for Review	08/04/15	S Sullivan	B Fuller
Prelim Final	08/04/15	S Sullivan	R Brown
Final	26/05/15	S Sullivan	B Fuller

Terms and Abbreviations

BCAM	Biodiversity Certification Assessment Methodology
CBD	Kurri Kurri Central Business District
Cessnock LEP	Cessnock Local Environmental Plan 2011
Cessnock LGA	Cessnock Local Government Area
Council	Cessnock City Council
DCP	Development Control Plan
EP&A Act	Environmental Planning & Assessment Act, 1979
Hydro	Hydro Aluminium Kurri Kurri Pty Ltd
Hydro Land	the former Hydro Aluminium Smelter and surrounding buffer lands (the full extent of the Hydro landholding)
Hydro Masterplan	Hydro Kurri Kurri Masterplan (covering the full extent of Hydro land)
Hydro Rezoning Masterplan	Hydro Kurri Kurri Rezoning Masterplan (covering the full extent of the Hydro land)
Hydro Rezoning Plan	Hydro Kurri Kurri Rezoning Masterplan (that relates to the extent of Hydro land within the Cessnock LGA)
LEP	Local Environmental Plan
LEP Amendment	Local Environmental Plan Amendment
LGA	Local Government Area
LHRS	Lower Hunter Regional Strategy
OEH	NSW Office of Environment and Heritage
RMS	NSW Roads and Maritime Services
the Site	The former Hydro Aluminium Smelter and surrounding buffer lands within the Cessnock LGA

the Smelter	former Hydro Aluminium Kurri Kurri Smelter
VPA	Voluntary Planning Agreement

Executive Summary

Hydro Aluminium Kurri Kurri Pty Ltd (Hydro) owns and manages approximately 2,000 hectares of land at Loxford, NSW, that was used for the former Hydro Aluminium Kurri Kurri Smelter (the Smelter) and adjacent buffer lands (Hydro Land). The Smelter ceased operations in September 2012, with Hydro formally announcing the closure of the Smelter in May 2014. To mark this new phase in the regions' history, Hydro is renaming the redevelopment project ReGrowth Kurri Kurri and providing a consistent identity through a new brand image for the project. The name symbolises the new start for the site, and the promise of prosperous futures for residents, businesses, and for the environment.

The majority of the Hydro Land (approximately 1440 hectares) is located in the north eastern area of the Cessnock LGA, with the remainder of the Hydro Land located within Maitland LGA.

The Hydro Land is strategically located in close proximity to the existing centres of Cessnock, Kurri Kurri and Maitland with access to existing significant infrastructure including the South Maitland Railway, Hunter Expressway and Kurri Kurri Waste Water Treatment Works. It is located approximately 33 kilometres to the northwest of the Newcastle CBD.

Figure 1 –Hydro Aluminium Smelter as viewed from the north

Given the scale and strategic location of the Hydro Land, and its limited development constraints, the Hydro Land has the potential to play a key role in achieving the economic, employment and environmental objectives for the Hunter Region identified in the NSW State Plan 2021, Lower Hunter Regional Strategy and the Hunter Regional Action Plan.

Hydro aims to achieve this strategic vision by the rezoning and enabling of development within the Hydro Land for significant employment, residential and biodiversity conservation purposes. The Hydro Kurri Kurri Masterplan at Figure 2 identifies the proposed uses that are considered suitable for the Hydro Land.

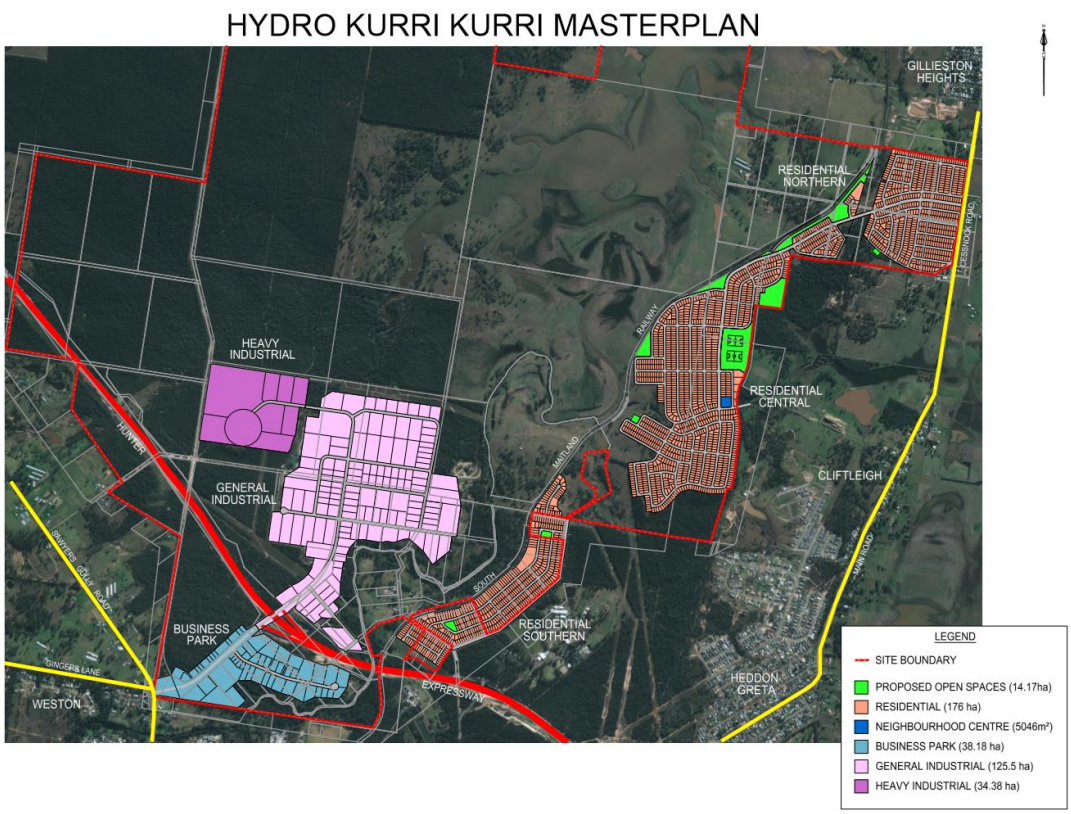

Figure 2 –Hydro Kurri Kurri Masterplan.

This Planning Proposal seeks to rezone that part of the Hydro Land within Cessnock LGA (the Site) to include the following zones under Cessnock LEP:

- R2 Low Density Residential;
- RE1 Public Recreation;
- RU2 Rural Landscape;
- SP2 Infrastructure;

- B1 Neighbourhood Centre;
- B7 Business Park;
- IN1 General Industrial;
- IN3 Heavy Industrial; and,
- E2 Environmental Conservation.

The proposed boundaries for the above zones are identified in the Hydro Rezoning Plan at Figure 3. The remainder of the Hydro Land (approximately 560 hectares) is located within Maitland LGA and will be subject to a separate planning proposal with Maitland City Council to give effect to the Hydro Rezoning Masterplan.

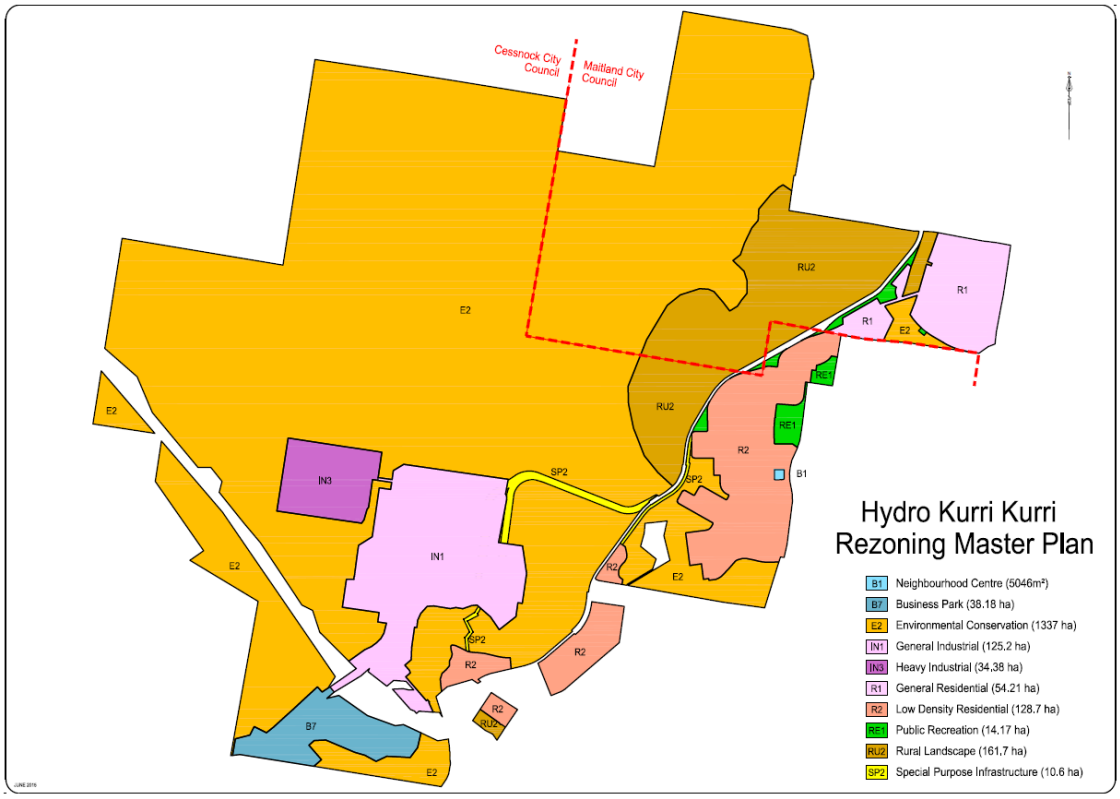

Figure 3 –Hydro Rezoning Masterplan

The proposed rezoning and redevelopment of the Site will create a number of significant economic, social and environmental benefits for the Hunter Region including:

- Ongoing jobs expansion of approximately 6,900 jobs, with 3,840 blue collar jobs and 3,060 white collar jobs (full-time, part-time and casual direct jobs);

- Creation of 13,160 direct construction jobs and 20,710 indirect supplier jobs, for a total construction phase employment benefit of 33,870 jobs (full-time, part-time and casual jobs);
- Expansion of ongoing jobs will result in an additional $448.6 million worker income per annum;
- Expansion in population from the delivery of new housing and subsequent population growth is expected to expand local retail spend by $58.4 million at full development;
- Provision of new community infrastructure and open space which will support an active community and encourage healthy lifestyles;
- The social benefit of local employment opportunities and economic growth through the inclusion of areas zoned as Business Park, General Industry and Heavy Industry, and through the subsequent construction of the proposed developments;
- Planning Proposal will support a community with a unique sense of place;
- Design principles that support creation of a socially sustainable community; and
- Preserving almost 1,350ha of environmental land under an E2 Environmental Conservation zoning, and another 162ha of rural land under an RU2 Rural Landscape zoning.

In assessing the Site capability, Hydro has adopted a ‘balanced outcome’ approach regarding biodiversity conservation. This approach aims for all impacts of future development that may result from the rezoning of land to be offset within the Site and a detailed biodiversity assessment has been completed in accordance with the BCAM. As a result of this analysis. Hydro has commenced an approval pathway to obtain Biocertification for the proposed rezoning with Council nominating this pathway to the NSW Office of Environment and Heritage as the preferred method for resolving any biodiversity impacts at the rezoning stage.

The objective of the Biocertification process is to secure biodiversity conservation measures within a significant area of the Site that will offset the potential impacts of the Planning Proposal on biodiversity values. This strategic approach at an early planning stage avoids piecemeal conservation and will see a large area set aside for environmental protection, before any land has been developed. A key benefit is that the community can have greater certainty that there is land already set aside for protection before a single tree is disturbed. The Biocertification process shall run concurrently with the Planning Proposal. Once approved, the Biocertification shall create one of the largest and most unique biobank sites within the Hunter Region.

The Hunter Expressway will shape the way that the Hunter Region is developed over the coming decades. The location for the proposed employment land is triggered by regional

transport infrastructure that will facilitate ongoing economic development. The rezoning will facilitate direct connection of the employment land to the South Maitland Railway via a proposed SP2 Infrastructure corridor. This combination of significant road and rail access shall provide the ReGrowth Kurri Kurri site with a unique position in the Hunter Region.

Key infrastructure components, including the Hunter Expressway and Kurri Kurri Waste Water Treatment Works, have underlined the potential of the Site to accommodate urban development. The provision of water and wastewater treatment for the proposed urban land can be achieved with minimal public infrastructure works.

This Planning Proposal has been prepared in accordance with Section 55 of the EP&A Act, and to the requirements contained in 'A Guide to Preparing Planning Proposals' prepared by the NSW Department of Planning.

Given the above strategic planning merit, we request that Council forward this Planning Proposal to the Minister for Planning for a 'gateway determination' in accordance with section 56 of the EP&A Act.

Introduction

This Planning Proposal is submitted to Council to rezone the Site under Cessnock LEP to include:

- R2 Low Density Residential;
- RE1 Public Recreation;
- RU2 Rural Landscape;
- SP2 Infrastructure;
- B1 Neighbourhood Centre;
- B7 Business Park;
- IN1 General Industrial;
- IN3 Heavy Industrial; and,
- E2 Environmental Conservation.

ESS Australia (ESS) has prepared this Planning Proposal on behalf of Hydro. The purpose of the Planning Proposal is to facilitate the redevelopment and investment in the Site for significant employment, residential, rural and biodiversity conservation purposes.

The remainder of the Hydro Land (approximately 560 hectares) is located within Maitland LGA and will be subject to a separate planning proposal with Maitland City Council to give effect to the Hydro Rezoning Masterplan.

This Planning Proposal has been prepared in accordance with section 55 of the EP&A Act, and the guideline prepared by the Department of Planning dated July 2009 entitled “A guide to preparing Planning Proposals”. In particular, this Planning Proposal addresses the following specific matters in the guideline:

- Objectives and intended outcomes;
- Explanation of provisions;
- Justification;
- Need for the Planning Proposal;
- Relationship to strategic planning framework;
- Environmental, social and economic impact;
- State and Commonwealth interests; and
- Community consultation.

ESS requests that Council forward this Planning Proposal to the NSW Minister for Planning for a ‘gateway determination’ in accordance with section 56 of the EP&A Act.

Site Description

The Site subject of this Planning Proposal comprises approximately 1440 hectares of the Hydro Land in the north eastern area of the Cessnock LGA.

The Site is a significant landholding within the Lower Hunter Region, being strategically located on the northern side of Kurri Kurri, with the South Maitland Railway running through the east of the Site and the Hunter Expressway running through the south west of the Site. The Site is in close proximity to the existing centres of Cessnock, Kurri Kurri and Maitland (refer to Figure 4 below).

