# AGRICULTURAL LAND SUITABILITY AND CAPABILITY ASSESSMENT

## Norsk Hydro Aluminium Smelter and associated land

CESSNOCK CITY COUNCIL

FINAL REPORT

JULY 2016

ISO 9001
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Certifications

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# EXECUTIVE SUMMARY

RMCG was engaged by Cessnock City Council to undertake an assessment of the former Norsk Hydro Aluminium Smelter and associated land. The land is subject to a planning proposal (PP 2015 CESSN 006) and a request for a Gateway determination has been approved subject to a number of conditions (Appendix 1).

This report address condition *g) – include the outcomes of an agricultural land suitability and capability assessment and update its assessment in the planning proposal of the Minister's s117 Directions 1.2 Rural Zones and 1.5 Rural Lands.*

In addressing this condition, RMCG undertook to assess the Norsk Hydro site and to answer the following questions:

- Is the land regionally significant agricultural land?
- Will the development fragment the existing landscape making it difficult for future agribusiness to develop?
- Will the development spark rural land use conflict?

This report documents the assessment of land within the Cessnock City LGA and is a companion to a similar report prepared for land within Maitland City.

The review found that:

- There is strong state, regional and local support to grow the agriculture sector and protect important agricultural land. However, at the same time, regional growth strategies have signalled significant population growth and development to cater for growth within the LGA that will compete with and challenge the growth of the agricultural sector.
- Agriculture is a small and reducing element of the Cessnock City economy. The major sectors by gross value are broilers, wine grapes and beef cattle. Wine grapes underpin the local viticulture industry part of the renowned Hunter Wine region, which is included in the Viticulture Critical Industry Cluster. The Norsk Hydro site is well separated from the Viticulture District.

Based on the desktop review and groundtruthing it is concluded that:

1. Land within the Norsk Hydro site is **not regionally significant agricultural land** as it does not comprise land of very high or high capability and does not support an economically significant agricultural sector.
2. **Development will not make it difficult** for agribusiness to develop because either:
   – The land is already substantially fragmented and is not attractive for new investment in commercial scale agriculture, particularly commercial livestock grazing that was found to be the most suitable use.
   – Proposed residential growth around the site has already served to make it difficult for agribusiness to develop and will result in the land becoming 'land locked' and unattractive for new or ongoing investment in commercial agriculture.
3. **The development will not spark rural land use conflict** and in particular conflict with commercial agriculture as commercial agriculture will not be a dominant land use on or adjacent to the Norsk Hydro site in the long term.

# 1 INTRODUCTION

## 1.1 BACKGROUND

RMCG was engaged by Cessnock City Council to undertake an assessment of the former Norsk Hydro Aluminium Smelter and associated land. The land is subject to a planning proposal (PP 2015 CESSN 006) and a request for a Gateway determination has been approved subject to a number of conditions (Appendix 1).

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This report documents the assessment of land within the Cessnock City LGA and is a companion to a similar report prepared for land within Maitland City.

## 1.2 METHDOLOGY

In undertaking the assessment RMCG undertook the following tasks:

- Desktop review of the strategic and policy context
- Compiled assessment criteria for agricultural land suitability and capability assessment.
- Inspected the site and surrounding district.

The site was visited on the 30th of May 2016.

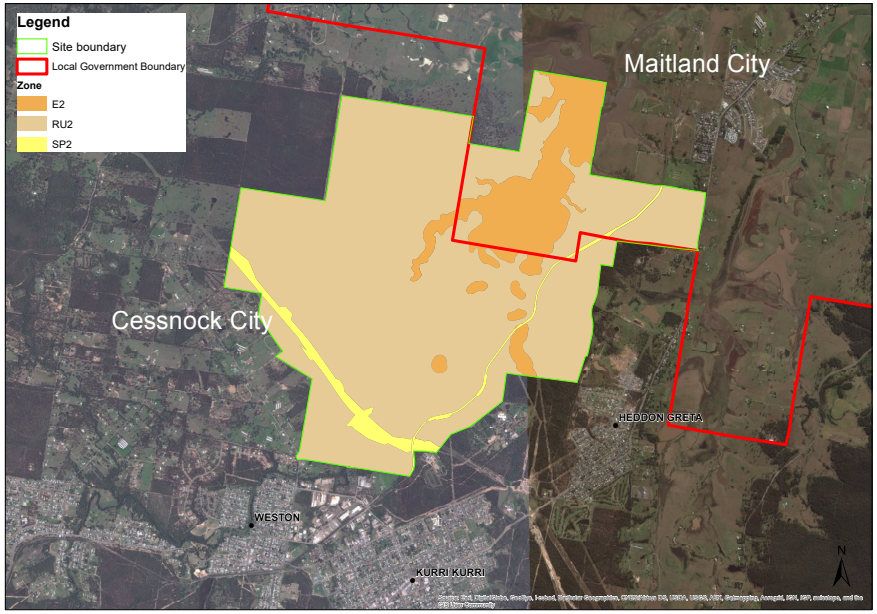
# 2 SITE OVERVIEW

The Norsk Hydro Site is located near Kurri Kurri just off the Hunter Expressway within the Cessnock City and Maitland City local government areas (Figure 1). The aluminium smelter started primary metal production in 1969 and closure was decided in May 2014. The area used for the smelter comprised a relatively small proportion of the total site. In addition to the aluminium smelter the land has been used for livestock grazing and intensive poultry and there is extensive areas of remnant native vegetation.

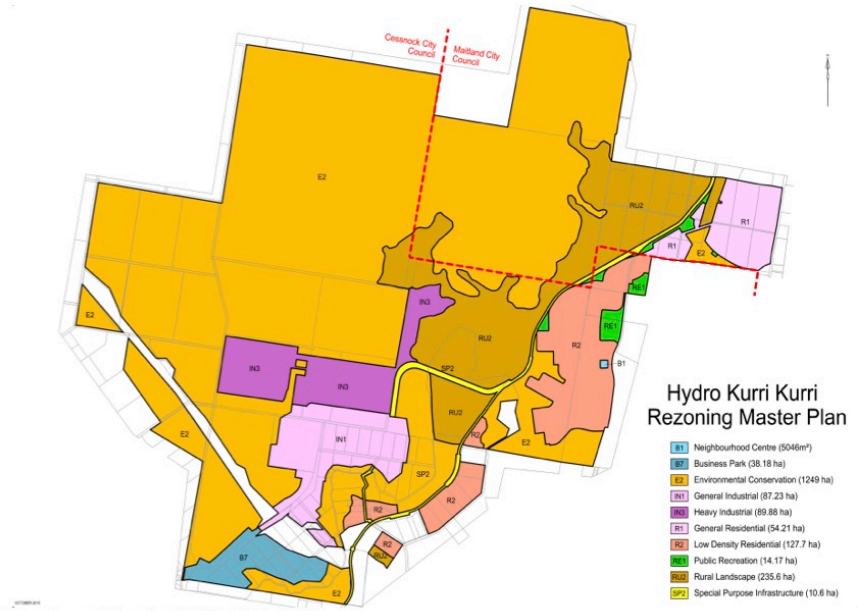
The land is currently zoned RU2 – rural landscape and E2 – environmental conservation (Figure 2). The proposal seeks to introduce a mix of zones to provide for industrial, commercial, residential and environmental conservation outcomes (Figure 3).

