

626ha MYOLA VALLEY

WET TROPICS BIOREGION

UNDER THREAT FROM DEVELOPMENT

OCTOBER 2017



WET TROPICS RAINFOREST CREEK HABITAT

BARNWELL 626HA
MYOLA VALLEY
CRITICAL BOTTLENECK

WORLD HERITAGE
WET TROPICS
BIOREGION

HUMAN IMPACT
DEFORESTATION
< 100 YEARS

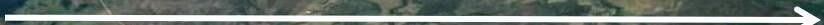
© 2017 Google
Image Landsat / Copernicus

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google Earth

Imagery Date: 12/14/2015 17°45'04.95" S 145°28'06.30" E elev 711 m eye alt 261.39 km

BARNWELL 626HA
MYOLA VALLEY
CRITICAL BOTTLENECK



WORLD HERITAGE
WET TROPICS
BIOREGION

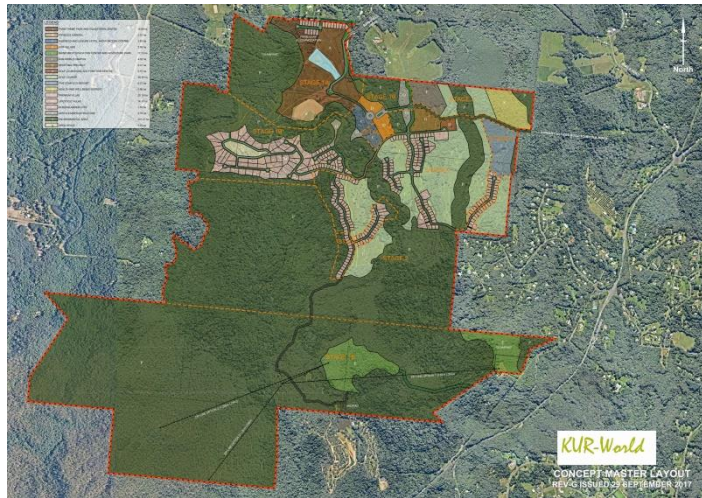




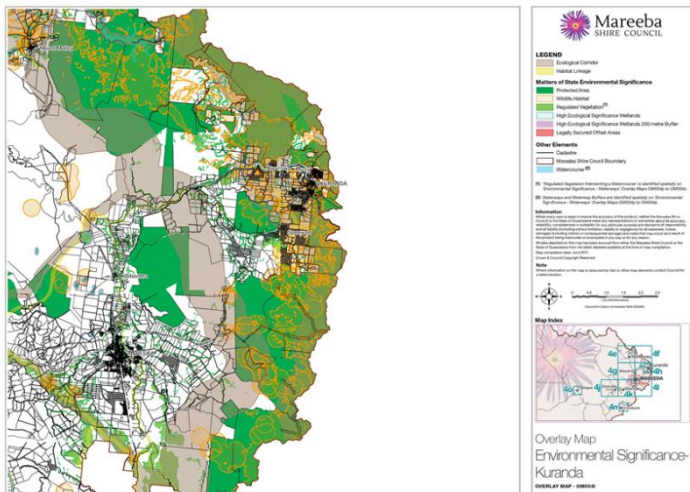
**BARNWELL 626HA
MYOLA VALLEY
CRITICAL BOTTLENECK**