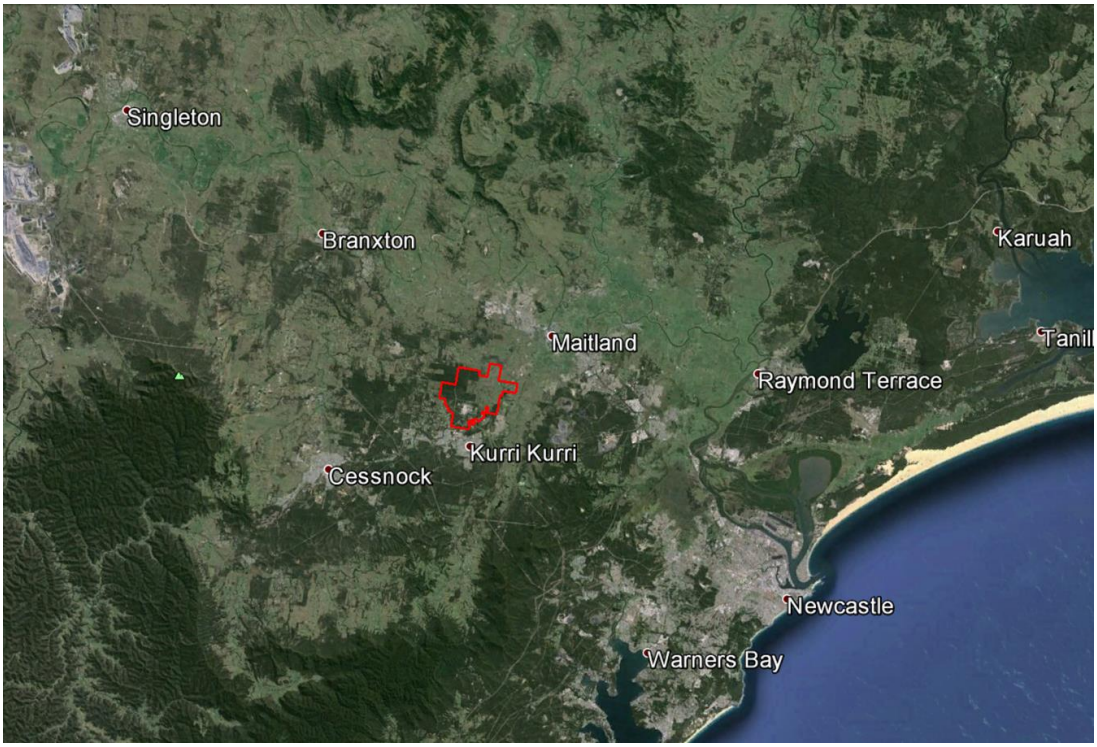

Figure 4 –The Hydro Landholding within a broader regional context.

The legal description of the Site is set out in **Appendix A**.

Current Controls under Cessnock LEP

The Site is currently zoned RU2 Rural Landscape and E2 Environmental Conservation under the Cessnock LEP. Transecting the Site is the Hunter Expressway and South Maitland Railway corridor that are both zoned SP2 Infrastructure under Cessnock LEP.

The current land use zones for the Site under Cessnock LEP (and the remainder of the Hydro Land under Maitland LEP) are identified within Figure 5 below.

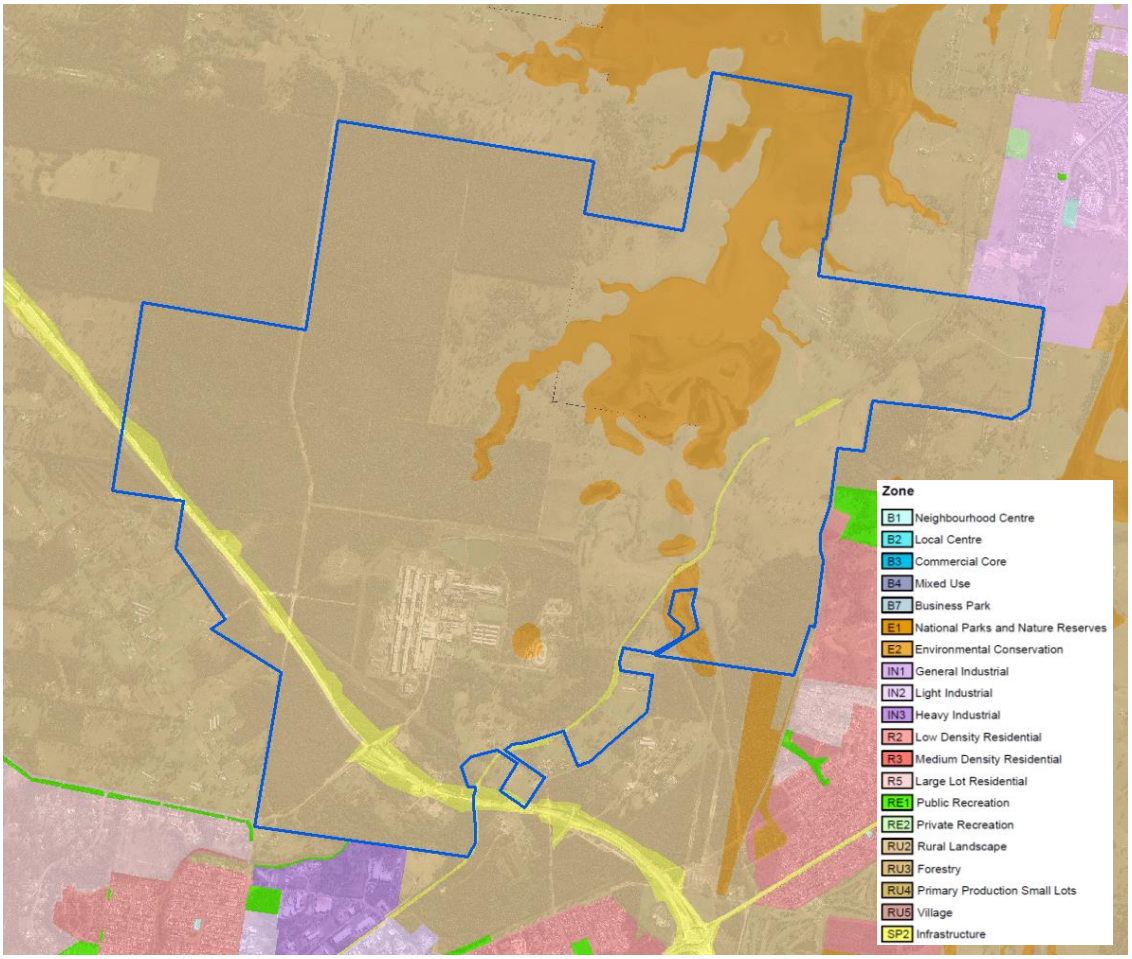

Figure 5 – Current Zoning for the Hydro Land under Cessnock and Maitland LEPs*.*

PART 1: OBJECTIVES OR INTENDED OUTCOMES

It is Hydro's strategic vision for the Site to play a key role in allowing the Hunter Region to achieve the economic, employment and environmental objectives identified in the NSW State Plan 2021, Lower Hunter Regional Strategy, Cessnock City Wide Settlement Strategy and the Hunter Regional Action Plan. Hydro aims to achieve this strategic vision by facilitating the rezoning and development of the Site for significant employment, residential, rural and biodiversity conservation purposes.

The objectives of this Planning Proposal are;

1. To rezone the Site to permit employment and residential development;
2. To rezone land in support of conservation objectives for the Site;
3. To manage the interface between the land uses;
4. To minimise the fragmentation of the residual rural land;
5. To maintain and enhance the conservation value within the Site; and
6. To respond to the constraints on the Site.

Figure 6 –North eastern extent of the Hydro Site, with Cessnock Road on the foreground, proposed residential development area in the mid ground and Smelter in the background.

PART 2: EXPLANATION OF PROVISIONS

The proposed objectives and outcomes for the Site will be achieved by:

- Amending the Land Zoning Map for Cessnock LEP to change the zoning for the Site from RU2 Rural Landscape and E2 Environmental Conservation to:
    - B1 Neighbourhood Centre,
    - B7 Business Park,
    - E2 Environmental Conservation,
    - IN1 General Industrial,
    - IN3 Heavy Industrial,
    - R2 Low Density Residential,
    - RE1 Public Recreation;
    - RU2 Rural Landscape, and
    - SP2 Infrastructure.

    The boundary of the proposed zones for the Site are set out in the Hydro Rezoning Plan (refer Figure 7 below).

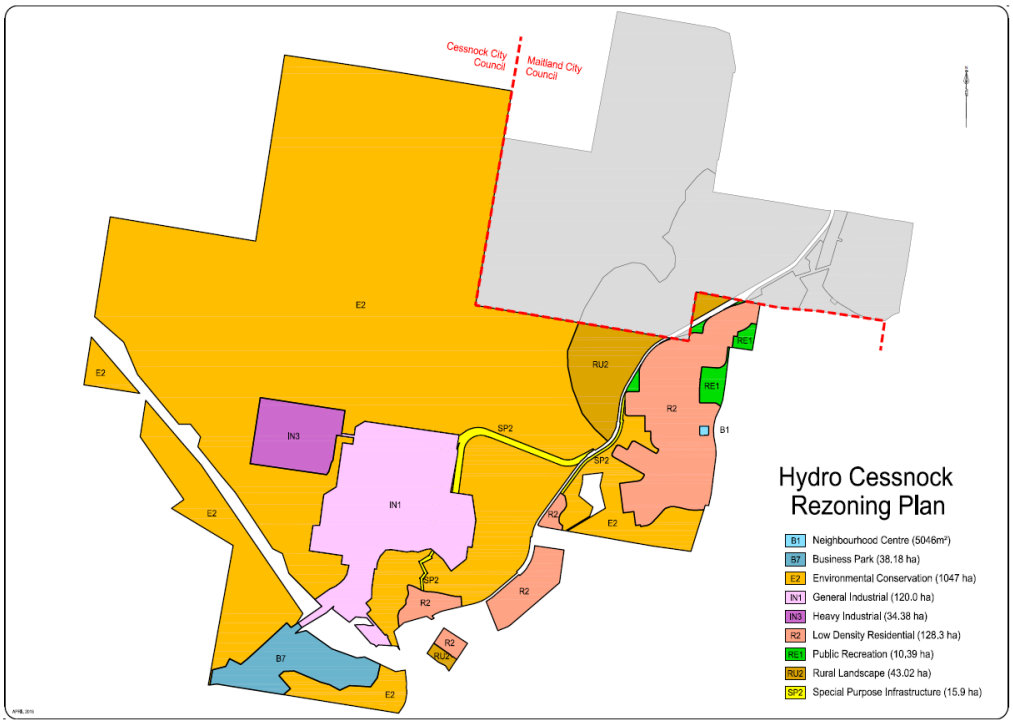

Figure 7 – Hydro Rezoning Plan for the Site.

- Amending the Lot Size Map for Cessnock LEP so that the minimum lot size reflects the changed residential zonings for the Site.

Council may seek to amend other planning controls in Cessnock LEP to facilitate the redevelopment of the Site in accordance with the Hydro Rezoning Plan including the Floor Space Ratio Map, Height of Buildings Map and Urban Release Area Map.

PART 3: JUSTIFICATION FOR PROPOSED REZONING

In accordance with the Department of Planning's 'Guide to Preparing Planning Proposals', this section provides a response to the following issues:

- Section A: Need for the planning proposal;
- Section B: Relationship to strategic planning framework;
- Section C: Environmental, social and economic impact; and
- Section D: State and Commonwealth interests.

SECTION A – NEED FOR THE PLANNING PROPOSAL

1. Is the planning proposal a result of any strategic study or report?

The need for this Planning Proposal is due to the decision to close the Smelter, the opportunities that have arisen due to the closure and the demand for employment and residential land. Hydro has been a long standing economic driver and employer within the community, with the proposed employment land providing long term replacement of job losses that resulted from the closure. High demand and low supply of residential land in the Lower Hunter has generated housing affordability issues. Within the Cessnock LGA there has been limited land releases, with the Huntlee and Avery's Village developments only recently commencing construction. The proposed residential land will ease housing pressure within the Cessnock LGA.

As part of the closure decision Hydro commenced a range of strategic planning studies in 2013 to determine land use capability within the Site. Key elements in the initial land use assessment were:

- Infrastructure;
- Transport;
- Flooding;
- Industrial Land Supply; and,
- Urban Design.

The initial assessment found that the Site was well located within the Lower Hunter, had good connections to key infrastructure and would provide opportunities to facilitate future development. There are areas within the Site that are suited to urban purposes, being employment and residential in nature, for conservation purposes and land that shall remain rural.

The proposed zoning of the Site is compatible with the aims and objectives of the Cessnock City Wide Settlement Strategy (CCWS). The CCWS indicates opportunities should be provided for additional sites to develop employment lands, with the Site being compliant with such direction. With respect to residential land the CCWS states that the timing and release of land will ultimately be dictated by the provision and service delivery of infrastructure, in particular, the ability of HWC to provide a reticulated water and sewer system to the identified urban release areas.

2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The Planning Proposal is the best means of achieving the objectives and intended outcomes of permitting future development on the Site. This method is consistent with Council's strategic management of land uses for similar proposals within the Cessnock LGA.

3. Is there a net community benefit?

Hydro has considered the impact upon the community that may result from the proposed rezoning of the Site. It is considered that there is a positive net community benefit as a result of the Planning Proposal.

Identified benefits of the Planning Proposal for the local community include:

- Enabling the provision of new housing stock in a range of sizes, styles and price points, which will directly contribute to the NSW Government target for new housing, as well as State Government and Council policies for new housing
- A subdivision layout that extends, consolidates and links into, existing communities rather than creating new, stand-alone, isolated residential areas
- Provision of new community infrastructure and open space which will support an active community and encourage healthy lifestyles
- The potential for much needed local employment opportunities and economic growth through the inclusion of areas zoned as Business Park, General Industry and Heavy Industry, and through the subsequent construction of the proposed developments
- Planning will support a community with a unique sense of place
- Permeability and access within the Site layout and between these new communities and surrounding areas
- A Site layout that will be accessible to people of all ages and abilities and a range of income groups
- Road layout that will be accessible for buses
- Design principles that support creation of a socially sustainable community

The Social and Economic Impact Assessment prepared by Elton Consulting is contained with **Appendix L**.

SECTION B – RELATIONSHIP TO STRATEGIC PLANNING FRAMEWORK

4. Is the planning proposal consistent with the objectives and actions contained within the applicable regional or sub-regional strategy?

The Site is within the geographic area covered by the Lower Hunter Regional Strategy, with the Strategy stating:

> *'The primary purpose of the Regional Strategy is to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the Region's population over the next 25 years. The Government's vision for the Lower Hunter embraces a sustainable future for the Region — balancing environmental, economic and social outcomes so that quality of life can be enhanced without burdening future generations.'*

The LHRS aims to provide for up to 115,000 new dwellings across the region by 2031, with 60% of the new dwellings to be located within new greenfield release areas. The Cessnock LGA has a number of existing urban release area identified in the LHRS.

The LHRS is a strategic document that sets out the broad planning growth within the region, which includes the Cessnock LGA. The LHRS identifies specific actions and targets relating to the location and form of future housing, employment and the development of land in and around identified centres. This Planning Proposal is consistent with the LHRS as described below.

A. A Vision for the Future

The Planning Proposal responds to the Strategy's vision in that it seeks to balance environment, economic and social outcomes within the Site. The key elements of the vision, being sustainable, affordable, prosperous and liveable, will all be realised through the future development that will result from the rezoning.

B. Centres and Corridors

The Site will support the regional centre of Cessnock and town centre of Kurri Kurri with economic growth from employment and housing. The provision of a small neighbourhood centre, for convenience goods and local services, will not undermine the overall centre hierarchy within the Strategy. The Strategy also identifies renewal corridors which present

opportunities for economic renewal and/or housing renewal and intensification. At a local level, since the commencement of construction of the Hunter Expressway, the area between the Maitland CBD and the Kurri Kurri Interchange has been viewed as a potential growth corridor. The rezoning of residential land within this corridor will support long term housing growth within the regional transport network.