**FIGURE 1: NORSK HYDRO SITE**

## FIGURE 2: CURRENT ZONING




## FIGURE 3: REZONING MASTERPLAN




Source: Cessnock Council and Maitland Council, 2015

# 3 POLICY AND STRATEGIC CONTEXT

## 3.1 STATE

### STATE ENVIRONMENTAL PLANNING POLICY (RURAL LANDS) 2008

The aims of the SEPP (Rural Lands) are as follows:

- Facilitate the orderly and economic use and development of rural lands for rural and related purposes
- Identify the Rural Planning Principles and the Rural Subdivision Principles so as to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State
- Implement measures designed to reduce land use conflicts
- Identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations
- Amend provisions of other environmental planning instruments relating to concessional lots in rural subdivisions.

The Rural Planning Principles are as follows:

- Promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas
- Recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State
- Recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development
- In planning for rural lands, to balance the social, economic and environmental interests of the community
- Identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land
- Provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities
- Consideration of impacts on services and infrastructure and appropriate location when providing for rural housing
- Ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.

## 3.2 REGIONAL

### DRAFT HUNTER REGIONAL PLAN

The Plan sets out the Government's vision for the region:

*The Hunter region will capitalise on its diversity and connectivity to capture growth, using its natural resources and amenity, economic strengths, and its communities, to actively manage change and attract investment. It will offer an array of quality lifestyles "within sustainable*

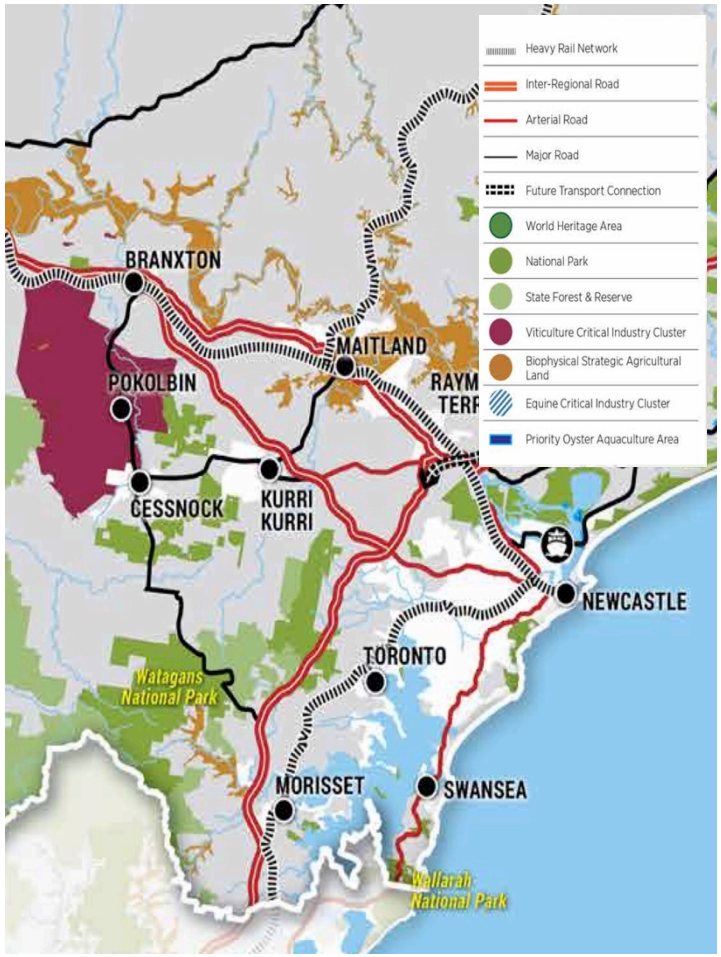
Goals and actions relevant to the rural lands of Cessnock include:

- Goal 1 – Grow Australia's next major City – the population of Hunter City and communities in the surrounding hinterland are expected to grow from 430,000 to around 750,000 over the next 40 to 50 years.
- Goal 2 – Grow the Largest regional economy in Australia:
  - Support the growth of the region's important primary industries
  - Develop local strategies to support sustainable agriculture and agribusiness
  - Develop strategies for enhancing tourism infrastructure to increase national competitiveness
  - Avoid urban and rural residential encroachment into identified agricultural and extractive resource lands when preparing long term settlement strategies
  - Protect the region's wellbeing and prosperity through increased biosecurity measures

The Plan identifies Biophysical Strategic Agricultural Land within the Norsk Hydro site. The site is not associated with a Critical Industry Cluster (Figure 4).

The significant growth anticipated in the region will increasingly challenge the viability of commercial agricultural business in Cessnock due to increasing land values, encroachment and land use conflict.

**FIGURE 4: SELECTED PRIMARY INDUSTRIES**[1]




### Lower Hunter Regional Strategy 2006 – 2031

The Lower Hunter Regional Strategy sets the framework and direction for growth within the Lower Hunter sub-region. The sub-region has been nominated as a significant growth area within NSW, with the area growing both in its own right and as an 'overflow' area for Sydney with potential to accommodate over 160,000 new people in the coming 25 years. An additional 66,000 new jobs and 115,000 new dwellings will be required to cater for this growth.

The Strategy identifies Cessnock as a future regional centre, with Pokolbin identified as a specialist centre for tourism and the wine industry. The target set for Cessnock LGA is 21,700 new dwellings with 19,700 being provided by new land releases (green field sites) and 2,000 from infill development within existing urban areas. This equates to an estimated 45,700 additional people living in Cessnock LGA, with the target population for the LGA being 96,410 people by 2031.