**WORLD HERITAGE
WET TROPICS
BIOREGION**

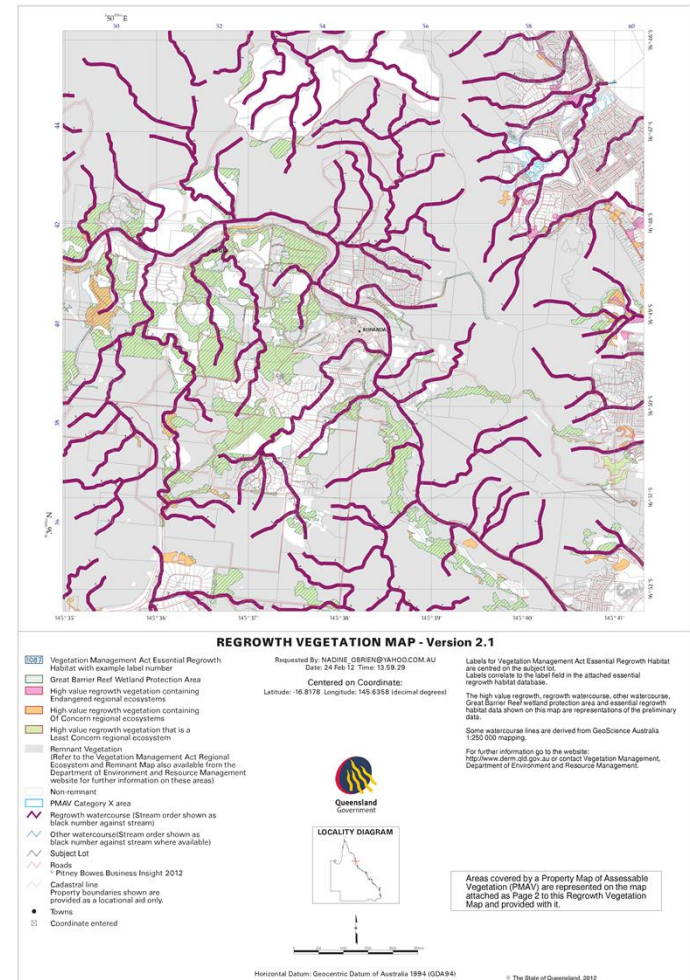
SOURCE REEVER AND OCEAN PTY LTD
KUR-WORLD CONCEPT MASTER LAYOUT 17 SEPTEMBER 2017



SOURCE MAREEBA SHIRE COUNCIL
OVERLAY MAP ENVIRONMENTAL SIGNIFICANCE- KURANDA 2016



SOURCE QUEENSLAND GOVERNMENT
REGROWTH VEGETATION MAP 2012



SOURCE EPBC REFERRAL OF PROPOSED ACTION KUR-WORLD INTEGRATED ECO-RESORT ATTACHMENT E: REPORT ON FROG SURVEYS OF BARNWELL ROAD HOLDINGS - Dr Conrad Hoskin

Surveys for endangered frogs and other wildlife on Barnwell Road Holdings

Dr Conrad Hoskin

Senior Lecturer & Researcher
College of Marine & Environmental Science
James Cook University
Townsville, 4811

Email: conrad.hoskin@jcu.edu.au
Phone: +61 (07) 4781 6048
Website: <https://research.jcu.edu.au/portfolio/conrad.hoskin>



Surveys conducted for Reeve & Ocean Pty Ltd

30th April 2016

Suggested actions for further surveys of endangered species

Determine the upstream limits of *Litoria myola* on the three streams it is known to occur (i.e., resolve the areas shaded yellow in Figure 3).

Perform targeted surveys for *Litoria dayi* in identified areas of potentially suitable habitat on Haren Ck, Owen Ck, and upper Warril Ck (Fig. 4).

Resolve the identity of the *Archontophoenix* palms on the property.

Perform targeted surveys for Northern Quolls in lots 131N157491 and 290N157480.

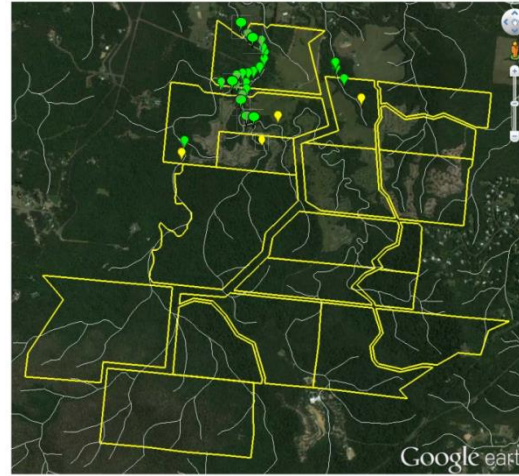


Fig. 2. *Litoria myola* records. *Litoria myola* records are shown as green symbols. Estimated potential upstream extents of *Litoria myola* are shown as yellow symbols.

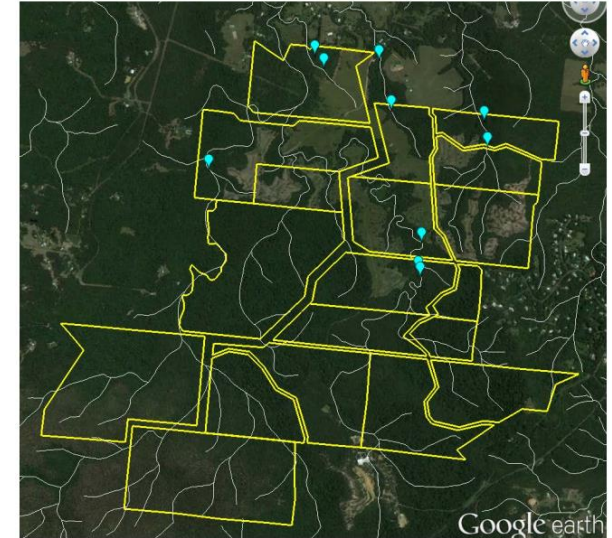


Fig. 5. Palm records. Blue symbols show where palms were encountered during the surveys. These palms may be *Archontophoenix myolensis*.