C. Employment and The Economy

The LHRS states:

> *'The identification of a diverse range of employment land, including sites that differ in size, range of services and location, is important to provide the capacity to attract different employment generating businesses. The Lower Hunter requires employment land that not only accommodates its own economic growth, but also contributes to meeting the employment land needs of the broader metropolitan region of Sydney.'*

The Planning Proposal will provide up to 6,900 jobs at full development. The LHRS states that 25% of total new jobs will be located in employment lands, such as those proposed within the Site.

The Strategy outlines that in recent decades the supply of industrial land has often been inaccessible to major transport. The Site is strategically located in the region and adjacent to the Hunter Expressway, providing for employment land with direct access to key transport infrastructure.

D. Housing

The Site is strategically located between two release areas, being Gillieston Heights and Cliftleigh. The rezoning of approximately 128 hectares of residential land between these two release areas provides connectivity along an existing transport corridor. The proposal shall increase the amount of housing provided whilst maintaining a sustainable balance between the need for new greenfield land releases and the ability of existing urban areas to meet housing demand within the Cessnock LGA.

The inclusion of a neighbourhood shopping centre will provide for day to day convenience goods, the provision of medical or other services, and a location to social interaction and meeting places for the surrounding community.

It is considered that the application is an innovative land use proposal which is outside of the areas identified as future urban and as such can be considered. The application has addressed the Sustainability Criteria, identified within the Strategy, below.

E. Transport

The construction of the Hunter Expressway will influence and shape development within the broader Hunter Region, and influence freight movement within Northern NSW. The employment land proposed is ideally located to support the Government's significant investment in transport infrastructure.

The LHRS identifies the following outcomes for Transport within the Region:

> *'Integrated land use and transport planning to connect homes, employment and services, minimising the need to travel and encouraging energy and resource efficiency. Maximising the economic, social and environmental outcomes of strong connections within the Lower Hunter and from the Lower Hunter to the broader Greater Metropolitan Region, Australia and internationally.'*

The Planning Proposal is consistent with the identified outcomes in that it is providing employment and housing in areas connected to existing infrastructure. The Hydro Masterplan shows how the overall development can integrate with existing transport networks, limiting the need for any further Government infrastructure. The rezoning will facilitate direct connection of the employment land to the South Maitland Railway via a proposed SP2 Infrastructure corridor. This combination of significant road and rail access shall provide the ReGrowth Kurri Kurri site with a unique position in the Hunter Region.

F. Environment and Natural Resources

The Planning Proposal shall create one of the largest and most unique biobank sites within the Hunter Region. A detailed biodiversity assessment has been completed and the intention is to gain Biocertification of the project area pursuant to Biodiversity Certification Assessment Methodology (BCAM) (DECCW 2011). The LHRS supports Biocertification of local environmental plan amendments where adequate arrangements have been made to ensure biodiversity values will be maintained or improved.

The Biocertification process ensures conservation land is set aside to compensate for any impacts that occur as urban land is developed. This strategic approach at an early planning stage avoids piecemeal conservation and will see a large area set aside for environmental protection, before any land has been developed. A key benefit is that the community can have

greater certainty that there is land already set aside for protection before a single tree is disturbed.

The Biocertification of the project area shall establish a new benchmark for management of biodiversity at a strategic level in the Cessnock LGA and the Lower Hunter Region. The proposed conservation area contains a range of endangered ecological communities, threatened species, waterbodies and riparian corridors that will be maintained, or enhanced through management practices, in perpetuity. Despite the proposed biobank site being an isolated area of remnant vegetation, it will complement the broader conservation effort and planning identified for the significant green corridors of the Region.

Figure 8 –The Wentworth Swamps and remnant native vegetation located in the northern part of the Site.

G. Rural Landscape and Rural Communities

The Hydro Land has largely been zoned for rural purposes since the local planning instrument was developed. Despite the Site accommodating one of the Region's largest employers and vast areas of dense native vegetation, this historical rural land use zoning has been carried through subsequent environmental plans. A site assessment has identified that despite the majority of the Site being zoned as rural land, there is no regionally significant agricultural land

and only a small part of the Hydro Land could be considered as suitable for agriculture. Currently the cleared areas of the Site are used for low intensity grazing and a small number of poultry sheds, with this agricultural use linked to the historic 'Wangara' landholding that was acquired by Hydro in the early 1980s.

An area of approximately 160 hectares is identified within the Hydro Rezoning Masterplan as RU2 – Rural Landscape, with 43 hectares of the land within the Cessnock LGA and forming part of the rezoning application. This area includes the grazing land and poultry sheds that have historically been located within the Hydro Land as part of the Wangara landholding.

The LHRS identifies that rural land comprises 80% of the land within the Region. The Cessnock LGA has regionally significant agricultural land, including the vineyards district. No agricultural land within the Hydro Land, or within the vicinity, is identified as being of regional significance. The rural land that is retained is not significant agricultural land, however it will provide scenic amenity value as identified within the Strategy.

H. Natural Hazards

The Planning Proposal has identified the extent of flooding within the Site. The Wentworth Swamps are present within the Site, as well as a number of watercourses. The proposed urban areas have considered the risk of natural hazards within the Site assessment process.

I. Water

The supply of water and disposal of wastewater are two critical factors in urban development within the Region. The location and capacity of existing infrastructure, and costs to augment existing infrastructure, are important for the strategic planning of the Region. The Planning Proposal has considered the location and capacity of existing infrastructure, outing a full strategy for servicing the proposed urban land. Importantly, the provision of water and wastewater treatment for the proposed urban land can be achieved with minimal public infrastructure works.

J. Heritage

The Site contains some developed areas, but mostly large areas of undeveloped land that may contain artefacts or other evidence of Aboriginal occupation. An Aboriginal Cultural Heritage Assessment has been undertaken across the Hydro Land to consider potential impacts that may result from future development. The assessment did not identify any artefacts or areas of such significance that the land should not be zoned for urban purposes. In accordance with legislative requirements, further detailed site assessment shall be completed prior to any development with the Site.

LHRS Appendix 1 - Sustainability Criteria

The Sustainability Criteria was included so that Council and the Department of Planning & Environment can consider innovative development proposals even though they may be outside of the regional strategy process.

1. **Infrastructure Provision** Mechanisms in place to ensure utilities, transport, open space and communication are provided in a timely and efficient way

The Site is centrally located within the Lower Hunter Region, close to key pieces of infrastructure being the Hunter Expressway and Kurri Kurri Wastewater Treatment Works. Further, there is significant utility infrastructure running to and across the Site. As part of the Site assessment Hydro has prepared a Servicing Strategy that outlines connection of utilities for the full development Site (Appendix E). Key elements of the proposed strategy are that:

- Water - supply of potable water to the development would be based on a staging that provides security of supply in the short-term and adequate main sizes for the ultimate growth;
- Sewer - supply of sewer will be by means of conventional gravity mains draining to a series of Waste Water Pump Stations, each pumping flows to an adjacent catchment and ultimately to the Kurri Kurri Waste Water Treatment Works;
- Electricity - electricity will be delivered to the development through underground cable located in common shared trenching through the road reserves. Underground cabling will extend the Ausgrid feeder network at higher voltages to a series of above-ground kiosk substations that 'distribute' the electricity in the low-voltage network;
- Gas - connection to the gas network will be available and determined on a staging basis, with an assessment of the connection methods determined by Jemena Gas Networks once the first application is made; and,
- Communications - communications connections will be available and determined by the National Broadband Network (NBN Co) once the first application is made.

Regarding transport infrastructure, Hyder were engaged to undertake a Traffic and Transport Study (Appendix O), with their report finding that he proposed access on Hart Road via Loxford interchange with Hunter Expressway will enable the provision of efficient freight movements to and from the Site. The future provision of two west facing ramps at Loxford interchange will provide a direct connection to the west including Upper Hunter and beyond.

The revised Master Plan has proposed 603 dwellings at the Northern precinct, 1182 dwellings at the Central precinct and 303 dwellings at the Southern precinct. Traffic from both Northern

and Central residential precincts are likely to use new access proposed on the Cessnock Road and connect to the existing Cliftleigh development.

2. **Access** Accessible transport options for efficient and sustainable travel between homes, jobs, services and recreation to be existing or provided

Hyder were engaged to undertake a Traffic and Transport Study (Appendix O), with their report finding:

- The Master Plan for Site will create an environment that is friendly to pedestrians, cyclists and public transport users. A pedestrian network will be installed to provide for movements of pedestrians throughout the development area. The local roads within the development will be designed to provide safe walking and bicycle routes that link with other existing services and facilities in the vicinity of the Site.
- There is a potential to provide regular bus services, particularly at peak hours, and to provide safe and convenient bicycle and pedestrian links to nearby residential areas.
- Currently there is only 3 bus routes (route 160, 163 and 164) operated by Rover Coaches that traverses along Cessnock Road. Provision of more frequent bus routes connecting the development Site to nearby residential areas will increase dependence on public transport reducing dependence on cars.

The proposed rezoning has been carefully planned to recognise and complement the existing and planned urban form of neighbouring communities of Cliftleigh and Loxford / Heddon Greta, as well as the topography of the Site. The sub-division layout responds to the existing communities by extending existing or planned road networks so that residents of the new community can access established transport patterns and connections to the wider region. In particular, the Residential Central community would link into Cliftleigh via William Tester Drive and Residential Southern community would link into Loxford and Heddon Greta via McLeod Avenue. Access to and from the industrial and business park precincts is via Harts Road.

In finalising the subdivision layout, the internal road layout would be designed to accommodate possible future bus services through the Site which would better link the new community and employment areas to adjacent residential and commercial areas such as Kurri Kurri, Cessnock and Maitland.

3. **Housing Diversity** Provide a range of housing choices to ensure a broad population can be housed

The proposed rezoning identifies an area of approximately 128ha of mostly cleared grazing land for low density residential development. The terrain is mostly flat with some areas of moderate slope, however these areas are still suitable for residential development.

Changes to household structure over the next 15 years will see a substantial shift in dwelling composition with the most substantial areas of growth being couples without children (24.5% increase) and lone person households (48.1% increase). These increases will result in many downsizer moves from traditional dwellings to smaller, more compact and cost effective housing products.

In order to provide housing diversity and housing product mix it is imperative that the future subdivision design ensures the road network created is flexible and mindful of the overall development costs to be shared across the ultimate yield. Sydney's South West corridor is leading the way in terms of product diversity. That area is aiming, and currently achieving a high product mix for new urban release areas to respond to the future household type demands.

4. **Employment Lands** Provide regional/local employment opportunities to support the Lower Hunter's expanding role in the wider regional and NSW economies

Urbis undertook an Industrial Land Supply Analysis to determine the opportunity for the Site to complement wider employment land (Appendix J). The report found:

Locally the Cessnock LGA employment base is largely underpinned by industrial sectors, with accommodation and food services also higher than the regional profile, in part servicing mining sector workers. This contrasts the wider Lower Hunter Region which has a significantly higher proportion of Professionals (19.7%) compared to Cessnock (11.3%). This reflects the type of centres located in the remainder of the Lower Hunter with Newcastle and Lake Macquarie containing the highest proportion of white collar jobs base.

The place of residence of local workers illustrates a moderate to high job containment rate for a regional location in Cessnock, with 64.8% of workers living within the Cessnock LGA, with the industrial sectors located in Cessnock drawing from a local workforce. In addition to this, 11.6% of workers reside nearby in Maitland, which while sitting outside the LGA border illustrates that there is a high propensity for Cessnock workers to live close to where they work.

This has ramifications for potential uses on the subject Site for accessing a workforce, which will likely draw on a local workforce. This may influence certain uses that rely on workers with higher education or typical 'white collar' backgrounds. The prevalence of local blue collar

workers would support the presence of industrial sector businesses rather than higher order white collar based employment.

Lower Hunter LGAs such as Maitland and Newcastle have more 'diverse' economies and industry bases, and offer greater employment opportunity for broader range of workers not associated with mining.

There will be a number of economic benefits associated with the Site's redevelopment, including:

- Ongoing jobs expansion of approximately 6,900 jobs, with 3,840 blue collar jobs and 3,060 white collar jobs (full-time, part-time and casual direct jobs)
- 13,160 direct construction jobs and 20,710 indirect supplier jobs, for a total construction phase employment benefit of 33,870 jobs (full-time, part-time and casual jobs)
- Expansion of ongoing jobs will result in an additional $448.6 million worker income per annum.

Urbis provide further consideration of the economic benefit of the proposed rezoning and subsequent development of the Site (Appendix F).

5. **Avoidance of Risk** Land use conflicts, and risk to human health and life, avoided

The Site is largely isolated due to the previous use as an Aluminium Smelter and required buffer areas. As a result there is reduced potential land use conflicts between the Site and adjoining land uses. Hydro has undertaken an assessment of potential impacts associated with noise, contamination and visual to ensure that no adverse impacts may result from the proposed rezoning of land within the Site.

6. **Natural Resources** Natural resource limits not exceeded/environmental footprint minimised

Hydro has commenced the approval pathway, with the support of Council, to gain Biocertification of the Site pursuant to Biodiversity Certification Assessment Methodology (BCAM) (DECCW 2011).

The BCAM was developed by the NSW Office of Environment and Heritage (OEH) and was gazetted by the NSW government in February 2011. The methodology may be applied to land for which biocertification is sought, and conferred by the Minister for the Environment if the conservation measures proposed in the biocertification application result in an overall improvement or maintenance in biodiversity values, according to the rules established. This is

referred to under the methodology as satisfying the 'improve or maintain test' (IoM test). The ecological values are also to be assessed in accordance with the gazetted methodology (BCAM).

The Biodiversity Key Findings prepared by Ecological Australia is contained with Appendix B.

7. **Environmental Protection** Protect and enhance biodiversity, air quality, heritage and waterway health

Biocertification of the Site will ensure the protection and enhancement of biodiversity within the Site. Studies have been undertaken regarding Aboriginal and European Heritage, flooding & stormwater management and acoustic impacts. It is considered that there will be significant environmental protection as a result of the rezoning application.

Figure 9 –The Site as viewed from the south, with Kurri Kurri visible in the foreground.

8. **Quality and Equity in Services** Quality health, education, legal, recreational, cultural and community development and other Government services are accessible

One of the main objectives of the rezoning is to contribute towards the development of new housing within the Lower Hunter region. The adopted subdivision layout is based on sound social and environmental sustainability principles, extending the reach of existing residential

communities rather than creating new isolated communities with new demands for social infrastructure. The design and provision of open space takes advantage of the Site's topography, orientation and rural setting.

The proposed rezoning shows three new residential communities, each designed in a broadly regular grid of local streets, neighbourhoods, parks and areas of open space. The *Healthy Urban Design Checklist* principles aim for a residential community to have reasonable access to a mix of facilities such as local shopping, health, education, leisure and recreational spaces. Social infrastructure is also ideally centrally located, easily accessible and linked into public transport routes.

The proposed neighbourhood centre will provide residents with access to daily shopping and opportunities for social interaction, and will provide space where local services such as a medical centre and child care could be established by private operators.

Parks, walkways and playing fields encourage social and recreational activities and make it attractive for future residents to adopt healthy patterns of living, which together meet many of the objectives of the *Healthy Urban Development Checklist.* Opportunities for residents to engage in sports and recreational activities, interact with nature or enjoy quiet contemplation contribute towards community and individual health outcomes.