## STRATEGIC REGIONAL LAND USE POLICY[2]

The Policy was introduced by the State Government in response to the rapid expansion of coal seam gas exploration and seeks to provide greater protection for valuable agricultural land. The policy outlines a methodology for identifying two categories of strategically important agricultural land

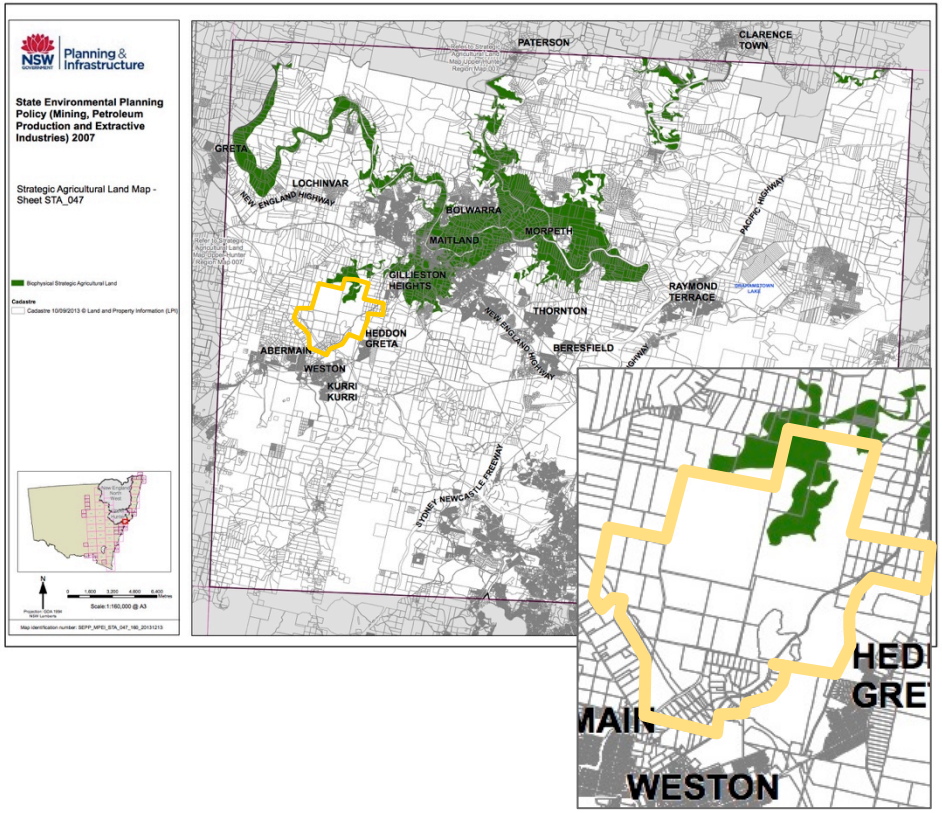
- Biophysical Strategic Agricultural Land – based on the inherent qualities of the land
- Critical industry clusters – based on the land's importance to a highly significant and clustered industry.

The Norsk Hydro Site includes land mapped as Biophysical Strategic Agricultural Land (Figure 5) within Maitland City.

[1] Department of Planning (2006) Lower Hunter Regional Strategy 2006 - 2031

[2] Department of Planning and Infrastructure (2012) Strategic Regional Land Use Policy

**FIGURE 5: BIOPHYSICAL STRATEGIC AGRICULTURAL LAND**[3]




## 3.3 LOCAL

The land is currently zoned a mix of RU2 – Rural landscape and E2 - Environmental Conservation.

## 3.4 CONCLUSIONS

There is strong state, regional and local support to grow the agriculture sector and protect important agricultural land. However, at the same time, regional growth strategies have signalled significant population growth and development to cater for growth within the LGA that will compete with and challenge the growth of the agricultural sector.

[3] http://www.planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Safeguarding-our-Agricultural-Land accessed 31.05.2016

# 4 ASSESSMENT CRITERIA

## 4.1 OVERVIEW

### Site Verification

A site verification process[4] has been developed under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, to determine the existence of BSAL at the site of a potential development. The protocol for site verification of Biophysical Strategic Agricultural Land recommends assessment of the following criteria:

- Access to reliable water
- Slope
- Rock outcrops
- Soil fertility / soil type
- Surface rock fragments
- Gilgai
- Soil depth
- Soil and site drainage
- pH
- Soil salinity
- Soil water storage
- Minimum area

### Land Use Conflict Risk Assessment Guide

The Land Use Conflict Resource Assessment Guide[5] provides guidance on criteria to use when conducting a Land Use Conflict Risk Assessment (LUCRA). It may assist landholders, developers and regulators with improved knowledge to avoid and manage land use conflicts.

The primary focus of the Guide is on conflicts affecting existing or proposed agricultural developments. In this assessment the Guide has been used to identify criteria for assessing the potential for conflict between existing agriculture surrounding the Norsk Hydro site and the proposed development.

Factors recommended for consideration of land use conflict collected for this assessment include:

- Description of the nature of the proposed land use change and proposed development
- Description of and the major activities associated with the land use change and their frequency. Include periodic and seasonal activities that have the potential to be a source of a complaint or conflict
- Appraising the topography, climate and natural features of the site and broader locality
- Description of the main activities of the adjacent properties and their frequency.
- Comparing and contrasting the proposed and adjoining/surrounding land uses and activities for incompatibility and conflict issues.

[4] Department of Primary Industry (2012) Development of protocol for site verification and mapping of Biophysical Strategic Agricultural Land

[5] Department of Trade and Investment, Regional Infrastructure and Services (2011) Land Use Conflict Resource Assessment Guide

## 4.2 CONSIDERATIONS FOR THIS STUDY

The following table details the criteria used to assess the site.

| Issue | Criteria |
|---|---|
| The land is regionally significant agricultural land | Access to reliable water<br>Disturbed landscape<br>Slope<br>Gilgai<br>Landscape drainage<br>Soil depth<br>Stoniness / rock outcrop<br>Rainfall<br>Critical industry cluster – is the site used or part of an area that supports a highly significant and clustered industry |
| The development will fragment the existing landscape making it difficult for future agribusiness to develop | Description of the nature of the proposed land use change and proposed development |
| The development will result in land use conflict | Description of major activities associated with the land use change<br>Description of activities of adjacent and surrounding properties |

# 5 AGRICULTURE IN CESSNOCK CITY

Agriculture in Cessnock is a relatively small component of the local economy and the regional and state agricultural industry. In 2015, agriculture was the 14th largest sector of the local economy measured by output (Figure 6) and 13th highest employer (Figure 7). In 2011, Cessnock contributed 7% of regional gross value of agricultural production (GVAP) and 0.2% of NSW GVAP.

The scale of the agricultural industry in Cessnock is reducing with the gross value falling between 2001 and 2011. There was a small increase in gross value of agriculture between 2011 and 2015 (Figure 8), which is attributed to an increase in the agricultural census statistical reporting area (resulting in the inclusion of agricultural businesses outside of the LGA) and strong prices for beef cattle.

In 2010-11, the total GVAP was $24million with poultry, crops, wine grapes, cattle and eggs the top five commodities (Figure 9). While not strictly an agricultural industry, the equine industry (pleasure horses) was valued at $2.9 million in 2011, which would make it third largest industry by gross value.