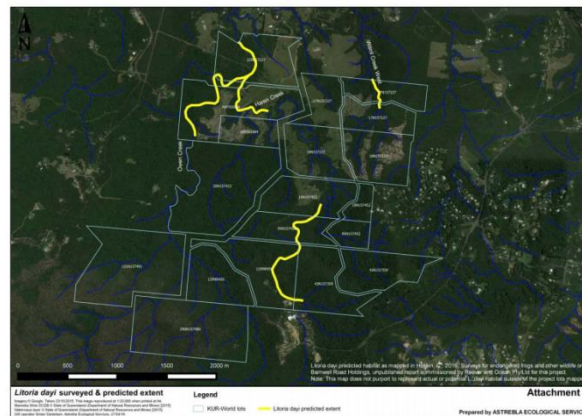


Fig. 4. Potential habitat for the Australian Lacelid frog (*Litoria dayi*). Sections of creek marked in yellow are of potentially suitable habitat for *Litoria dayi*, based on habitat use at nearby sites in the Myola area. Map prepared by Simon Danielsen (Astrebla Ecological Services), in consultation with Conrad Hoskin (JCU)

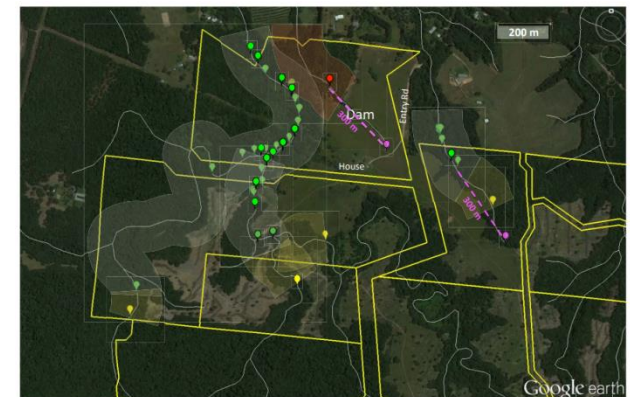
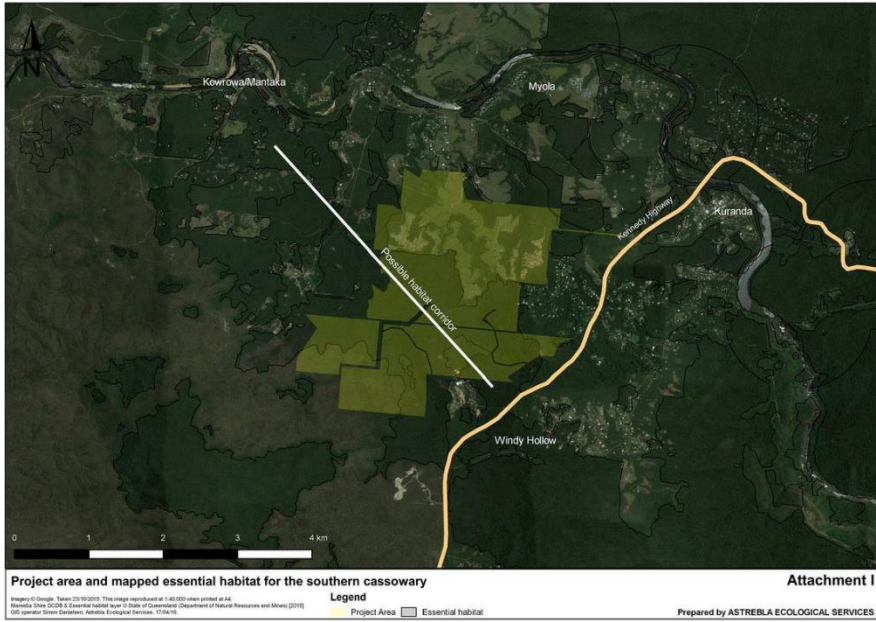


Fig. 3. Close-up of *Litoria myola* records. *Litoria myola* records are shown as green symbols. Transparent green shading shows a buffer of approx. 100 m wide on either side of stretches of creeks where *Litoria myola* was detected. Estimated potential upstream extents of *Litoria myola* are shown as yellow symbols, with a 100 m buffer (yellow shading) on either side of the creeks. The red shaded area is a creek that probably had *Litoria myola* but is now filled with sediment from the dam. The red symbol within this shading shows the potential former upstream extent of *L. myola* on this creek. This was determined as 300 m downstream from the top of this creek, which is the same distance as *L. myola* occurs from the top of the adjacent small creek (pink symbols and dashed lines).