The proposed rezoning will encourage active transport options such as walking and cycling along local paths and roads, links to the neighbourhood centre and safe and easy access to other nearby pedestrian and cyclist routes (such as in Cliftleigh) and parks, where social interaction and recreational activities can take place.

The inclusion of employment lands in the proposal will support the long term social sustainability of the new community and contribute to the economic well-being of the local workforce by providing employment opportunities for a range of age groups and experience levels.

Through preserving almost 1,350ha of Environmental land under an E2 zoning and another 162ha of Rural Landscape (RU2) zoning, the great majority of the overall Site would change little from its existing character and would enable ongoing conservation or environmental uses.

5. Is the planning proposal consistent with the local council's Community Strategic Plan, or other local strategic plan?

The City Wide Settlement Strategy 2010 (CWSS) was adopted by Council on 15 September 2010. The CWSS sets out strategic directions to inform the preparation of the new LEP and implements a number of the outcomes and actions arising from the Lower Hunter Regional

Strategy 2006. The CWSS incorporates the outcomes and actions arising from the LHRS and extends the life of the CWSS to correspond with the 25 yr time frame.

At the time of CWSS adoption, the Hydro Aluminium Smelter was still operational. The decision to close and decommission the smelter was not foreshadowed by Hydro at that time and was not considered within the CWSS. The Planning Proposal does not undermine the CWSS or prejudice any other identified future urban land.

6. Is the planning proposal consistent with applicable state environmental planning policies?

An assessment of the Planning Proposal against the relevant SEPPs is provided in the table below.

Planning Instrument	Provisions
State Environmental Planning Policy (Exempt & Complying Development Codes) 2008	NOT APPLICABLE The Planning Proposal does not include any specific provisions relating to Exempt & Complying development, nor does it contradict any provisions within the SEPP.
State Environmental Planning Policy (INFRASTRUCTURE) 2007	NOT APPLICABLE Nothing in this Planning Proposal affects the aims and provisions of this SEPP. The rezoning and development of the Site for residential purposes will result in the efficient use of existing service infrastructure recently extended to the locality.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	NOT APPLICABLE This SEPP aims to provide for the management and development of mineral, petroleum and extractive materials resources. The Lower Hunter area has a long history of extractive industry, however the Planning Proposal does not cover any area known to have existing resources.
State Environmental Planning Policy (RURAL LANDS) 2008	INCONSISTENT The Planning Proposal is inconsistent with the Rural Lands SEPP (2008) as it proposes to rezone rural land to

Planning Instrument	Provisions
	conservation and urban land. A site assessment has identified that there is no regionally significant agricultural land comprised in the Site, and only a small part of the Hydro Land could be considered as suitable for agriculture. Approximately 160 hectares of the Hydro Land currently grazed (43 hectares within the Cessnock LGA) will be maintained as rural land. The Planning Proposal seeks to rezone the majority of the rural land to conservation land because the existing vegetation is proposed to be retained. This land will be retained in perpetuity as an offset to the proposed urban land. Of the urban land proposed, the residential land represents a logical extension of the adjoining urban release areas and employment land is appropriately located given the recently opened Hunter Expressway and Hart Road Interchange. It is therefore considered a reasonable inconsistency in this instance.
State Environmental Planning Policy (Affordable Rental Housing) 2009	CONSISTENT The Planning Proposal does not contradict the aims and objectives of the SEPP.
State Environmental Planning Policy No. 44 – Koala Habitat Protection	CONSISTENT The Planning Proposal seeks to retain the vast majority of potential habitat within the Site. A detailed flora and fauna assessment has been undertaken and the impact upon potential habitat has been identified. Despite the presence of koala habitat, there is no known recording of presence within the Site.

Planning Instrument	Provisions
State Environmental Planning Policy No. 55 – Remediation of Land	CONSISTENT A contamination assessment has been completed by ENVIRON (refer Appendix E) which finds that the Site contains relatively low level contaminants and is either suitable, or can be made suitable, for the proposed uses subject of the Hydro Rezoning Plan.

7. Is the Planning Proposal consistent with applicable S.117 Ministerial Directions?

The following is a list of Directions issued by the Minister for Planning to relevant planning authorities under section 117(2) of the EP&A Act.

Compliance with Section 117 Directions			
	Ministerial Direction	**Relevance**	**Consistency and Implications**
No.	**Title**	(Yes/No)	
1.1	**Business and Industrial Zones**	Yes	This Planning Proposal is consistent with the objectives in that it encourages employment growth in a suitable locations.
1.2	**Rural Zones**	Yes	The Planning Proposal seeks to rezone land from a rural zone to conservation, employment and residential zones. The Site is not identified as having high agricultural production value. Inconsistency with the terms of this direction is viewed to be of minor significance. This Planning Proposal seeks confirmation from the Director-General (or delegate) that inconsistency with this direction is justified and of minor significance.

1.3	**Mining, Petroleum Production and Extractive Industries**	Yes	The residential and employment zonings would have the effect of prohibiting the mining of coal and other minerals, production of petroleum and winning/obtaining of extractive materials from the Site. The Planning Proposal does not cover any area known to have existing resources. It is recommended that this Planning Proposal be referred to *NSW Trade and Investment – Department of Primary Industries* (DPI) as part of the public authority consultation process. Pursuant to the requirements of the direction, a period of 40 days is to be provided for the DPI to respond.
1.4	**Oyster Aquaculture**	No	The Planning Proposal does not seek a change in land use which could result in adverse impacts on a Priority Oyster Aquaculture Area or a "current oyster aquaculture lease in the national parks estate". The Planning Proposal does not seek a change in land use which could result in incompatible use of land between oyster aquaculture in a Priority Oyster Aquaculture Area or a "current oyster aquaculture lease in the national parks estate" and other land uses.
1.5	**Rural Lands**	Yes	This Planning Proposal affects land within an existing rural zone. It also seeks to change the existing minimum lot size for subdivision of the land. The Planning Proposal is considered to be inconsistent with the Rural Planning Principles and Rural Subdivision Principles listed in *State*

			Environmental Planning Policy (Rural Lands) 2008 (Rural Lands SEPP) in that it intends to rezone rural land. This Planning Proposal seeks confirmation from the Director-General (or delegate) that any inconsistency with this direction is justified and of minor significance for the reasons set out above.
2.1	**Environment Protection Zones**	Yes	This Planning Proposal is considered to be consistent with the direction. This Planning Proposal does not reduce the environmental protection standards that apply to the land. The Planning Proposal contains provisions that facilitate the protection and conservation of environmentally sensitive areas.It is intended that the majority of the Site will be managed as conservation in perpetuity.
2.2	**Coastal Protection**	No	This direction does not apply to the Planning Proposal because it does not affect land in the coastal zone.
2.3	**Heritage Conservation**	Yes	The Planning Proposal is considered to be in consistent with this direction. Any future impact of development will be of minor significance and the environmental or indigenous heritage significance of the item, area, object or place is conserved by existing legislation, or regulations that apply to the land.

2.4	**Recreation Vehicle Areas**	No	This Planning Proposal does not seek to enable land to be developed for the purpose of a recreation vehicle area within the meaning of the *Recreation Vehicles Act 1983*.
3.1	**Residential Zones**	Yes	This Planning Proposal seeks to rezone part of the Site to a residential zone. Through the extension of an existing urban release area in the Cessnock LGA, it is expected that this Planning Proposal will broaden the choice of building types and locations available in the local housing market. This Planning Proposal submitted a range of environmental assessments, including a water servicing strategy and sewer servicing strategy to understand existing capacity and to ensure that the Site is able to be serviced. Further a traffic and transport study has assessed potential impacts upon the existing traffic network. This Planning Proposal is considered to be consistent with this direction.
3.2	**Caravan Parks and Manufactured Home Estates**	No	This Planning Proposal is not for the purposes of identifying suitable zones, locations or provisions for caravan parks or manufactured home estates.
3.3	**Home Occupations**	Yes	The mandatory provisions of the SI LEP make home occupations exempt from requiring development consent in the residential zone. The objectives of this direction are considered to be addressed by this Planning Proposal.

3.4	**Integrating Land Use and Transport**	Yes	This Planning Proposal seeks to rezone land for urban purposes, being residential and employment. The proposal is considered to be consistent with the relevant aims, objectives and principles of: improving access to housing, jobs and services by walking, cycling and public transport; and,providing for the efficient movement of freight This Planning Proposal is considered to be consistent with this direction.
3.5	**Development Near Licensed Aerodromes**	No	This Planning Proposal does not seek to create, alter or remove a zone or a provision relating to land in the vicinity of a licensed aerodrome.
3.6	**Shooting Ranges**	No	This Planning Proposal does not seek to create, alter or remove a zone or a provision relating to land adjacent to and/or adjoining an existing shooting range.
4.1	**Acid Sulfate Soils**	No	This Planning Proposal does not apply to land having a probability of containing acid sulfate soils as shown on the Acid Sulfate Soils Maps held by the NSW Department of Planning and Infrastructure.
4.2	**Mine Subsidence and Unstable Land**	No	The Site is not within a designated mine subsidence district and is not identified as being unstable.

4.3	**Flood Prone Land**	Yes	The Site includes areas of land that are flood prone. A detailed assessment has been undertaken to to ensure that 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*
4.4	**Planning for Bushfire Protection**	Yes	This Planning Proposal is considered to be consistent with this direction. This Planning Proposal seeks to consult with the NSW Rural Fire Service subsequent to gateway determination being issued and prior to undertaking community consultation. The Site is considered to be capable of providing for development that complies with *Planning for Bushfire Protection 2006.*
5.1	**Implementation of Regional Strategies**	Yes	The Planning Proposal relates to a Site where the Lower Hunter Regional Strategy applies. The Planning Proposal achieves the overall intent of the LHRS and does not undermine the achievement of its vision, land use strategy, policies, outcomes or actions.
5.2	**Sydney Drinking Water Catchments**	No	The land subject of this Planning Proposal is not within the Sydney Drinking Water Catchment.
5.3	**Farmland of State and Regional Significance on the NSW Far North Coast**	No	This direction does not apply to Cessnock LGA.

5.4	**Commercial and Retail Development along the Pacific Highway, North Coast**	No	This direction does not apply to the Cessnock LGA.
5.5	**Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)**	No	This direction has been revoked.
5.6	**Sydney to Canberra Corridor**	No	This direction has been revoked.
5.7	**Central Coast**	No	This direction has been revoked.
5.8	**Second Sydney Airport: Badgerys Creek**	No	The Site is not within the boundaries of the proposed second Sydney airport site or within the 20 ANEF contour as shown on the map entitled "Badgerys Creek–Australian Noise Exposure Forecast–Proposed Alignment–Worst Case Assumptions".
6.1	**Approval and Referral Requirements**	Yes	This Planning Proposal is considered to be consistent with this direction. This Planning Proposal does not include provisions that require the concurrence, consultation or referral of development applications to a minister or public authority and does not identify development as designated development.
6.2	**Reserving Land for Public Purposes**	Yes	This Planning Proposal is considered to be consistent with this direction. It does not seek to create, alter or reduce existing zonings or reservations of land for public purposes.

6.3	**Site Specific Provisions**	Yes	This Planning Proposal is considered to be consistent with this direction. The proposal does not intend to amend The Cessnock LEP in order to allow a particular development proposal to be carried out. The Planning Proposal does not refer to drawings for any such development.
7.1	**Implementation of the Metropolitan Plan for Sydney 2036**	No	This direction does not apply to the Cessnock LGA.

SECTION C – ENVIRONMENTAL, SOCIAL & ECONOMIC IMPACT

8. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The Site contains areas of native vegetation, disturbed native vegetation, wetlands and highly modified grazing land. Previously the vegetation within the site was managed as buffer land to the operational smelter, with management activities including weed eradication, pest control and livestock agistment.

The Planning Proposal shall create one of the largest and most unique biobank sites within the Hunter Region. The Lower Hunter Regional Strategy supports Biocertification of LEP amendments where adequate arrangements have been made to ensure biodiversity values will be maintained or improved.

A detailed biodiversity assessment has been completed, and the Biocertification process has been commenced. Council has nominated this pathway to the NSW Office of Environment and Heritage as the preferred method for resolving any biodiversity impacts at the rezoning stage. The Biocertification process shall run concurrently with the Planning Proposal.

The objective of the Biocertification process is to secure biodiversity conservation measures within a significant area of the Site (approximately 1070 hectares) that will offset the potential impacts of the Planning Proposal on biodiversity values.

9. Are there any other likely environmental effects as a result of the Planning Proposal and how are they proposed to be managed?

The Planning Proposal for the Site has assessed a range of environmental constraints to determine appropriate future land uses, with these reports forming part of the rezoning application. Beyond the impact upon existing vegetation, the development footprint has been identified based upon:

- Aboriginal Cultural Heritage Assessment;
- Flooding and Stormwater Impact Assessment;
- Geotechnical Assessment;
- Heritage Impact Assessment;
- Noise and Vibration Impact Assessment; and,
- Traffic and Transport Study.

The outcomes from these environmental assessments are detailed later in this Planning Proposal.

The environmental issues and mitigation measures associated with the detailed design and construction of the future employment land and residential subdivisions would need to be addressed in detail in future Development Applications.

10. How has the Planning Proposal adequately addressed any social and economic effects?

The Planning Proposal has considered both social and economic impacts that may result from the rezoning, both positive and negative. There will be a number of economic benefits associated with the Site's redevelopment, including:

- Ongoing jobs expansion of approximately 6,900 jobs, with 3,840 blue collar jobs and 3,060 white collar jobs (full-time, part-time and casual direct jobs)
- 13,160 direct construction jobs and 20,710 indirect supplier jobs, for a total construction phase employment benefit of 33,870 jobs (full-time, part-time and casual jobs)
- Expansion of ongoing jobs will result in an additional $448.6 million worker income per annum
- The expansion in population from the delivery of new housing and subsequent population growth is expected to expand local retail spend by $58.4 million at full development
- Publically available conservation areas can provide significant benefits to local areas.

Hydro has considered the social impact upon the community that may result from the proposed rezoning of the Site. It is considered that there is a positive net community benefit as a result of the Planning Proposal.

Identified benefits of the proposal for the local community include:

- Enabling the provision of new housing stock in a range of sizes, styles and price points, which will directly contribute to the NSW Government target for new housing, as well as State Government and Council policies for new housing
- A subdivision layout that extends, consolidates and links into, existing communities rather than creating new, stand-alone, isolated residential areas
- Provision of new community infrastructure and open space which will support an active community and encourage healthy lifestyles
- The potential for much needed local employment opportunities and economic growth through the inclusion of areas zoned as Business Park, General Industry and Heavy Industry, and through the subsequent construction of the proposed developments
- Planning will support a community with a unique sense of place
- Permeability and access within the Site layout and between these new communities and surrounding areas
- A Site layout that will be accessible to people of all ages and abilities and a range of income groups
- Road layout that will be accessible for buses
- Design principles that support creation of a socially sustainable community

It is considered that the Planning Proposal has adequately addressed any social and economic impacts of the rezoning.