**FIGURE 6: ECONOMIC OUTPUT BY INDUSTRY, CESSNOCK CITY 2015[6]**

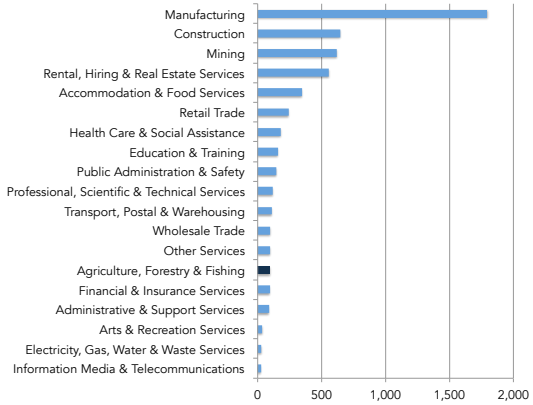



**FIGURE 7: EMPLOYMENT BY INDUSTRY SECTOR, CESSNOCK CITY 2015[6]**

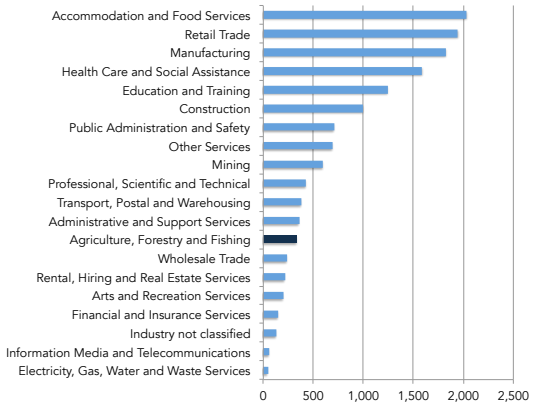
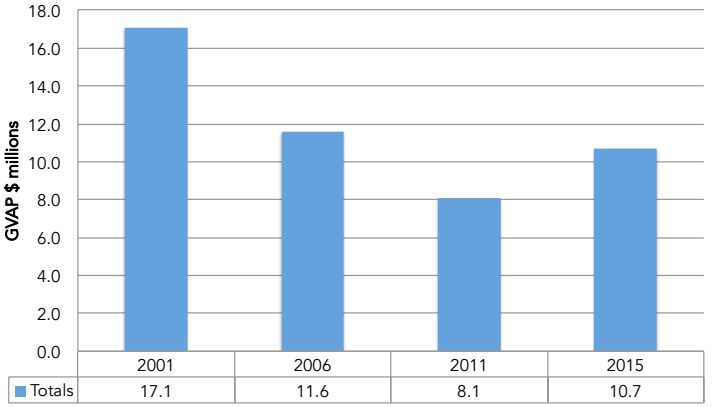


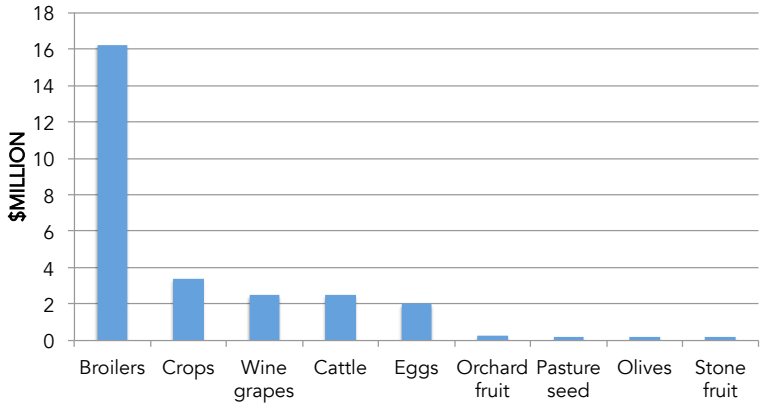

**FIGURE 8: TREND IN GROSS VALUE OF AGRICULTURE (EXCLUDING BROILERS) CESSNOCK CITY[7]**




[6] http://economy.id.com.au/cessnock accessed 2.06.016

[7] Australian Bureau of Statistics Data supplied by Neil Clarke and Associates

**FIGURE 9: GROSS VALUE MAIN COMMODITIES, CESSNOCK CITY 2010-117**




## 5.1 CONCLUSION

Agriculture is a small and reducing element of the Cessnock City economy. The major sectors by gross value are broilers, wine grapes and beef cattle. Wine grapes underpin the local viticulture industry part of the renowned Hunter Wine region, which is part of the Viticulture Critical Industry Cluster. The Norsk Hydro site is well separated from the Viticulture District.

# 6 SITE DESCRIPTION

## 6.1 OVERVIEW

The Norsk Hydro Site is located 6 kilometres from the centre of Kurri Kurri. The area used for the smelter comprises a relatively small proportion of the total site. In addition to the aluminium smelter the land has been used for livestock grazing and intensive poultry and there is extensive areas of remnant native vegetation.

**FIGURE 10: CONTOURS**

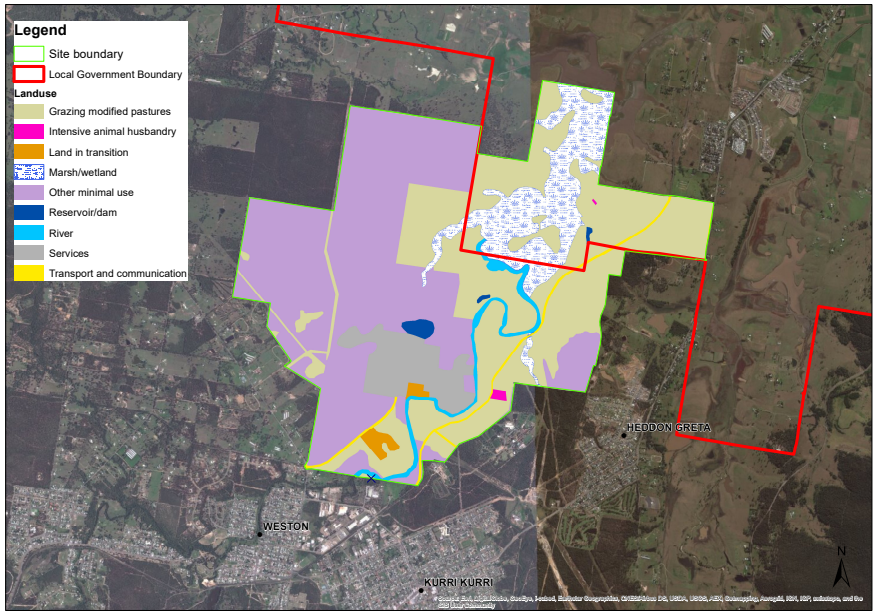
### Topography

The topography can impact on the suitability of the site for different agricultural enterprises. The site topography is mainly undulating to gently undulating (mostly less than 10% slope) draining to the flat land associated with the Wentworth Swamp in the central part of the site (Figure 10). Swamp Creek and Black Waterholes Creek feed the Swamp.