**SOURCE EPBC REFERRAL OF PROPOSED ACTION KUR-WORLD INTEGRATED ECO-RESORT
ATTACHMENT I: CASSOWARY ESSENTIAL HABITAT - Astrebla Ecological Services**



SOURCE Distinguished Professor Bill Laurance

[JCU Centre for Tropical Environmental Sustainability Science \(TESS\)](#)

Speaking about the World Heritage Wet Tropics Bioregion from a global perspective and the Myola Valley, proposed KUR-World site specifically.



*“On the Australian continent, we’re talking about **1,000th** of Australia’s continental land area.*

*A major analysis which looked at the biogeographic and the biological uniqueness and irreplaceability of different ecosystems on the planet – this was over **173,000** different protected areas on the planet – ranked the **Wet Tropics World Heritage Area as the 6th most critical and irreplaceable.***

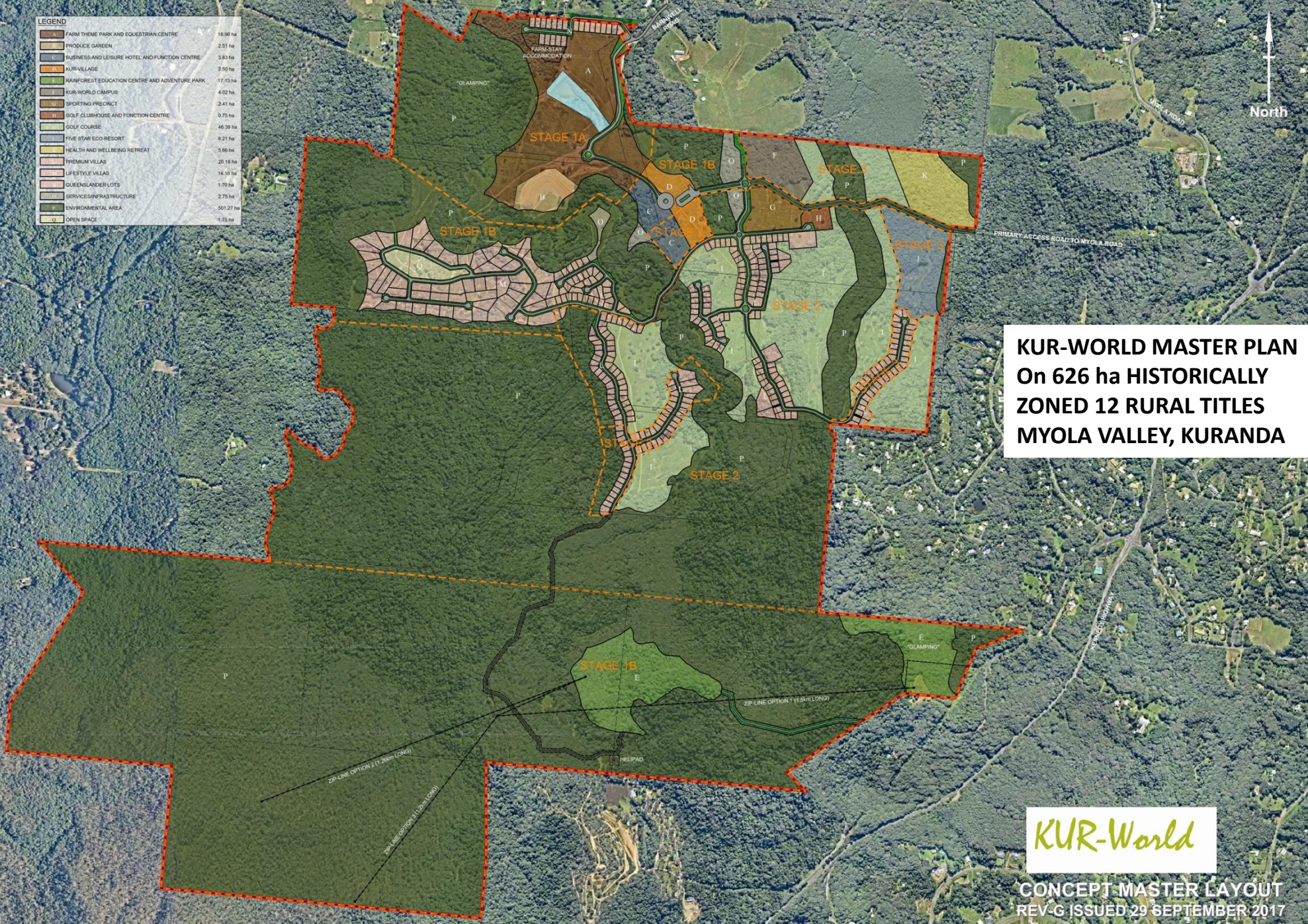
***Of World Heritage Areas, it was the 2nd most critical and irreplaceable.** I think this gives you global perspective on what we’re talking about here.*