SECTION D – STATE AND COMMONWEALTH INTERESTS

11. Is there adequate public infrastructure for the planning proposal?

The location of the proposed urban areas has been based upon site capability, including the provision of infrastructure. Key infrastructure components, including the Hunter Expressway and Kurri Kurri Waste Water Treatment Works, have highlighted the potential of the Site to accommodate urban development. As part of the Site assessment Hydro has prepared a Servicing Strategy that outlines connection of utilities for the full development Site. Key elements of the proposed strategy are that:

- Water - supply of potable water to the development would be based on a staging that provides security of supply in the short-term and adequate main sizes for the ultimate growth;
- Sewer - supply of sewer will be by means of conventional gravity mains draining to a series of Waste Water Pump Stations, each pumping flows to an adjacent catchment and ultimately to the Kurri Kurri Waste Water Treatment Works;
- Electricity - electricity will be delivered to the development through underground cable located in common shared trenching through the road reserves. Underground cabling will extend the Ausgrid feeder network at higher voltages to a series of above-ground kiosk substations that 'distribute' the electricity in the low-voltage network;
- Gas - connection to the gas network will be available and determined on a staging basis, with an assessment of the connection methods determined by Jemena Gas Networks once the first application is made; and,
- Communications - communications connections will be available and determined by the National Broadband Network (NBN Co) once the first application is made.

It is concluded that the Site is adequately serviced by existing infrastructure, with a Detailed Servicing Strategy provided as part of the rezoning application. Future development may require augmentation of existing services and this will be subject of agreement between the developer and service provider.

It is expected that the Planning Proposal will be referred to the relevant infrastructure authorities for comment.

Traffic generation

A Traffic and Transport Study has been prepared as part of the rezoning application. The study has considered the capacity of the existing network and identified any augmentation that may be required to accommodate increases in transport demands.

The Planning Proposal does not propose any specific upgrades or road works. As development applications come forward in the future, the impacts of employment and residential uses will generate vehicle movement that may necessitate improvements. The required upgrades or road works would be conditioned and completed as part of the staged development of land.

It is expected that the Planning Proposal will be referred to Roads and Maritime Services (RMS) for comment.

12. What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

Hydro has undertaken consultation with the following public authorities regarding the proposed rezoning:

- Department of Planning & Environment
- NSW Office of Environment and Heritage
- Cessnock City Council
- Maitland City Council
- NSW Roads and Maritime Services
- Hunter Water Corporation
- Ausgrid
- Telstra/NBN

Hydro have also consulted with Jemena regarding connection to natural gas.

Consultation will occur in accordance with the gateway determination resulting from this Planning Proposal.

PART 4: MAPPING

Council shall prepare the relevant LEP Amendment Plans in support of the Planning Proposal to the Department of Planning & Environment. LEP Maps shall include but may not be restricted to Hydro Rezoning Plan (Figure 10), Floor Space Ratio Map, Height of Buildings Map and Urban Release Area Map.

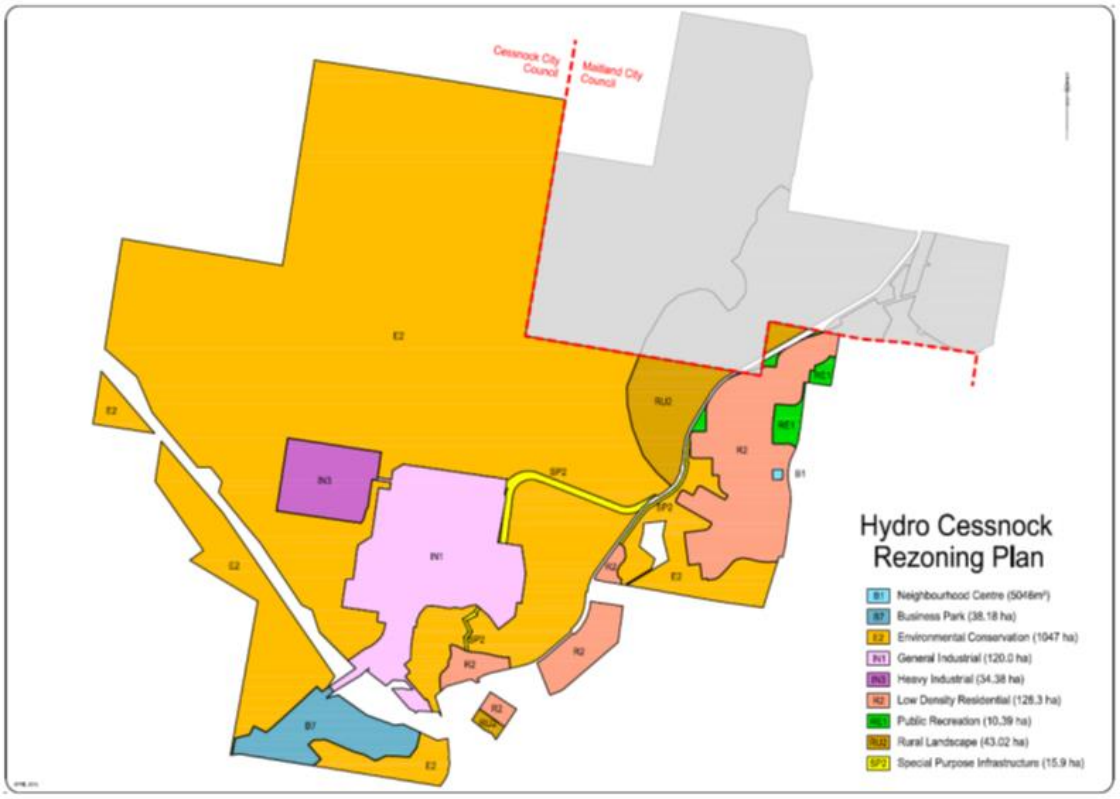

Figure 10 – Hydro Rezoning Plan for the Cessnock LGA (repeated).

PART 5: COMMUNITY CONSULTATION

The Minister's gateway determination under Section 56(2) of the EP&A Act will specify the community consultation that must be undertaken by Council for the Planning Proposal.

Figure 11 –Hydro Site as viewed from the north east, with Gillieston Heights visible in the foreground and Cliftleigh visible in the left of the photograph.

Limited stakeholder engagement has been carried out by Hydro in relation to the broader Hydro Masterplan to facilitate the rezoning and development of the Hydro Land within the Maitland and Cessnock LGAs. The following stakeholders have been consulted:

- Department of Planning & Environment
- NSW Office of Environment and Heritage
- Cessnock City Council
- Maitland City Council
- Hydro Community Reference Group
- Kurri Kurri Business Chamber
- NSW Roads and Maritime Services
- South Maitland Railway
- Hunter Water Corporation
- Ausgrid

- Telstra/NBN
- Jemena

It is anticipated that further community consultation will be carried out in the normal statutory process of notification and exhibition of this Planning Proposal and in accordance with the Department's 'A Guide to Preparing Local Environmental Plans'. The consultation may incorporate any additional consultation measures that are determined appropriate as part of the 'Gateway' determination process.

PART 6: PROJECT TIMELINE

Hydro has undertaken a comprehensive range of environmental assessment within the Site to determine land use capability. The documentation submitted shall provide Cessnock Council and the LEP Panel with a high level of confidence that should the Planning Proposal proceed, that the level of information provided with the Planning Proposal will enable the plan making process to be completed within a reasonable time.

The Gateway determination shall confirm the project timeline and mechanisms for the Planning Proposal to progress through the plan making process.

Environmental Assessment

This Planning Proposal responds to the need to provide employment and housing opportunities within the Cessnock LGA in close proximity to existing infrastructure. The following provides a summary of environmental assessment work that has informed the Planning Proposal.

Aboriginal Cultural Heritage Assessment

AECOM Australia Pty Ltd (AECOM) was engaged by Hydro to undertake an Aboriginal cultural heritage assessment of the Site. The Aboriginal cultural heritage assessment report is to form part of Hydro's Planning Proposal to Cessnock and Maitland City Councils and has been compiled with reference to the NSW Office of Environment and Heritage's (OEH) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) (the 'Code of Practice'). Aboriginal community consultation for this assessment has been conducted in accordance with OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (the 'Consultation Requirements') (DECCW, 2010a).

Archaeological survey of the Site was undertaken over an eight day period between 23 June 2014 and 2 July 2014 by a combined field team of two AECOM archaeologists and up to six rostered Registered Aboriginal Party (RAP) field representatives per day. The survey focussed on higher areas of Ground Surface Visibility (GSV) within the western half of the Site. However, several transects were also completed in the eastern half of the Site. In the north-eastern and north-central portions of the Site, particular attention was paid to areas of higher GSV along the margins of Wentworth Swamp, namely cattle tread and fluvial erosion exposures. All survey was conducted on foot, with a total of 51 transects completed over the course of the survey. Recorded transect data indicate that a total survey coverage of 137.5 ha, representing around 7**%** of the Site, was achieved.

The Aboriginal cultural heritage assessment reports identifies Aboriginal heritage constraints in two forms, being identified sites and areas of archaeological sensitivity. These are defined and measured as:

- Aboriginal archaeological sites – sites can be broadly defined as places in the landscape that retain physical evidence of past Aboriginal activity. The report identities sites as being low, moderate or high scientific significance.
- Archaeologically sensitivity– includes all areas within the Site and considers the potential for these areas to contain Aboriginal archaeological deposits in subsurface contexts. The report identifies three levels of sensitivity – Nil, Low and High.

A total of 482 individual Aboriginal cultural lithic items were identified during the current survey, 475 or 98.5% of which are located within the Site. Employing a 50 m distance convention for site definition, consideration of the location of these items against the mapped and/or described boundaries of valid AHIMS registered sites within the Site (n = 23) provides a total of 65 new Aboriginal archaeological sites and 20 pre-existing sites (85 sites in total). Newly identified surface sites within the Site include 31 artefact scatters and 34 isolated artefacts while pre-existing sites consist of 11 artefact scatters and nine isolated artefacts. Of the 20 previously recorded open artefact sites within the Site, nine were relocated during the current survey.

In addition to identified sites, an assessment of the archaeological sensitivity of land within the Site has also been undertaken, with three levels of sensitivity - Nil, Low and High - recognised on the basis of observed archaeology (i.e., its distribution and character), the results of previous Aboriginal heritage investigations within and surrounding the Site, levels of past land disturbance and the predicted complexity of deposits within each category. Identified areas of high archaeological sensitivity within the Site include elevated low gradient landform elements adjacent to Wentworth Swamp and higher order watercourses.

An assessment of the scientific significance of newly and previously recorded Aboriginal sites within the Site has been undertaken. Moderate scientific significance has been attributed to eight sites and low scientific significance to 77 sites. No sites of high scientific significance have been identified within the Site to date.

Verbal and written advice received from the 32 RAPs for this assessment indicates that all identified sites within the Site are culturally significant and need to be cared for appropriately. Hydro's Masterplan for the Site has been reviewed in relation to its impact on Aboriginal cultural heritage. Consideration of the distribution of identified Aboriginal archaeological sites in relation to the Hydro Masterplan indicates that 50 sites, including five out of eight sites assessed as being of moderate scientific significance, are located in conservation, rural land use and riparian corridor areas (or combinations thereof). These sites are unlikely to be directly impacted by future residential and employment-related development works within the Site. A further four sites, two of which have been assessed as being of moderate scientific significance, extend into areas earmarked for employment land uses but are located principally in conservation or riparian corridor areas.

While recognising the potential for site impacts through environmental management works and ongoing rural land use activities, collectively, these 54 sites are considered to represent a significant preservation outcome for the surface Aboriginal archaeological record of the Site. Compared with residential and employment-related development works, environmental

management and ongoing rural land use activities are deemed significantly less likely to result in the destruction of identified sites.

Examination of the Hydro Masterplan suggests that all remaining Aboriginal archaeological sites within the Site (n = 31) are likely to be directly impacted by residential and employment-related development works. Impacted sites include 30 sites of low scientific significance and one site of moderate scientific significance. Archaeologically, the potential loss of these sites is considered to be offset by the retention, in conservation, rural land use and riparian corridor areas, of fifty-four sites of equal or greater scientific significance.

Consideration of the suitability of the Hydro Masterplan with respect to the archaeological sensitivity of land within the Site indicates a significant preservation outcome for land of high archaeological sensitivity, with the majority comprising conservation and rural land use land that will not be impacted by future residential and employment-related development works within the Site. Attention is drawn, in particular, to the retention in conservation, rural land use and riparian corridor areas, of the majority of the highly sensitive land associated with Black Waterholes Creek, Swamp Creek and Wentworth Swamp. Land of low archaeological sensitivity is also well represented in areas zoned for conservation and continuing rural land use activities. Proposed residential and employment-related development areas within the Site correspond principally with areas of low to nil archaeological sensitivity.

Management recommendations for identified Aboriginal heritage constraints within the Site are as follows:

Aboriginal archaeological sites: where possible, these sites should be conserved as part of the master planning process, with decisions concerning their long-term management to be made in consultation with RAPs. However, where conservation is unfeasible, it is recommended that the Development Control Plan (DCP) for the Site include a specific development control for known Aboriginal archaeological sites. This control should specify that any works which directly affect these sites will require an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the NPW Act 1974.

Archaeologically sensitive areas:

Areas of high archaeological sensitivity warrant a full Aboriginal cultural heritage assessment prior to any development impacts and it is recommended that the DCP for the Site include a development control to this effect. Aboriginal cultural heritage assessments in areas of high archaeological sensitivity should be undertaken in accordance with OEH's Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011), Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales

(DECCW, 2010b) and Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010a).

Areas of low archaeological sensitivity warrant an Aboriginal archaeological due diligence assessment prior to any development impacts and it is recommended that the DCP for the Site include a development control to this effect. Due diligence assessments in areas of low sensitivity should be undertaken in accordance with OEH's Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW, 2010c). Visual inspections undertaken for the purposes of a due diligence assessment should include an Aboriginal community representative.

Areas of nil archaeological sensitivity do not contain any known Aboriginal heritage constraints and it is recommended that the DCP for the Site contain a development control to this effect. Nonetheless, the development control should also specify that Aboriginal objects may still occur in these areas and that if impacts to any identified objects cannot be avoided, an AHIP will be required.

The Aboriginal Cultural Heritage Assessment prepared by AECOM is contained with **Appendix B**.

Biodiversity Key Findings

The Biocertification process has been commenced with Cessnock Council nominating this pathway to the NSW Office of Environment and Heritage as the preferred method for resolving biodiversity impacts at the rezoning stage. The Planning Proposal shall create one of the largest and most unique biobank sites within the Hunter Region. In assessing the site capability, Hydro have adopted a 'balanced outcome' approach regarding biodiversity conservation. This approach aims for all impacts of future development that may result from the rezoning of land to be offset within the Hydro Land. A detailed biodiversity assessment has been completed and the Biodiversity Certification Assessment Methodology (BCAM) (DECCW 2011) has been applied.

Overview of Biocertification

The BCAM was developed by the NSW Office of Environment and Heritage (OEH) and was gazetted by the NSW government in February 2011. The methodology may be applied to land for which biocertification is sought, and conferred by the Minister for the Environment if the conservation measures proposed in the biocertification application result in an overall improvement or maintenance in biodiversity values, according to the rules established. This is referred to under the methodology as satisfying the 'improve or maintain test' (IoM test).

To obtain Biodiversity Certification (or 'biocertification') the 'planning authority' (i.e. Cessnock Council) must submit a biodiversity certification application and Biodiversity Certification Strategy (BCS); both of which are required to be publicly exhibited. The ecological values are also to be assessed in accordance with the gazetted methodology (BCAM).