## Land use

Around half the land has been cleared for farming and is currently used for livestock grazing (Figure 11). Intensive animal husbandry (poultry) sheds on the site have been decommissioned.

### FIGURE 11: LAND USE[1]




## Land capability

Statewide land capability mapping[2] assigns a class between 1 and 8, with Class 1 land being extremely high agricultural capability land and Class 8 extremely low capability agricultural land (Table 1). Mapping of land capability for agriculture (Figure 12) found that most of the land is Class 6 and Class 4 agricultural capability with a small area of Class 3 in the northern part of the site (within Maitland LGA). The area mapped as Class 3 land capability aligns with the land mapped as Biophysical Strategic Agricultural Land.

## Property size

Mapping of property size[3] (Figure 13) shows that most land is held in properties over 40 ha in size with clusters of lots under 10ha in the southern part of the site.

[1] Department of Environment and Climate Change

[2] Office of Environment and Heritage (2013) Land and soil capability mapping for NSW
[3] Property data provided by Cessnock City

## TABLE 1: LAND CAPABILITY CLASSES AND DEFINITIONS

**Class 1: Extremely high capability land:** Land has no limitations. No special land management practices required. Land capable of all rural land uses and land management practices.

**Class 2: Very high capability land:** Land has slight limitations. These can be managed by readily available, easily implemented management practices. Land is capable of most land uses and land management practices, including intensive cropping with cultivation.

**Class 3: High capability land**: Land has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices. However, careful management of limitations is required for cropping and intensive grazing to avoid land and environmental degradation.

**Class 4: Moderate capability land:** Land has moderate to high limitations for high-impact land uses. Will restrict land management options for regular high-impact land uses such as cropping, high-intensity grazing and horticulture. These limitations can only be managed by specialised management practices with a high level of knowledge, expertise, inputs, investment and technology.

**Class 5: Moderate–low capability land:** Land has high limitations for high-impact land uses. Will largely restrict land use to grazing, some horticulture (orchards), forestry and nature conservation. The limitations need to be carefully managed to prevent long-term degradation.

**Class 6: Low capability land:** Land has very high limitations for high-impact land uses. Land use restricted to 6 low-impact land uses such as grazing, forestry and nature conservation. Careful management of limitations is required to prevent severe land and environmental degradation Land generally incapable of agricultural land use (selective forestry and nature conservation)

**Class 7: Very low capability land:** Land has severe limitations that restrict most land uses and generally cannot be overcome. On-site and off-site impacts of land management practices can be extremely severe if limitations not managed. There should be minimal disturbance of native vegetation.

**Class 8: Extremely low capability land:** Limitations are so severe that the land is incapable of sustaining any land use apart from nature conservation. There should be no disturbance of native vegetation.

## FIGURE 12: LAND CAPABILITY

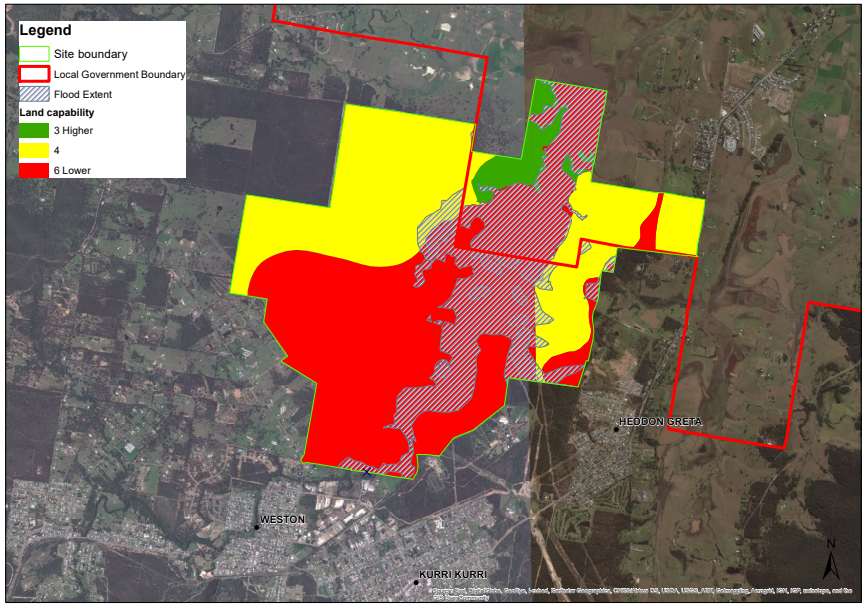
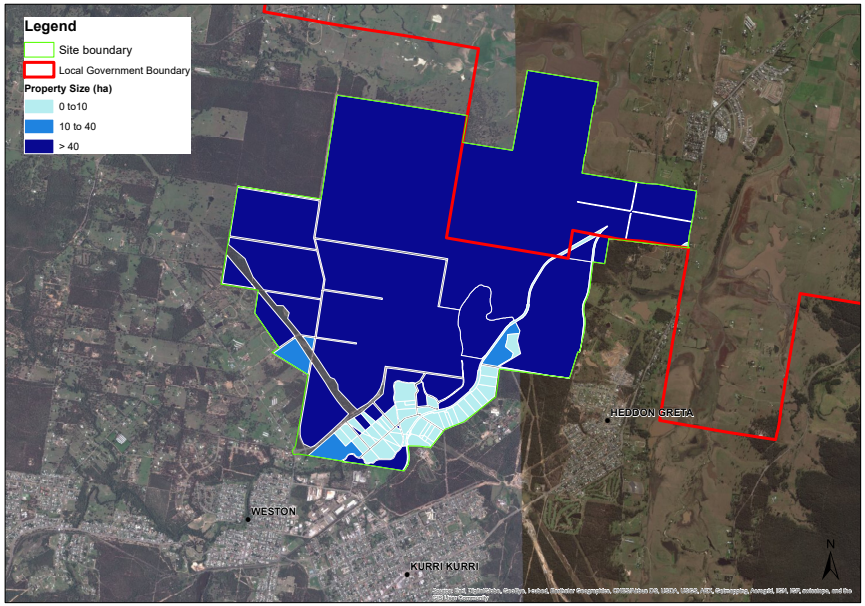