*Anybody, from anywhere on the planet, looking around would say **this is absolutely critical biological and environmental real estate.***

You would not want to risk it – from an International, from a global perspective – for lots of different reasons.”

“Big development projects, almost as a generality, not always, but almost always as a generality it’s the secondary effects, it’s the knock on effects of the transportation infrastructure, and the water infrastructure, and the energy infrastructure, and the land use change pressures and everything else going on, the migration is actually more important than the project itself.”

LEGEND	
	FARM THEME PARK AND EQUESTRIAN CENTRE 18.96 ha
	PRODUCE GARDEN 2.51 ha
	BUSINESS AND LEISURE HOTEL AND FUNCTION CENTRE 3.83 ha
	KUR VILLAGE 2.50 ha
	RAINFORREST EDUCATION CENTRE AND ADVENTURE PARK 17.53 ha
	KUR-WORLD CAMPUS 4.02 ha
	SPORTING PRECINCT 2.41 ha
	GOLF CLUBHOUSE AND FUNCTION CENTRE 0.75 ha
	GOLF COURSE 46.39 ha
	FIVE STAR ECO-RESORT 6.21 ha
	HEALTH AND WELLBEING RETREAT 5.66 ha
	PREMIUM VILLAS 20.18 ha
	LIFESTYLE VILLAS 14.19 ha
	QUEENSLANDER LOTS 1.70 ha
	SERVICE INFRASTRUCTURE 2.75 ha
	ENVIRONMENTAL AREA 501.27 ha
	OPEN SPACE 6.75 ha