For the purposes of the TSC Act, biodiversity values include (but are not limited to) threatened species, threatened populations and threatened ecological communities (EECs), and their habitats. Biodiversity values listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) are also assessed, though Biodiversity Certification does not, at the time of writing this report, grant Commonwealth EPBC Act approval. The definition of biodiversity values does not include fish or marine vegetation within the meaning of Part 7A of the NSW Fisheries Management Act 1994, unless that fish or marine vegetation has been the subject of an order under section 5A of the TSC Act.

If the Minister confers biocertification on land, under Part 7AA of the TSC Act, a consent/approval authority does not have to take biodiversity issues into consideration when assessing future development applications, i.e. for the purpose of s.5A of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act), the development or activity is not subject to an Assessment of Significance for threatened species, populations or ecological communities.

Under the BCAM, the impact of development and conservation measures on biodiversity values is quantified using biodiversity credits which are defined by each of the vegetation types (ecosystem credits) and threatened species present (either via ecosystem credits for threatened fauna species or via species credits). In this regard, the methodology determines the number of credits that are 'required' to offset the adverse impacts of development on biodiversity values, and, the number of credits that can be 'generated' by undertaking recognised conservation measures as outlined in s126L of the TSC Act that will improve biodiversity values within the BCAA. Where the number of credits that are created is equal to, or exceeds the number and type of credits required, the 'improve or maintain' test described under the methodology is considered to be satisfied, provided 'Red Flags' have been avoided, or a Red Flag Variation has been approved by the Director General of OEH.

Four plant community types have been identified within the assessment area. Each of these types is equivalent to an individual Endangered Ecological Community (EEC). This is summarised in the appendices, with the community types within the portion of Hydro landholdings that falls within Cessnock LGA identified below.

- Cabbage Gum-Rough-barked Apple grassy woodland on alluvial floodplains of the lower Hunter
- Forest Red Gum - Grey Gum dry open forest on hills of the lower Hunter Valley, Sydney Basin Bioregion
- Parramatta Red Gum - Narrow-leaved Apple - Prickly-leaved Paperbark shrubby woodland in the Cessnock-Kurri Kurri area
- Spotted Gum - Red Ironbark - Narrow-leaved Ironbark - Grey Box shrub-grass open forest of the lower Hunter

The entire Biocertification Assessment Area was subject to detailed targeted threatened flora and fauna surveys to identify the extent and estimate the numbers of threatened flora species. Four threatened flora species have been recorded within Hydro landholdings. Several threatened fauna species have been recorded within Hydro landholdings, including records within the Cessnock LGA.

The Biodiversity Key Findings prepared by Ecological Australia is contained with **Appendix C**.

Bushfire Impact Assessment

Under the *Rural Fires Act* and *Environmental Assessment Legislation Amendment Act* 2002 (amends the EP&A Act) local councils are required to ensure that all developments in bushfire prone lands conform to documented bushfire protection specifications.

Bushfire Prone Land Maps identifies the landholdings as having Category 1, 2 and 3 vegetation and bushfire vegetation buffers.

Residential

The bushfire threat for the proposed rezoning has been assessed and subject to mitigation measures it is considered that the rezoning of the Site is supported. Provided the following recommendations are implemented in full, it is our opinion that the future residential development can comply with the requirements of PBP (2006).

Industrial

The site of the proposed industrial development area will be zoned B7 Business Park and IN3 Heavy Industrial under Cessnock LEP.

In general, the BCA fire safety construction provisions for ‘other development’ are taken as acceptable solutions and as such industrial developments do not require specified APZ setbacks and construction standards. Such developments will be assessed on the provision of the aims and objectives of PBP, and applicable performance-based controls and acceptable

solutions as detailed in the PBP. These are essentially minimal defendable space (setbacks from bushfire prone vegetation), suitable access and egress, and adequate emergency water supplies.

The recommended minimum defendable space is only 10 m. This may allow some industrial buildings to be constructed within BALFZ (flame zone) where proposed lots directly adjoin bushfire prone vegetation. As such, all buildings within the rezoning shall be constructed from non-combustible materials including steel and/or concrete. Where these construction requirements cannot be achieved, compliance with the minimum APZ as defined in Table A2.4 of PBP (2006) shall be required; this would be assessed on a lot-by-lot basis at the development application stage (i.e. under Section 79BA of the EP&A Act 1997).

The Bushfire Impact Assessment prepared by Kleinfelder is contained with **Appendix D**.

Contamination Assessment

Introduction

Contaminated site assessment following the guidance established in the *National Environmental Protection (Assessment of Contaminated Sites) Measure 1999 (NEPM)* has been carried out across the Site. Site investigation initially comprised a Phase 1 environmental site assessment which identified and described activities undertaken across the Site that could potentially result in contamination. This historical and current activity data informed a scope of work for Phase 2 intrusive investigations. The Phase 2 assessment involved the collection and analysis of soil, groundwater and surface water samples. This data has been compared to relevant criteria developed for the Site based on proposed future land uses and has been presented in a number of reports. Where soil, groundwater or surface water data indicates the presence of contaminants, a remediation plan has been prepared that describes the remediation necessary to render the Site suitable for the proposed land use.

As a general note, all land within the buffer zone is considered to have the potential for impact from dust deposition during smelter operations. Surface soil samples across the buffer zone were therefore assessed for fluoride concentrations. These investigations found that dust deposition has not adversely impacted the buffer zone land.

Investigation and reporting has been completed by dividing the large Site area into smaller reporting parcels. Parcel boundaries were determined based on the proposed future land use, existing and current uses and lot boundaries. Reports for each completed Parcel are contained within **Appendix E**.

Central Residential Precinct

The Central Residential Precinct is represented by Parcel 3. Parcel 3 is used currently and historically for cattle grazing and includes a remnant fill embankment which formed part of a former railway spur located in the northern part of the Parcel 3. Soil samples were collected for a range of potential contaminants of concern. Analysis of soil samples from Parcel 3 found low to undetectable concentrations for all contaminants of concern.

Following site assessment a stockpile of illegally disposed potentially asbestos containing roof sheeting was identified. These illegal disposed materials are currently managed under the buffer zone management program.

On this basis it is considered that Parcel 3 is suitable for future land use of residential and open space pending removal of potentially asbestos containing materials.

Southern Residential Precinct

The Southern Residential Precinct is represented by Parcels 12, 13 and 14. Site activities were primarily residential with some small rural land use. Phase 1 site assessment identified potential for contamination to have arisen from the presence of asbestos containing building materials, and general rural land management practices, such as on site waste disposal or small fuel storage.

Analysis of soil samples and visual observation identified the predominant contamination to comprise buried and surface asbestos containing fragments. Remediation of these sites and in some cases demolition of the residence is required to render these sites suitable for the proposed residential development.

Business Park

The Business Park comprises of Parcel 5 and Parcel 9. Parcel 5 is an area of undisturbed bush and sampling did not identify any constraints to the proposed use of the Site as part business park and environmental conservation area.

Parcel 9 includes the site of the former Kurri Kurri Municipal Landfill and two now demolished residential properties. Asbestos containing materials in soil have been identified across Parcel 9 and require remediation to make the site suitable for the proposed use.

Heavy Industrial and General Industrial

Heavy and general industrial land comprises the smelter site and immediate surrounds and Parcels 4, 10, 15 and 16.

For the smelter site and immediate surrounds, extensive investigation of soil, groundwater and surface water has been completed across this site. Investigations identified discrete areas of the site that require remediation due to activity derived impacts to soil. A historical onsite waste storage area is also situated on site and requires remediation or management. Remediation will be necessary for some soils, sediments and groundwater. This remediation proposal is subject to a current preliminary environmental planning submission and is considered to be state significant development.

Parcels 4, 10 and 15 were formerly residential properties with now demolished houses. Parcel 4, 10 and 16 are currently undeveloped. Parcel 15 is the site of the Kurri Kurri Speedway. These properties are impacted by asbestos containing fragments in soil and require remediation to make suitable for the proposed industrial land use. Parcel 16 is the site of a former smelter waste disposal area which requires remediation to make suitable for the proposed use.

Ecological Area

Ecological areas are described by Parcel 6, 7, 8, 11 and 18. These parcels comprise undisturbed bush, rural land use in the form of grazing, and former or current (Parcel 2 only) residential dwellings. Soil investigations did not identify the presence of impacts from smelter operations however site inspections did identify occasional occurrences of illegal waste dumping, including asbestos containing wastes. Removal of these materials by appropriately licensed contractors forms part of the buffer zone management program. The ecological areas are considered suitable for this purpose subject to removal and ongoing management of illegal waste disposal.

The Contamination Assessment prepared by ENVIRON is contained with **Appendix E**.

Detailed Servicing Strategy

As part of the Site assessment Hydro has prepared a Servicing Strategy that outlines connection of utilities for the full development Site. Key elements of the proposed strategy are that:

- Water - supply of potable water to the development would be based on a staging that provides security of supply in the short-term and adequate main sizes for the ultimate growth;
- Sewer - supply of sewer will be by means of conventional gravity mains draining to a series of Waste Water Pump Stations, each pumping flows to an adjacent catchment and ultimately to the Kurri Kurri Waste Water Treatment Works;

- Electricity - electricity will be delivered to the development through underground cable located in common shared trenching through the road reserves. Underground cabling will extend the Ausgrid feeder network at higher voltages to a series of above-ground kiosk substations that 'distribute' the electricity in the low-voltage network;
- Gas - connection to the gas network will be available and determined on a staging basis, with an assessment of the connection methods determined by Jemena Gas Networks once the first application is made; and,
- Communications - communications connections will be available and determined by the National Broadband Network (NBN Co) once the first application is made.

The Detailed Servicing Strategy prepared by PCB is contained with **Appendix F**.

Economic Benefits Assessment

The redevelopment of the Site provides an opportunity for the release and development of a substantial amount of residential and employment generating uses.

The redevelopment of the Site will provide approximately 375 hectares of additional developable land, and reserve 1,300 hectares as environmental conservation land. There will be a number of economic benefits associated with the Site's redevelopment, including:

- Ongoing jobs expansion of approximately 6,900 jobs, with 3,840 blue collar jobs and 3,060 white collar jobs (full-time, part-time and casual direct jobs)
- 13,160 direct construction jobs and 20,710 indirect supplier jobs, for a total construction phase employment benefit of 33,870 jobs (full-time, part-time and casual jobs)
- Expansion of ongoing jobs will result in an additional $448.6 million worker income per annum
- The expansion in population from the delivery of new housing and subsequent population growth is expected to expand local retail spend by $58.4 million at full development
- Publically available conservation areas can provide significant benefits to local areas. Whilst the composition for the subject Site is yet to be finalised, the potential benefit to Cessnock could be within the range illustrated above.

The LHRS sets out the need for additional housing and employment land development within the Lower Hunter Region, to meet the housing and job targets outlined in the Lower Hunter Regional Strategy (LHRS) of:

- Provision of up to 115,000 new dwellings for a projected 160,000 new residents from 2011 to 2031
- Provide capacity to accommodate 66,000 new jobs in the LHR from 2011 to 2031.

It is estimated that the proposed masterplan for the Hydro smelter redevelopment will contribute the following housing and jobs to the LHRS targets:

- 2,100 new housing lots, representing 3% of the LHRS' detached housing target
- 6,900 new jobs, representing 10.5% of the LHRS' jobs target.

Of the 45,459 new jobs expected to be created in the Lower Hunter between 2011 and 2031, approximately 3,528 of these are expected to be in industrial based sectors, with 902 of these jobs forecast for Cessnock LGA.

This will result in the take up of 176 ha (8.8 ha per annum) of additional industrial land in the LHR, 45 ha (2.25 ha per annum) of which are expected to be located in the Cessnock LGA by 2031.

The 198 hectares of industrial zoned land on the subject site exceeds the Cessnock LGA's demand for industrial stock by 2031.

Despite this, Urbis' analysis indicates that given the site's location adjacent to the Hunter Expressway, ability to offer flexible lot sizes (due to its consolidated land ownership) and the expected growth in the freight and logistics and construction sectors, that the site cater to larger warehouse and distribution operators while also providing smaller sized options. As such it would be expected to draw on LHR demand for employment land, as it would offer employment opportunities for residents in the whole of the LHR.

While the development of the site will be staged, this will likely occur over a period of time longer than the official employment forecasts.

Urbis expects this to occur at a 5.3 - 8.4 hectare per annum rate, resulting in a 24-37 years development timeframe.

Under the residential staging scenarios, the 2,072 residential lots will be delivered along with the associated neighbourhood centres by:

- 41 years under the low case residential land at 50 lots per annum
- 26 years under the high case residential land at 80 lots per annum.

The Economic Assessment and Economic Benefit documents prepared by Urbis are contained with **Appendix G**.

Flooding and Stormwater Impact Assessment

The purpose of the Flooding and Stormwater Impact Assessment is to present a greater level of detailed advice to supplement proposed plans of subdivision that would support the Planning Proposal for rezoning. Flooding on the Site is primarily caused by inundation associated with flooding in the Hunter River.

Proposed re-development of the Site would necessitate the dedication of low-lying portions of the subdivision for storm water controls, including any combination of gross pollutant traps, detention basins, constructed wetlands and riparian corridor rehabilitation. Commentary is also provided on indicative costs associated with storm water management facilities.

Tail water levels from the Hunter River downstream is the hydraulic control adjacent to the Site. The constant level RL9.7mAHD is adopted level of flooding due to the 1% AEP event as modelled in previous flood studies of the Hunter River and nearby tributaries.

The flood and riparian zones represent constraints that can be negotiated around the fringes of their extents. The current subdivision layout is responsive to the flood impacts and riparian corridors.

Areas identified on the subdivision plan for stormwater management are representative of the scale of land area required to adequately treat and control storm water to acceptable standards.

As a result of this assessment of flooding and stormwater a significant area of the Site is capable of being developed for the residential and industrial purposes.

The Flooding and Stormwater Impact Assessment prepared by PCB is contained with **Appendix H**.

Geotechnical Assessment

This report presents the findings of a preliminary geotechnical assessment for a portion of the proposed redevelopment of the Site, located at Loxford. This assessment was commissioned by Hydro in consultation with ESS. In conjunction with this report, a preliminary geotechnical assessment was also undertaken for a broader selection of the Hydro Land (, however the remaining portion of the Hydro Land is located within the Maitland LGA, and the results are presented in a separate report).

The Site is considered to be generally geotechnically suitable for the proposed residential and industrial development, subject to more detailed investigation being undertaken at the appropriate stage of the project planning and design.

The development may encounter soft / wet soils in areas of high moisture, poor subgrade soils and reactive clays. These however can be readily managed by good engineering and construction practices, and are similar to the geotechnical conditions of the local area where other developments have occurred. Design and construction should be undertaken with respect to good practices to minimise the potential for saline impact to occur.

The presence of filling in areas to be re-developed from current / former land use will require specific engineering controls. Low lying areas of the Site should be assessed for potential acid sulphate soils, if ground disturbance will occur as part of development.

The Geotechnical Assessment prepared by Douglas Partners is contained with **Appendix I**.

Heritage Impact Assessment

The purpose of this report is to assess the heritage significance and the impact potential works will have on the significance of the Site, to identify measures that may mitigate any negative impact and where applicable, detail why more sympathetic options are not viable.

The aluminium smelter at Kurri Kurri, built by Alcan Australia and the first constructed in NSW, commenced operation in 1969. The smelter since that time has undergone modification and expansion under two further owners prior to its purchase by current owner, Hydro Aluminium Kurri Kurri Pty Ltd in 2002. Operating for 43 years it ceased production in 2012. Since that time a skeleton workforce has maintained the plant and managed the buffer zone lands.