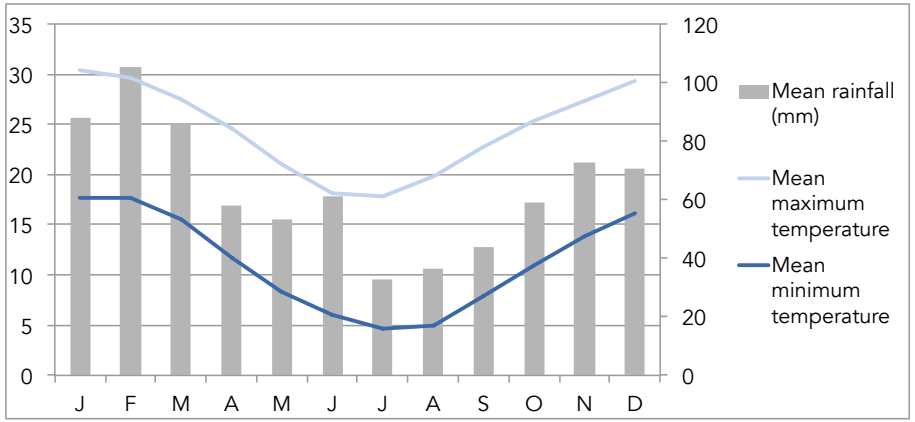
**FIGURE 13: PROPERTY SIZE**




## CLIMATE

The climate is sub-tropical to temperate characterised by hot, humid summers and mild dry winters. The annual average rainfall is 763mm per year. Agricultural production relies on seasonal rainfall as there is little opportunity for irrigation development due to low reliability flows of streams and lack of significant exploitable aquifers underlying the site.

**FIGURE 14: CESSNOCK (NUKALBA) TEMPERATURE AND RAINFALL[4]**



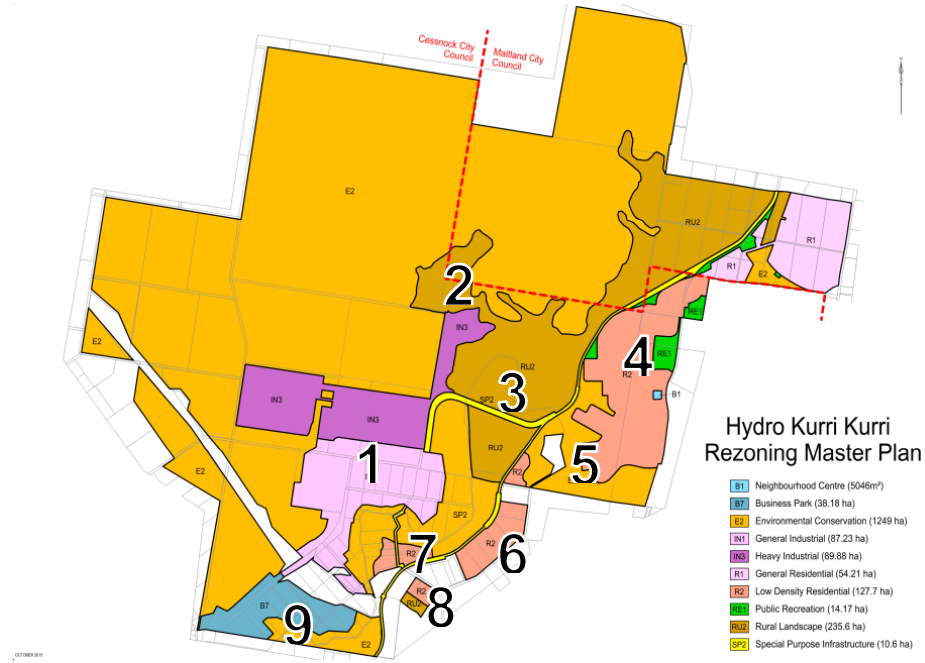

## SOILS

An assessment of the soils at the site was undertaken by auguring a number of inspection holes. The maximum depth of these inspection holes was between 30 and 40 cm due the dryness of the soil. However, gullies and road cuttings provided opportunities to view deeper soils profiles. Data recorded for each hole included: field texture, colour, drainage/waterlogging, and presence of stone.

Detailed assessments were undertaken at nine locations across the site (Figure 15) focusing on areas where the proposed zoning seeks to achieve a shift away from rural or environmental uses to residential, commercial or industrial uses.

[4] Bureau of Meteorology (http://www.bom.gov.au/climate/averages/tables/cw_061242.shtml) accessed 7.6.2016

**FIGURE 15: LOCATION OF DETAILED SITE ASSESSMENTS**




Source: Cessnock Council and Maitland Council, 2015

## SITE 1

Site 1 is the location of the aluminium smelter and associated infrastructure including office buildings and car parks. The Kurri Kurri Speedway is located to the east of the industrial complex at Site 1. Other land surrounding the industrial complex is predominantly vegetated.

*Due to the level of development and changes to soils resulting from this development, the site is unsuitable for agriculture.*

## SITE. 2, SITE 3, SITE 4, SITE 5

Sites 2, 3, 4 and 5 are located on gently undulating to flat land that drain toward the Wentworth Swamp. The land is mainly cleared with some scattered vegetation and is currently used for livestock grazing. The land is relatively unfragmented and there are no dwellings. The land capability is mapped as mainly Class 6 – low capability with agricultural uses restricted to low impact uses such as livestock grazing or forestry. A small area is mapped as – Class 4 – moderate capability land that is suited to a wider range of uses but requiring specialised management practices. Site inspection found that the soil is deep, structured, gradational clay / clay loam (Table 2). There were no indications of waterlogging, however, soil permeability is envisaged to be moderate to slow. The lower lying flat land showed indications of seasonal inundation and ephemeral wetlands or swamps.

*The site inspection confirms that the land capability ranges between Class 6 and Class 4. The lack of fragmentation and development means that the land could support commercial scale agriculture primarily livestock grazing with limited potential for cropping or horticulture (perennial horticulture) in higher locations within the landscape.*

**TABLE 2: SOIL DESCRIPTION**

| | | | | | |
|---|---|---|---|---|---|
| Topography | Gently undulating to flat | | | | |
| Drainage | Undulating land was moderate to slow drainage<br>Flat land adjacent to wetlands was poorly drained | | | | |
| Soil description | Depth | Texture | Free rock | Colour | Gilgai |
| Topsoil | Gradational > 60cm | Clay / clay loam | Nil | Grey | Nil |
| Subsoil | | Fine Sandy Clay Loam | Nil | Grey | Nil |

**Site 2**

### Site 3


### Site 4


### Site 5


## SITE 6

Site 6 is fragmented land used for a mix of rural residential and hobby farming. A decommissioned poultry shed is located on one property. Mapping of agricultural land capability indicates that the land is Class 6 – low capability with agricultural use restricted to low impact uses such as livestock grazing or forestry. Soil sampling was not undertaken at this site as it is in private ownership. However, there is a high probability that the soil is similar to that observed at Sites 2 through 5 due to its proximity to these areas and similar topography. Block sizes are relatively small (around 3 to 5 hectares) and there is a house on each block. The land is mostly cleared with scattered remnant native vegetation. The Hunter TAFE Kurri Kurri Campus is immediately adjacent Site 6.