KUR-WORLD MASTER PLAN
On 626 ha HISTORICALLY
ZONED 12 RURAL TITLES
MYOLA VALLEY, KURANDA



CONCEPT MASTER LAYOUT
REV-G ISSUED 29 SEPTEMBER 2017

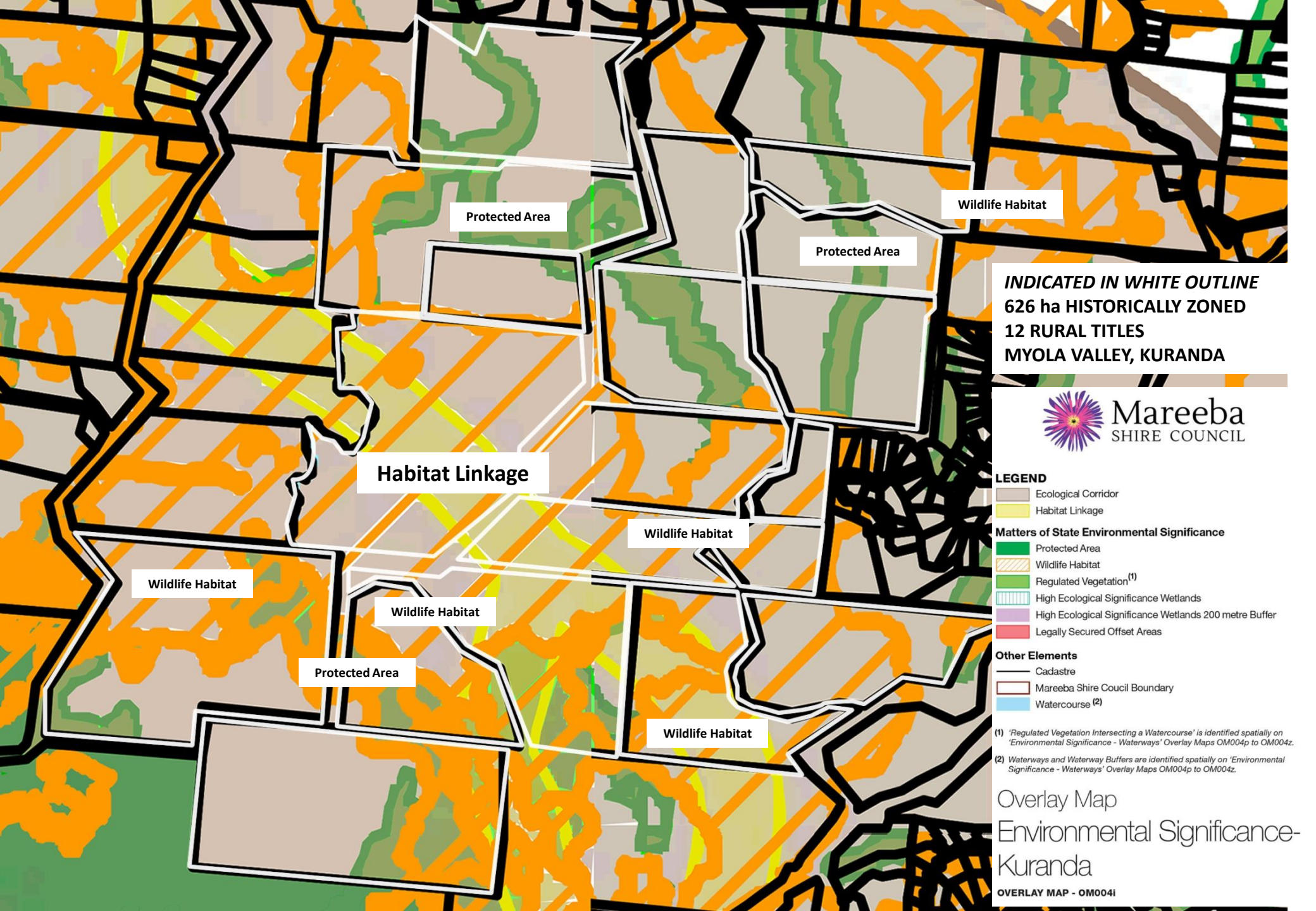
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	ENVIRONMENTAL AREA 501.27 ha
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**INDICATED IN WHITE OUTLINE
626 ha HISTORICALLY ZONED
12 RURAL TITLES
MYOLA VALLEY, KURANDA**



**CONCEPT MASTER LAYOUT
REV-G ISSUED 29 SEPTEMBER 2017**



INDICATED IN WHITE OUTLINE
626 ha HISTORICALLY ZONED
12 RURAL TITLES
MYOLA VALLEY, KURANDA



- LEGEND**
- Ecological Corridor
 - Habitat Linkage
- Matters of State Environmental Significance**
- Protected Area
 - Wildlife Habitat
 - Regulated Vegetation⁽¹⁾
 - High Ecological Significance Wetlands
 - High Ecological Significance Wetlands 200 metre Buffer
 - Legally Secured Offset Areas

- Other Elements**
- Cadastre
 - Mareeba Shire Council Boundary
 - Watercourse⁽²⁾

⁽¹⁾ 'Regulated Vegetation Intersecting a Watercourse' is identified spatially on 'Environmental Significance - Waterways' Overlay Maps OM004p to OM004z.
⁽²⁾ Waterways and Waterway Buffers are identified spatially on 'Environmental Significance - Waterways' Overlay Maps OM004p to OM004z.

Overlay Map
 Environmental Significance-
 Kuranda

Vegetation Management Act
Essential Regrowth Habitat
High value regrowth

Remnant
Vegetation

Vegetation Management Act
Essential Regrowth Habitat
High value regrowth

Vegetation Management Act
Essential Regrowth Habitat
High value regrowth

INDICATED IN RED OUTLINE
626 ha HISTORICALLY ZONED
12 RURAL TITLES
MYOLA VALLEY, KURANDA

Remnant
Vegetation

REGROWTH VEGETATION MAP - Version 2.1

Remnant
Vegetation

- 1087 Vegetation Management Act Essential Regrowth Habitat with example label number
- Great Barrier Reef Wetland Protection Area
- High value regrowth vegetation containing Endangered regional ecosystems
- High value regrowth vegetation containing Of Concern regional ecosystems
- High value regrowth vegetation that is a Least Concern regional ecosystem
- Remnant Vegetation (Refer to the Vegetation Management Act Regional Ecosystem and Remnant Map also available from the Department of Environment and Resource Management website for further information on these areas)
- Non-remnant
- PMAV Category X area
- Regrowth watercourse (Stream order shown as black number against stream)
- Other watercourse (Stream order shown as black number against stream where available)
- Subject Lot
- Roads
- © Pitney Bowes Business Insight 2012
- Cadastral line
Property boundaries shown are provided as a locational aid only.
- Towns
- Coordinate entered