A number of historic heritage and potential historic heritage items were investigated as part of the assessment. They include: the Hydro Aluminium Kurri Kurri Smelter Plant; the South Maitland Railway; the Stanford Railway; Glen Ayr Colliery; Weston Soldier Settlement; and a rubbish depot. The heritage significance assessment determined that there were no items of State heritage significance in the Site.

This report was prepared adhering to best practice standards as detailed in The *Burra Charter: The Australia*

ICOMOS Charter for Places of Cultural Significance, 2013 (*Burra Charter*), and in accordance with the requirements of NSW Heritage Division and the Office of Environment and Heritage.

This report found that implementation of the proposed Hydro Master Plan would impact on the:

- Hydro Aluminium Kurri Kurri Smelter Plant;
- Stanford Railway;
- Weston Soldier Settlement; and
- A rubbish depot

In the instance of the Smelter, while the complex is considered to have local cultural heritage significance its retention solely as a heritage item is not considered viable.

The Stanford Railway, Weston Soldier Settlement and the rubbish depot are not considered to have a level of cultural heritage significance that would require their retention. However, to ensure the place of the items in the historical record the following recommendations are made:

Recommendation 1 – Hydro Aluminium Kurri Kurri – Smelter Site

A photographic archival record of the Smelter should be made in accordance with Photographic recording of Heritage Items using Film or Digital Capture (NSW Heritage Office 2006)

Recommendation 2 – Hydro Aluminium Kurri Kurri – Smelter Site

The Smelter played an important role in the development of the aluminium smelting industry in NSW and forms part of the industrial history of the Hunter Valley, NSW. The documentary record of the construction, expansion and operation of the Smelter is a valuable archive and discussions around lodgement of significant items within that record may be appropriate with custodians of a suitable archival repository such as Newcastle University Cultural Collection – Archives.

Recommendation 3 – Weston Soldier Settlement

The Weston Soldier Settlement should be the subject of further investigation through documentary research and oral history recording. The outcome should be a report that provides a record of this important but little known aspect of local history.

Recommendation 4 – Rubbish depot

The Rubbish depot should be the subject of an archaeological assessment report. The intention of the assessment report would be to determine if the Rubbish depot warrants the lodging of a Section 140 Application for an Excavation Permit (*NSW Heritage Act 1977*) and if it does, to support that Application.

This investigation of the Rubbish depot has the potential to provide a valuable insight into the social development of Weston Soldier Settlement and neighbouring towns.

Recommendation 5 – Heritage Awareness

As part of the Site induction and/or toolbox talks, all relevant staff, contractors and subcontractors should be made aware of their statutory obligations for heritage under the *Heritage Act 1977*.

Recommendation 6 – Unexpected Finds

If, during the course of development works, suspected archaeological relics, as defined by the *Heritage Act 1977*, are uncovered, work should cease in that area immediately.

The Historic Heritage Assessment & Statement of Heritage Impact prepared by RPS is contained with **Appendix J.**

Industrial Land Supply Analysis

A market assessment was undertaken of the proposed employment lands within the Site, with the objective of identifying the development potential of future employment lands on the subject Site.

Having had regard to the analysis contained in this report, it is our view that the Site can support future industrial development, with market evidence suggesting freight and logistics and building services as the most likely industrial segment targets for the Site. While other opportunities are present, such as intermodal / rail maintenance facilities, they are somewhat contingent on the Port of Newcastle expanding containerised freight operations in the case of an intermodal facility and improving connections with the coal freight network in relation to the rail maintenance facility. Such facilities would likely take up a significant portion of the subject Site (in excess of 40 hectares).

Key findings of the assessment are summarised below:

DRIVERS OF INDUSTRIAL DEVELOPMENT

- Freeway Business Park has somewhat comparable access to highway interchanges as the subject Site. Over the last 3 years (financial years) Freeway Business Park has experienced 14.1 ha take-up of vacant land per annum. Stripping out the 'outlier' 15 ha sale in 2010 to Aldi and the 6.3 ha sale at 53 Weakleys Street, results in a more conservative annual take up of approximately 7 ha per annum, representing an example of what the subject Site could achieve under similar conditions.
- The limited number of industrial precincts across Australia that contain onsite electricity generation infrastructure makes it difficult to determine the potential increase in 'take-up' rate associated with this type of development. However the Swanbank Enterprise Park are attracting some heavy industrial tenants, with high electricity requirements, on large lot size of 15 ha (Holcim). This would likely be impacted by the potential relative affordability of the electricity generated on site and its reliability. We note however that take-up has been limited as this type of development is largely attractive to large scale manufactures that have been experiencing a decline in activity over the past decade.

- Strong transport infrastructure in non-metropolitan / regional areas is not a guarantee of a strong demand and land take-up – as demonstrated in Parkes and Blayney which saw a marginal increase in land take up following completion of major transport infrastructure projects.
- Other infrastructure led precincts such as Erskine Park / Eastern Creek in Sydney's west, have attracted a significant uplift in both the take-up of industrial land and value upon the completion of enabling transport infrastructure.
- As such it is clear that potential exists for catalyst infrastructure projects to improve the commercial viability of existing and potential industrial precincts where they are well located in large population areas or in areas of high growth. With specific relevance to the future development of the subject Site are road infrastructure upgrades such as the F3 extension and Hunter Expressway.
- These transport infrastructure projects are likely to drive the potential for growth in the freight transport and storage sector on the subject Site, which based on forecasting is also expected to have strong underlying jobs growth over the next 20 years.

HUNTER ECONOMIC FRAMEWORK

- The historic correction away from Australia's traditional manufacturing and agricultural led export market was driven primarily by the growth in demand for resources from the Chinese economy. Since 2003 China, and other growing export markets such India and South Korea have increasingly comprised a greater share of Australia's exports at the expense of advanced economies such the EU and US. Despite this existing export markets such as Japan continues to comprise a large market for Australian exporters, including thermal coal exports from the Hunter Region.
- Trade exposed sectors will continue to face challenging economic conditions with a higher exchange rate and competition from low cost competitors overseas, Manufacturers servicing a local market, tied to increasing population and household formation however are likely to continue to increase their employment and capacity, in line with future population growth across Hunter Region LGAs. The availability of industrial land well connected to key transport routes and close to their market will likely drive the location of these businesses.
- This structural shift in the NSW economy from labour intensive and trade exposed sectors to a more serviced based economy is reflected in the performance of the Hunter Region's manufacturing sector. The key difference is the economic performance and growth attributed to the mining sector, with the Hunter Region comprising a large endowment of the State's coal resources.

- Locally the Cessnock LGA employment base is largely underpinned by industrial sectors, with accommodation and food services also higher than the regional profile, in part servicing mining sector workers. This contrasts the wider Lower Hunter Region which has a significantly higher proportion of Professionals (19.7%) compared to Cessnock (11.3%). This reflects the type of centres located in the remainder of the Lower Hunter with Newcastle and Lake Macquarie containing the highest proportion of white collar jobs base.
- The place of residence of local workers illustrates a moderate to high job containment rate for a regional location in Cessnock, with 64.8% of workers living within the Cessnock LGA, with the industrial sectors located in Cessnock drawing from a local workforce. In addition to this, 11.6% of workers reside nearby in Maitland, which while sitting outside the LGA border illustrates that there is a high propensity for Cessnock workers to live close to where they work.
- This has ramifications for potential uses on the subject Site for accessing a workforce, which will likely draw on a local workforce. This may influence certain uses that rely on workers with higher education or typical 'white collar' backgrounds. The prevalence of local blue collar workers would support the presence of industrial sector businesses rather than higher order white collar based employment.
- Lower Hunter LGAs such as Maitland and Newcastle have more 'diverse' economies and industry bases, and offer greater employment opportunity for broader range of workers not associated with mining.
- There is a broad shift in economic structure occurring not just in the Hunter Region but nationally, from traditional industrial based employment to professional services and higher order employment. Despite this, the local industry sectors are likely to mirror its local blue collar workforce, in addition to expanding industry sectors within the Lower Hunter, such as construction and transport, postal and warehousing.

LOWER HUNTER EMPLOYMENT LAND SUPPLY

- When assessing the capacity of employment lands to accommodate future industry growth, it is important to consider where the majority of this vacant employment land is focused, with over half of this located in the Tomago Industrial Area, the Hunter Economic Zone (HEZ) and Singleton Green Industrial Estate.
- It is possible that not all of the current and proposed supply is seen as being suitable for servicing the demand which is expected to come mainly from the transport and storage, construction and mining industries. These businesses typically require large land parcels, and access to transport routes is of course a key requirement for transport and storage, and mining businesses (in terms of access to mining areas).

- Therefore the current supply does not necessarily preclude the development of new employment lands where the opportunity exists to provide employment lands that better meet the needs of industrial operators and may indicate gaps in the existing supply of employment lands.
- The proximity of the subject Site to the Hunter Expressway and its connectivity to major population bases to the north and east will increase the competitiveness of the Hydro land over existing sites such as HEZ.

The Industrial Land Supply Analysis prepared by Urbis is contained with **Appendix K**.

Noise and Vibration Impact Assessment

Vipac Engineers and Scientists Ltd (Vipac) was commissioned by Hydro to conduct a noise impact assessment for the Hydro Rezoning Plan.

The Hydro Land comprises approximately 2,000 hectares, with the former Smelter occupying approximately 60 hectares of the Site and the remaining lands comprising of a mix of conservation habitat lands, agricultural lands, the Black Waterholes and surrounding floodplains. The Site is also crossed by the South Maitland Railway line passing from Maitland to Kurri and on to Cessnock, although it is Vipac's understanding that the train line is currently only used on occasion by coal export trains servicing one mine in the region.

The Preliminary Masterplan for the Site had identified approximately 300 hectares of land that is proposed to be rezoned for employment use, and had identified sufficient land to be rezoned that would be suitable for 1,290 residential lots for residential development. The Rezoning Masterplan was revised to reduce the employment development to 200 hectares and to increase residential dwellings to 2,088 lots. The revised Rezoning Masterplan has proposed approximately 603 dwellings at the Northern precinct (in the Maitland LGA), 1,182 dwellings at the Central precinct and 303 dwellings at the Southern precinct.

Noise levels associated with the proposed employment development (Heavy Industrial, Light Industrial and Business Park) and potential impacts on nearby noise sensitive receptors (located in the surrounding area and proposed residential properties in the residential land parcels) will be required to comply with Project Specific Noise Levels that have been determined on the basis of a series of baseline noise surveys that were undertaken across the Site and at representative noise sensitive receptors located in the vicinity of the Site.

There is a potential for rail noise impacts on future residential properties that may be developed in the proposed residential land parcels located in proximity to the existing South Maitland Railway line which crosses the Hydro Aluminium Site. However, based on the

existing frequency of use of the rail line, it is not anticipated that the potential rail impacts would impede significantly on the proposed Rezoning Masterplan.

However, it will be necessary to conduct an acoustic assessment for any future residential dwellings that may be constructed on lots located in close proximity to the rail line. The assessment should be undertaken by a suitably qualified acoustician in order to ensure that the properties are designed and constructed in accordance with *NSW DoP document- "Development near Rail Corridors and Busy Roads" – Interim Guideline* to achieve acceptable internal noise amenity, with regard to the external rail traffic noise exposure levels.

The predicted existing and cumulative future traffic noise levels associated with traffic volumes representative of the full development of the Land Rezoning proposals, at existing receivers along Hart Road (south of the Hunter Expressway) and in proximity to the Hunter Expressway (West of Hart Road) comply with the daytime and night-time noise criteria. However the predicted existing road traffic noise levels at receivers along Main Street and McLeod Road/Heddon Street are raised above the daytime and night-time noise criteria. As stated in Section 3.4 of the Road Noise Policy, with regard to existing residences and other sensitive land uses affected by additional traffic on existing roads, generated by land use development, any increase in total traffic noise level should be limited to 2dB above that of the corresponding existing noise level at any residential property.

The traffic noise levels that would be generated in association with the Land Rezoning Masterplan proposed development will be expected to be within +2dB of the existing road traffic noise levels at all of the noise sensitive receivers during day and night-time periods provided the traffic generated by the proposed development is within the traffic volumes outlined in this assessment. The predicted noise impact associated with the Hydro Aluminium Land Rezoning Masterplan development would comply with the Road Noise Policy criteria.

It is predicted that the potential traffic noise exposure that may arise in the event of the overall development of the Land Rezoning Masterplan, associated with the Residential Land Parcels and the 200Ha Employment Land areas, would be raised above the applicable noise criteria by approximately 5dB at a number of residential lots, taking into consideration a 2.0m noise bund/barrier. Notwithstanding the indicative external noise limits, future residential dwellings that may be constructed on the affected lots could comply with applicable internal noise criteria and will need to be designed and constructed in accordance with *NSW DoP document- "Development Near Rail Corridors and Busy Roads" – Interim Guideline* to achieve acceptable internal noise amenity, with regard to the external road traffic noise exposure levels.

The internal noise levels on existing and proposed noise sensitive receptors associated with the potential traffic movements that may be generated in the area, in the event that the Land

Rezoning Proposals are developed in full, are predicted to be below the maximum internal noise levels, which is unlikely to cause awakening reaction to the occupants and would be unlikely to cause sleep disturbance impacts.

The proposed Land Rezoning Masterplan for the Hydro Aluminium lands at Kurri Kurri is therefore not considered likely to generate any significant noise impact on existing noise sensitive receptors located in the surrounding area. The findings of the noise impact assessment of the proposed Land Rezoning Masterplan also indicate that potential future noise sensitive receptors (i.e. future residential properties that may be developed on the proposed Residential Parcels of the Land Rezoning Masterplan) are not considered likely to experience any significant noise impacts. However, based on the results of the noise impact assessment, it is anticipated that a 2.0m noise bund/barrier is likely to be required in proximity to a number of potentially affected proposed future residential lots facing Main Street (Northern Precinct Residential Land Parcels) and proposed future residential lots facing the Hunter Expressway (Southern Precinct Residential Land Parcels).

Any development proposals for residential properties on the affected lots will be subject to a separate Development Application and Approvals process that should include an acoustic review by a suitably qualified acoustician of detailed designs for properties that may be developed in due course. This review will be required in order to ensure that satisfactory internal noise amenity criteria can be achieved within the properties.

The Noise and Vibration Impact Assessment prepared by VIPAC is contained with **Appendix L**.

Socio & Economic Impact Assessment

Elton Consulting were engaged to examine the proposed rezoning and consider the socio-economic implications for a future development, identify its potential benefits and impacts for existing and future residents and the workforce and to provide advice in relation to how the project could provide benefits to Kurri Kurri and Lower Hunter communities, particularly those within the Cessnock and Maitland LGAs. Where potentially adverse socio-economic impacts are identified, this analysis will provide input into further development of the concept in order to reduce the potential for impacts on members of these communities.

The study process has involved:

- A review of existing information, including reports, maps and plans
- Site investigations
- Identification and analysis of socio-economic issues and site constraints

- Liaison with strategic and social planners from Cessnock City Council
- Assessment of the social and economic impacts of the proposed rezoning to employment and residential lands.