*The site inspection confirms that the land capability is Class 6 low capability suited to livestock grazing. However, land fragmentation and small property sizes means that land is not capable of supporting commercial scale livestock enterprises.*


## SITE NO 7

Site 7 is partially cleared with the main land use a fabrication business on Dawes Avenue and rural residential or hobby farming. Soil sampling was not undertaken at this site as it is in private ownership. Land capability is mapped as Class 6 - low capability and the findings of the site inspection supports this assessment. Property sizes are small – mostly less than 10 ha

*The site inspection confirms that the land capability is Class 6 low capability suited to livestock grazing. However, land fragmentation and small property sizes means that land is not capable of supporting commercial scale livestock enterprises.*

## SITE 8

Site 8 is a cluster of rural residential properties with housing and horse grazing on cleared, small properties (<10ha). Soil sampling was not undertaken at this site as it is in private ownership. Land capability is mapped as Class 6 - low capability and the findings of the site inspection supports this assessment.

*The site inspection confirms that the land capability is Class 6 low capability suited to livestock grazing. However, land fragmentation and small property sizes means that land is not capable of supporting commercial scale livestock enterprises.*

## SITE 9

Site 9 is located immediately adjacent the Hunter Expressway and Hart Rd interchange. Land is used for rural residential purposes and is partially cleared. Properties with cleared land are less than 10ha in size. Soil sampling was not undertaken at this site as it is in private ownership. Land capability is mapped as Class 6 - low capability and the findings of the site inspection supports this assessment.

*The site inspection confirms that the land capability is Class 6 low capability suited to livestock grazing. However, land fragmentation and small property sizes means that land is not capable of supporting commercial scale livestock enterprises.*

## 6.2 CONCLUSIONS

Based on the desktop review and groundtruthing it is concluded that land within the Norsk Hydro site is **not regionally significant agricultural land** as it does not comprise land of very high or high capability and does not support an economically significant agricultural sector. The agricultural capability and suitability of land at specific sites is summarised here:

- Site 1
  - Not suitable for agriculture
- Site 2
  - Land capability Class 6 – low capability
  - Agricultural suitability – livestock grazing
- Site 3
  - Land capability Class 6 – low capability
  - Agricultural suitability – livestock grazing
- Site 4
  - Land capability ranges between Class 4 moderate capability to Class 6 – low capability
  - Agricultural suitability – livestock grazing and some cropping / perennial horticulture in limited locations
- Site 5
  - Land capability Class 6 – low capability
  - Agricultural suitability – livestock grazing
- Site 6
  - Land capability Class 6 – low capability
  - Agricultural suitability – not suitable for commercial scale agriculture
- Site 7
  - Land capability Class 6 – low capability
  - Agricultural suitability – not suitable for commercial scale agriculture
- Site 8
  - Land capability Class 6 – low capability
  - Agricultural suitability – not suitable for commercial scale agriculture
- Site 9
  - Land capability Class 6 – low capability
  - Agricultural suitability – not suitable for commercial scale agriculture.

It is also therefore concluded **the development will not make it difficult for agribusiness to develop at Sites 1, 6, 7, 8 and 9** because the land in these locations is already substantially fragmented and is not attractive for new investment in commercial scale agriculture, particularly commercial livestock grazing that was found to be the most suitable use.

While land at Sites 2,3,4 and 5 was found to be suitable for agriculture, other factors, such as further development at Gillieston Heights on the northern boundary and Heddon Greta on the eastern boundary will result in this land becoming ‘land locked’ and unattractive for new or ongoing investment in commercial agriculture. Therefore, it is concluded that **the development will not make it difficult for agribusiness to develop at Sites 2,3,4 and 5** as the proposed residential growth around the site has already served to make it difficult for agribusiness to develop.

# 7 LAND USE CONFLICT

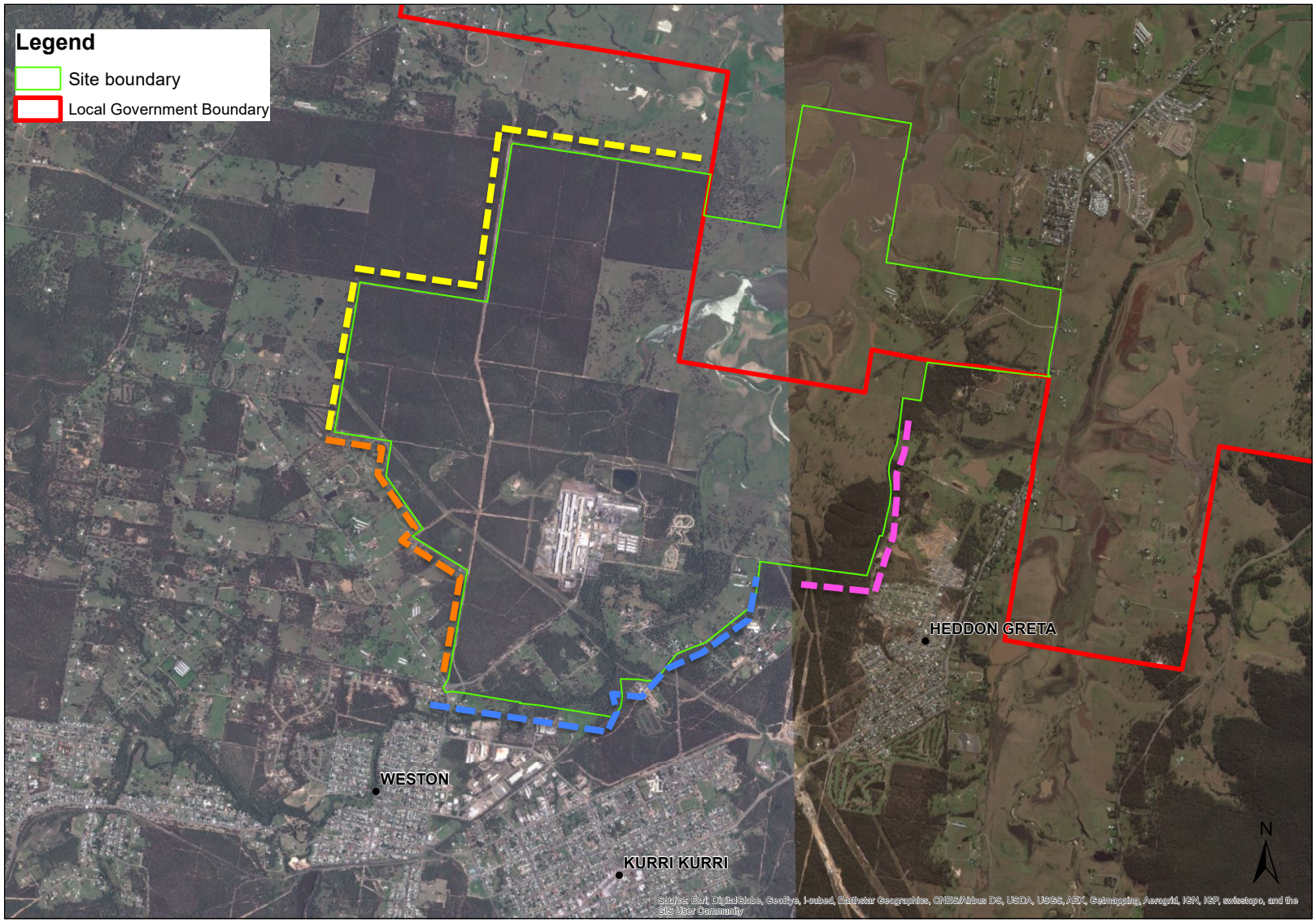
To assess whether the development will spark rural land use conflict, and for this study, land use conflict with agriculture, the land surrounding the proposed development site was inspected and major land uses recorded including: rural residential, hobby farming, commercial agriculture, rural industry.