Remnant
Vegetation

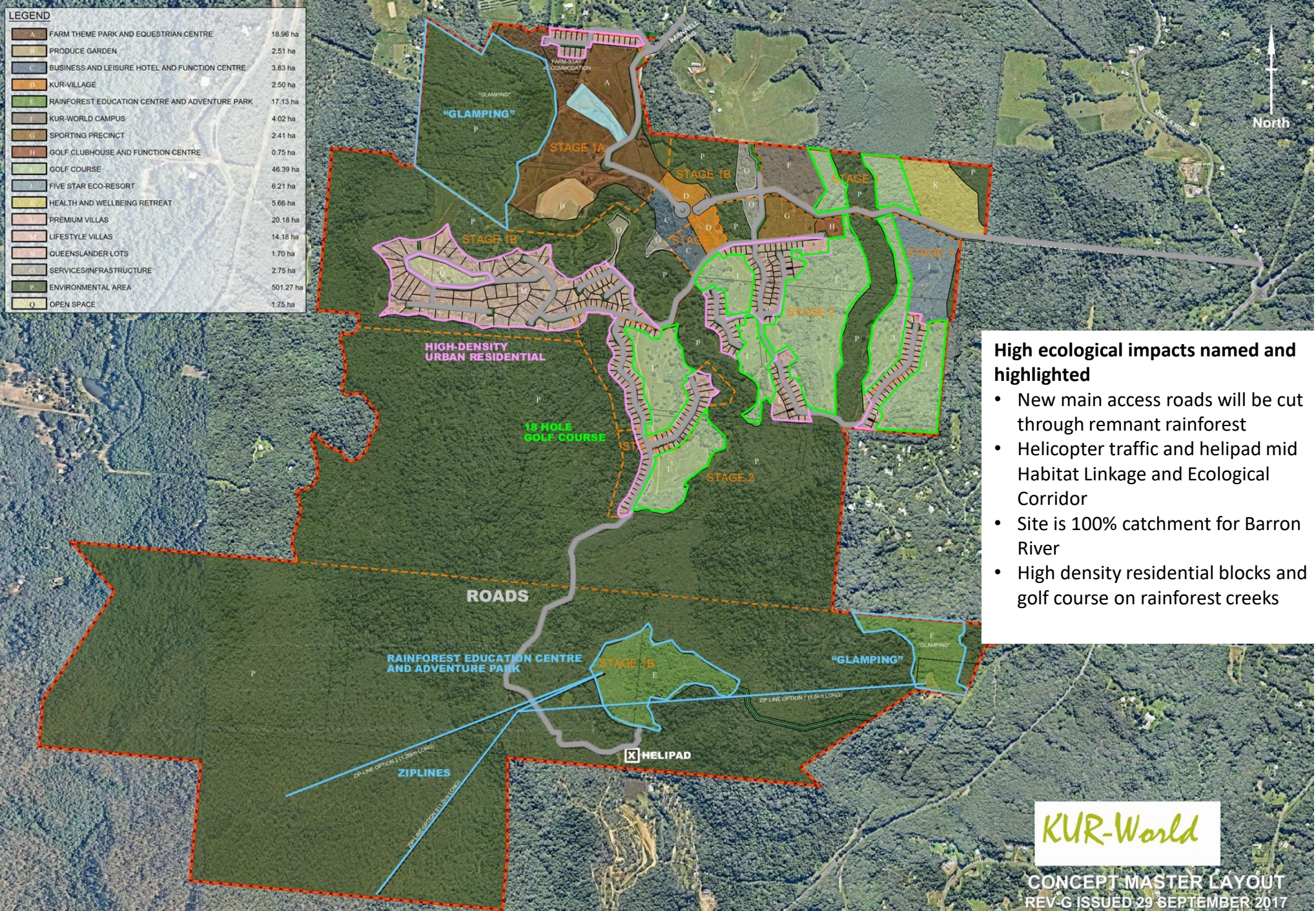
Vegetation Management Act
Essential Regrowth Habitat
High value regrowth

Remnant
Vegetation

Remnant
Vegetation

Remnant
Vegetation

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N	QUEENSLANDER LOTS	1.70 ha
O	SERVICES/INFRASTRUCTURE	2.75 ha
P	ENVIRONMENTAL AREA	501.27 ha
Q	OPEN SPACE	1.75 ha