Key features include:

- Three distinct residential precincts extending generally eastward from the South Maitland Railway Line (176 ha)
- A Heavy Industrial zone in the south western portion of the Site (38.38 ha)
- A large General Industrial area (125.5 ha) located on the Site of the former Kurri Kurri aluminium smelter between the Heavy Industrial area and Residential Southern
- An area designated as a Business Park on the Site's southern boundary, south of the Hunter Expressway
- A Neighbourhood Centre of 5,046m2 located within the Residential Central precinct
- Areas of open space including local parks, sporting fields and recreational open space along drainage corridors and the railway corridor (14.17 ha)

The Residential Northern precinct adjoins the southern boundary of Gillieston Heights in Maitland LGA. The Residential Central precinct adjoins the western boundary of Cliftleigh and the Residential Southern precinct adjoins the community of Loxford.

A review of the adopted subdivision layout, discussions with our client, examination of other project documentation and consideration of the social issues raised in public consultation and typical of new master planned communities, have highlighted the ways in which the project has been developed in order to successfully minimise the major social concerns and provide social benefits for the Kurri Kurri and wider Cessnock and Lower Hunter communities.

Identified benefits of the proposal for the local community include:

- Enabling the provision of new housing stock in a range of sizes, styles and price points, which will directly contribute to the NSW Government target for new housing, as well as State Government and Council policies for new housing
- A subdivision layout that extends, consolidates and links into, existing communities rather than creating new, stand-alone, isolated residential areas
- Provision of new community infrastructure and open space which will support an active community and encourage healthy lifestyles
- The potential for much needed local employment opportunities and economic growth through the inclusion of areas zoned as Business Park, General Industry and Heavy Industry, and through the subsequent construction of the proposed developments

- Planning will support a community with a unique sense of place
- Permeability and access within the Site layout and between these new communities and surrounding areas
- A Site layout that will be accessible to people of all ages and abilities and a range of income groups
- Road layout that will be accessible for buses
- Design principles that support creation of a socially sustainable community.

Aspects of the current proposal which may nevertheless have the potential to create some social impacts include:

- An increase in population size in areas not currently identified for urban growth
- The potential for isolation from established communities, support networks, services and facilities
- Challenges for community integration and social cohesion
- Impacts on demands for community facilities, services and open space.

It is considered that the significant economic and social benefits resulting from the Planning Proposal outweigh the potential social impacts identified above. The ways in which these social impacts have been addressed in the current proposal are discussed within the report.

Having considered the key socio-economic issues, benefits and impacts of the proposed rezoning, the major social impacts to be addressed in the next stage of planning are:

- Distance from established communities and the potential for isolation. This points to a need to foster physical connections (roads, pathways, public transport, community facilities) and social connections (community development worker, community activities, placemaking and social cohesion) to build a strong and well integrated local community
- Planning for accessibility including future public transport connections and / or a community bus
- Planning for industrial areas.

Strategies to mitigate the identified social impact issues and to address the expected needs of future residents and the workforce are discussed in the report.

The Social and Economic Impact Assessment prepared by Elton Consulting is contained with **Appendix M**.

Stakeholder Engagement

Hydro is committed to providing a positive legacy for the community and is undertaking extensive stakeholder consultation in conjunction with the investigative and planning process. This approach ensures stakeholders are involved throughout the various phases of the project and their contributions considered in the decision-making process.

A proactive consultation strategy has been developed to guide the project during the investigations and future planning phases, including the rezoning proposal. This strategy aims to increase engagement with the local community and other stakeholders, to maintain good existing relationships and provide an ongoing two-way flow of information.

Consultation with key stakeholders and the community will occur throughout key phases of the project, and will inform the following aspects:

- Site remediation and demolition
- Environmental impact assessment
- Rezoning
- Divestment.

This project carefully manages the expectations of each of the stakeholder groups about the remediation and redevelopment of the Site, focussing on identifying and addressing potential community issues or concerns. This means that wherever reasonable and feasible, 'involving' stakeholders in the discussions before the final decision is made so there is shared ownership of the outcomes.

The Stakeholder Engagement prepared by GHD is contained with **Appendix N**.

Subdivision Design

The prepared subdivision designs and supporting engineering drawings and documentation respect the Site's constraints and opportunities, whilst being reflective of the true end product the market is likely to demand. The objective is a plan suitable for submission to Council in support of a rezoning proposal and delivering the highest and best use outcome across all landholdings.

Throughout this process periodic checks were made of key parameters which could impact the project's viability and, where required, concepts were refined to improve the overall efficiency, logic and ultimate end use of the subdivision layouts.

In summary the Residential and Industrial subdivisions present opportunity to extract value from the Hydro land holdings. The lands future development is:

- Strategically logical within a planning context;
- Viable in terms of constraints, opportunities, access and servicing; and
- Marketable for product delivery.

The Subdivision Design prepared by PCB is contained with **Appendix O**.

Traffic and Transport Study

The Traffic and Transport Report has been prepared by Hyder consulting Pty Ltd (Hyder) to support the proposal to redevelop the Site. As part of the "Gateway" Planning Proposal, a Traffic and Transport Study of the Site is required to address the principles of integrated transport planning, explore alternative methods of transport and determine capacity of the road network and identify required upgrades.

The report summarises the outcomes relating to Stage 1 and Stage 2 of the Study. Hyder's Study outcome has been reported in two parts as follows:

- Part A documents preliminary traffic impact assessment at key access points and identifies potential for converting half interchange to a full interchange at Loxford with Hunter Expressway.
- Part B documents revised traffic impact assessment for the Planning Proposal. Nine access options /points are assessed taking into account existing network connectivity, road geometry constraints and future impact. A workshop was held on 19 September 2013 among consultants as part of the Master Planning process. Hyder presented all nine access options in that workshop.

The following three access options are shortlisted and proposed for the Site from traffic perspectives:

- The main access to the residential development be located at the northeast boundary via a new intersection with Cessnock Road (Option C).
- The main access locations to the employment development be located along Hart Road via the Loxford interchange (Figure 12) with Hunter Expressway (Option A and B).

The Planning Proposal for the Site has identified approximately 200 hectares to be rezoned for employment development purpose and approximately 2088 residential lots are proposed to be rezoned. In the event projected development growth is realised as identified within the Planning Proposal, the traffic analysis has predicted peak hour trip generation between 5,200 and 5,450 vehicle trips in one typical peak hour. The residential trips constituted about 32% of

total generated trips. The remaining 68% trips are predicted to be generated from employment land.

Figure 12 –Hunter Expressway and the Hart Road Interchange, as viewed from the south.

The modelling was undertaken for three development threshold scenarios. The analysis has varied employment land thresholds at 75 ha, 120 ha and 200 ha. The assessment considered half and full interchanges configurations at Loxford as follows:

- The Loxford interchange at Hart Road assumes no change from current condition (i.e. half interchange with east facing ramps).
- A full interchange at Hart Road is tested. Two additional west facing ramps at Hart Road are assumed.

The traffic assessment found that:

- A new traffic signal on Cessnock Road would accommodate the ultimate Northern and Central residential development yields at about 1785 lots.
- The existing half interchange at Loxford with Hunter Expressway is predicted to accommodate additional trip generation from 75 ha employment land.

- The preliminary engineering review indicates that the half interchange at Loxford can be converted to full interchange (roundabout controls to both end of bridge) with additional land take, increased pavement extents and surrounding earthworks.
- The full interchange at Loxford with Hart Road (roundabout control) is likely to accommodate up to 120 ha employment land. However, the Hart Road overbridge is likely to be impacted.
- The 200 ha employment land is predicted to generate substantial traffic volumes 4,000 vehicles in one peak hour. The full development at 200 ha will impact the full interchange (with additional two west facing ramps). The Hart Road overbridge is likely to be substantially impacted.

The development of the Site will require regular reviews of traffic generation and its impact on the road network. Hyder recommends that RMS traffic generation be reviewed when agreed milestones are reached, for example after 75 ha of developable land is completed and occupied.

The provision of infrastructure for the Site shall be subject of a Voluntary Planning Agreement or Council Contributions Plan, or a combination of the two. The final drafting of any VPA or Contributions Plan shall be done in consultation with NSW Department of Planning & Environment, Cessnock City Council and the RMS at the development stage.

The Traffic and Transport Study prepared by Hyder is contained with **Appendix P**.

Visual Impact Assessment

The visual effects of the Planning Proposal have been addressed in terms of the effects on the landscape (how the existing character of the Site would change), and the effects on views and visual amenity (considered from the viewpoint of residents living near the proposal, tourists and commuters travelling in the vicinity, and communities in the surrounding area).

Overall the visual changes that would result from the Planning Proposal should be generally positive, assuming the proposed design measures recommended in this report are incorporated.

Rezoning the Site implies removal of the existing plant (the tall stacks and the contiguous mass of industrial buildings that form the plant) to allow for the activities associated with the proposed new zones. The Smelter's stacks have been a dominant and recognisable industrial element on the local skyline for many years. The removal of the stacks is the most significant visual change likely to affect the largest number of people in the vicinity.

The existing plant buildings can be seen from select residential properties north of the Site (Kiah Road, Hungerford Lane, Gillieston Heights), and east of the Site (Bowditch Avenue). The proposal to rezone the plant area to ‘General Industrial’ would reduce the height and mass of built form currently seen from these locations, and with the inclusion of mitigating design measures (such as a continuous canopy of trees and screen planting), views into the proposed industrial zone could potentially be largely screened in the longer term.

A Heavy Industrial zone is proposed adjacent to the General Industrial zone within an existing forest/bushland area. The proposed zone would result in a large area of vegetation being cleared and an increase in the total area of buildings, roads and infrastructure on the Site. It is possible that the proposed Heavy Industrial zone could be viewed from some properties located north of the Site (Kiah Road and Hungerford Road, and possibly select streets within Gillieston Heights). Extensive planting and careful placement of buildings throughout the proposed Heavy Industrial zone (as outlined in the mitigating design measures) would be essential to minimise its potential visibility.

A Business zone is proposed along Hart Road, Weston. Users of Hart Road (including those accessing the Hunter Expressway) would experience significant visual change. Their views, although transient as they travel through the area, would be affected by the loss of vegetation lining the road and the introduction of buildings and commercial enterprises. Mitigation measures have been recommended to promote an attractive new development and minimise negative visual effects. The changes along Hart Road are limited from permanent viewing locations, such as residential properties and existing businesses in the area.

The visual exposure of the proposed residential areas (R2 zones) within the Site is generally limited due to their lower elevation and surrounding landform. An exception is the proposed R2 zone located on the highest section of the Site adjoining Main Road. The view from Main Road and existing residential areas of the proposed R2 zone would be consistent with the views of surrounding residential development occurring along that road and within adjacent suburbs. For most future residents of the proposed R2 zones, the elevated South Maitland Railway line, landform and proposed mitigating measures, would provide a visual impediment restricting views between the proposed residential areas and proposed industrial areas of the Site.

A significant proportion of the Site is proposed to be zoned Environmental Conservation. This zone would maintain large areas of vegetation within the Site, provide green buffers between more intensively developed zones, help screen views into the proposed zones, and make the Site as a whole more attractive.

Under the Proposal, the existing plant and stacks would make way for the proposed business and industrial zones, which could be developed as attractive business and employment areas

with the introduction of mitigating design measures. The proposed residential areas, although increasing the extent of residential visual character in the vicinity, are close to the existing and planned residential developments (consolidating between Kurri Kurri and Maitland), and it is likely that there is a strong awareness and expectation of such change due to the rapid pace of residential development in the surrounding area.

Although there would be substantial long-term visual change with the transformation of the existing rural zoned Site to a more extensive business, industrial and residential setting, the Planning Proposal is likely to improve views from many vantage points. There are opportunities to ensure attractive communities can be achieved by implementing appropriate design principles and other mitigation measures such as those recommended in this report.

The Visual Impact Assessment prepared by Envisage is contained with **Appendix Q**.

Conclusion

This Planning Proposal requests that the Site be rezoned under Cessnock LEP to include the following zones:

- R2 Low Density Residential;
- RU2 Rural Landscape;
- SP2 Infrastructure;
- B1 Neighbourhood Centre;
- B7 Business Park;
- IN1 General Industrial;
- IN3 Heavy Industrial; and
- E2 Environmental Conservation.

The vast majority of the Site is proposed to be rezoned E2 Environmental Conservation (approximately 1,060ha) and RU2 Rural Landscape (approximately 43ha). The effect of this is that the Site would change little from its existing character and would enable significant ongoing conservation and environmental uses.

The urban and subregional context of the Site allows for the remainder of the Site (approximately 337 hectares) to be suitable for a suite of employment, residential and rural uses. The rezoning of the Site for such uses, will contribute to achieving important objectives and directions in NSW Government planning strategies and policies for housing and employment targets in suitable locations. It will achieve a density of development that is appropriate for its urban context and employment growth.

The Site is strategically located within the vicinity of key regional infrastructure, including the Hunter Expressway and Kurri Kurri Wastewater Treatment Works. The rezoning will facilitate direct connection of the employment land to the South Maitland Railway via a proposed SP2 Infrastructure corridor. This combination of significant road and rail access shall provide the ReGrowth Kurri Kurri site with a unique position in the Hunter Region. The full range of utility services – electricity, telecommunications, gas, water, sewer and stormwater drainage – are available on and adjacent to the Site and have capacity to accommodate future development consistent with the proposed rezoning.

Given the above strategic planning merit, we request that Council forward this Planning Proposal to the Minister for Planning for a ‘gateway determination’ in accordance with section 56 of the EP&A Act.

Appendix A

Hydro Land Lot Schedule

Plan Label	Lot Number
DP1082569	10
DP1082569	11
DP1082569	12
DP1082569	13
DP1082569	14
DP1082569	15
DP1082569	16
DP1082569	17
DP1082569	18
DP1082569	19
DP1082569	20
DP1082569	21
DP1082569	22
DP1082775	10
DP1082775	11
DP1082775	13
DP1082775	14
DP1082775	15
DP1082775	16
DP166625	1
DP233125	2
DP233125	3
DP39701	789

DP456769	1
DP456769	2
DP456769	3
DP456946	1
DP456946	2
DP456946	3
DP456946	4
DP456946	5
DP456946	6
DP456946	7
DP456946	8
DP456946	9
DP456946	10
DP456946	11
DP502196	2
DP543057	1
DP547715	1
DP553542	10
DP589169	1
DP62332	1
DP62332	2
DP62332	3
DP654206	1
DP71130	1
DP728982	809
DP73597	1
DP755231	316
DP755231	317

DP755231	318
DP755231	319
DP755231	351
DP755231	352
DP755231	353
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DP755231	461
DP755231	462
DP755231	463
DP755231	536
DP755231	682
DP755231	769
DP975994	54
DP975994	55
DP975994	58
DP975994	60
DP975994	61
DP975994	63
DP975994	69
DP975994	70

DP975994	71
DP998540	1

Appendix B

Aboriginal Cultural Heritage Assessment

AECOM

Appendix C

Biodiversity Key Findings

Ecological Australia

Appendix D

Bushfire Impact Assessment

Kleinfelder

Appendix E

Contamination Assessment

ENVIRON

Appendix F

Detailed Servicing Strategy

PCB

Appendix G

Economic Benefits Assessment

Urbis

Appendix H

Flooding and Stormwater Impact Assessment

PCB

Appendix I

Geotechnical Assessment

Douglas Partners

Appendix J

Heritage Impact Assessment

RPS

Appendix K

Industrial Land Supply Analysis

Urbis

Appendix L

Noise and Vibration Impact Assessment

VIPAC

Appendix M

Socio & Economic Impact Assessment

Elton Consulting

Appendix N

Stakeholder Engagement

GHD

Appendix O

Subdivision Design

PCB

Appendix P

Traffic and Transport Study

Hyder

Appendix Q

Visual Impact Assessment

Envisage