The interface between the Norsk Hydro site and adjoining land uses is shown in Figure 16. Table 3 summarises the proposed zoning of land on the Norsk Hydro site, land use on land adjoining the Norsk Hydro site and the risk that the proposed change to land use will introduce land use conflict with agriculture. This assessment found that the risk that the proposed development will introduce rural land use conflict with agriculture is low, primarily because in most instances, commercial agriculture is not an existing use on land adjoining the Norsk Hydro site or commercial agriculture is not proposed for land as part of the site rezoning.

**TABLE 3: LAND USES AND RISK ASSESSMENT**

| Interface | Norsk Hydro proposed zone | Adjoining land uses | Land use conflict risk with agriculture |
|---|---|---|---|
| | E2 – Environmental conservation | Hobby farming, commercial broadacre agriculture and native vegetation | Low |
| | E2 – Environmental conservation | Rural residential and hobby farming including recreational horse stables, livestock grazing and some small scale agricultural activities such as greenhouse vegetables | Low |
| | E2 – Environmental conservation<br>B7 - Business Park | Light industrial, commercial uses and native vegetation | Low |
| | E2 – Environmental conservation<br>R2 – Low Density Residential | Residential (note future northern growth planned for Heddon Greta) | Low |

## FIGURE 16: ADJOINING LAND USES



# 8 CONCLUSION

RMCG undertook an assessment of the Norsk Hydro site, including a desktop review and site inspections, to answer the following questions:

- Is the land regionally significant agricultural land?
- Will the development fragment the existing landscape making it difficult for future agribusiness to develop?
- Will the development spark rural land use conflict?

The review found that:

- There is strong state, regional and local support to grow the agriculture sector and protect important agricultural land. However, at the same time, regional growth strategies have signalled significant population growth and development to cater for growth within the LGA that will compete with and challenge the growth of the agricultural sector.
- Agriculture is a small and reducing element of the Cessnock City economy. The major sectors by gross value are broilers, wine grapes and beef cattle. Wine grapes underpin the local viticulture industry part of the renowned Hunter Wine region, which is included in the Viticulture Critical Industry Cluster. The Norsk Hydro site is well separated from the Viticulture District.

Based on the desktop review and groundtruthing it is concluded that:

4. Land within the Norsk Hydro site is **not regionally significant agricultural land** as it does not comprise land of very high or high capability and does not support an economically significant agricultural sector.
5. **Development will not make it difficult** for agribusiness to develop because either:
   - The land is already substantially fragmented and is not attractive for new investment in commercial scale agriculture, particularly commercial livestock grazing that was found to be the most suitable use.
   - Proposed residential growth around the site has already served to make it difficult for agribusiness to develop and will result in the land becoming ‘land locked’ and unattractive for new or ongoing investment in commercial agriculture.
6. **The development will not spark rural land use conflict** and in particular conflict with commercial agriculture as commercial agriculture will not be a dominant land use on or adjacent to the Norsk Hydro site in the long term.

# APPENDIX 1

NSW GOVERNMENT | Planning & Environment

## Gateway Determination

***Planning proposal (Department Ref: PP_2015_CESSN_006)**: to investigate the rezoning of the former Norsk Hydro Aluminium Smelter and associated land.*

I, the Deputy Secretary, Planning Services, at the Department of Planning and Environment as delegate of the Minister for Planning, have determined under section 56(2) of the *Environmental Planning and Assessment Act 1979* (the Act) that an amendment to the *Cessnock Local Environmental Plan (LEP) 2011* to rezone the former Norsk Hydro Aluminium Smelter and associated land, should proceed subject to the following conditions:

1. Council is to amend the planning proposal and draft maps prior to exhibition to:

   (a) exclude the proposed B7 and B1 zoning. Further justification of the size, location and zone proposed for these areas is required, in particular how the proposal relates to surrounding land uses and the existing/proposed centres in Kurri Kurri and Gillieston Heights;

   (b) provide for the aluminium smelter waste containment cell to be zoned either IN3 Heavy Industry or SP2 Waste Disposal Facility;

   (c) address the requirements of the Office of Environment and Heritage regarding flood modelling to accurately demonstrate the impact of flooding, including local flooding, on the land to be rezoned and all existing and proposed access roads;

   (d) provide a strategy that facilitates flood free access for proposed residential development;

   (e) address the requirements of State Environmental Planning Policy No 55 (SEPP 55) - Remediation of Land and the Contaminated Land Planning Guidelines;

   (f) determine the appropriate zoning for the land adjoining Main Street, Hunter expressway and the South Maitland Railway line based on detailed acoustic and vibration impact assessment. The responsibility for and mechanism to deliver any proposed noise attenuation measures such as bunds should be clarified. If required, the proposed zoning map should be amended before exhibiting the planning proposal where impacts cannot be ameliorated;

   (g) include the outcomes of an agricultural land suitability and capability assessment and update its assessment in the planning proposal of the Minister's s117 Directions 1.2 Rural Zones and s1.5 Rural Lands;

   (h) clarify road upgrades/intersection proposals as outlined in the Traffic and Transport Study to the Hunter Expressway and Cessnock Road following discussion with Roads and Maritime Services and Maitland City Council;

   (i) correct the statement (pg 34) that no specific upgrades or road works are proposed;

   (j) correct the statement (pg 24) that the site contains no items of local heritage significance and recognise the heritage significance of the South Maitland Railway and undertake the necessary heritage impact assessment; and

   (k) amend zone boundaries to reflect the outcomes of studies and identify the subject lands as an urban release area.

PP_2015_CESSN_006