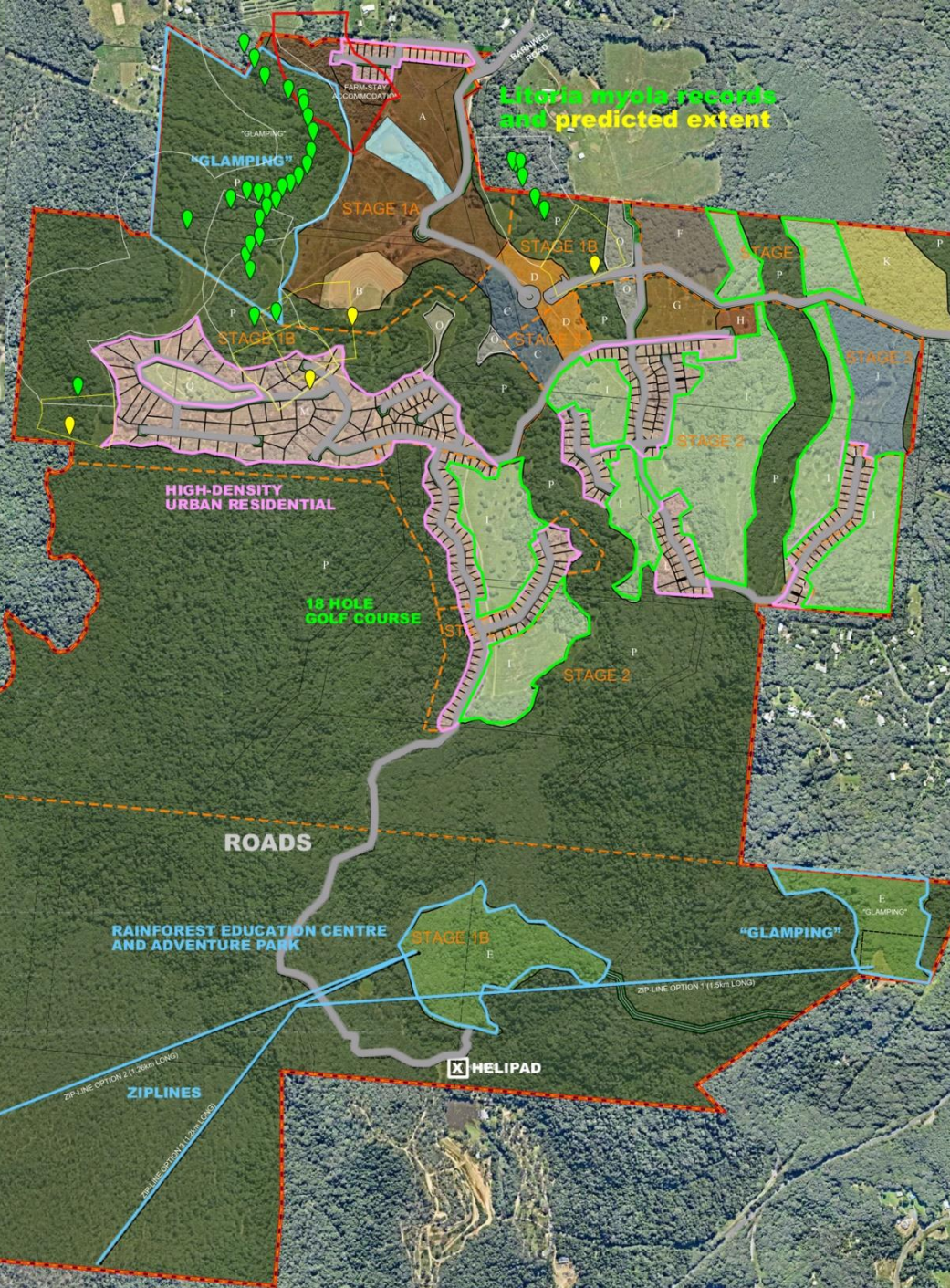


High ecological impacts named and highlighted

- New main access roads will be cut through remnant rainforest
- Helicopter traffic and helipad mid Habitat Linkage and Ecological Corridor
- Site is 100% catchment for Barron River
- High density residential blocks and golf course on rainforest creeks

KUR-World

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Litoria myola records and predicted extent



- Kuranda tree frog *Litoria myola***
- Endemic
 - 3 rainforest creeks on site
 - 50% total habitat downstream of site

EPBC Act Listing Status: Endangered

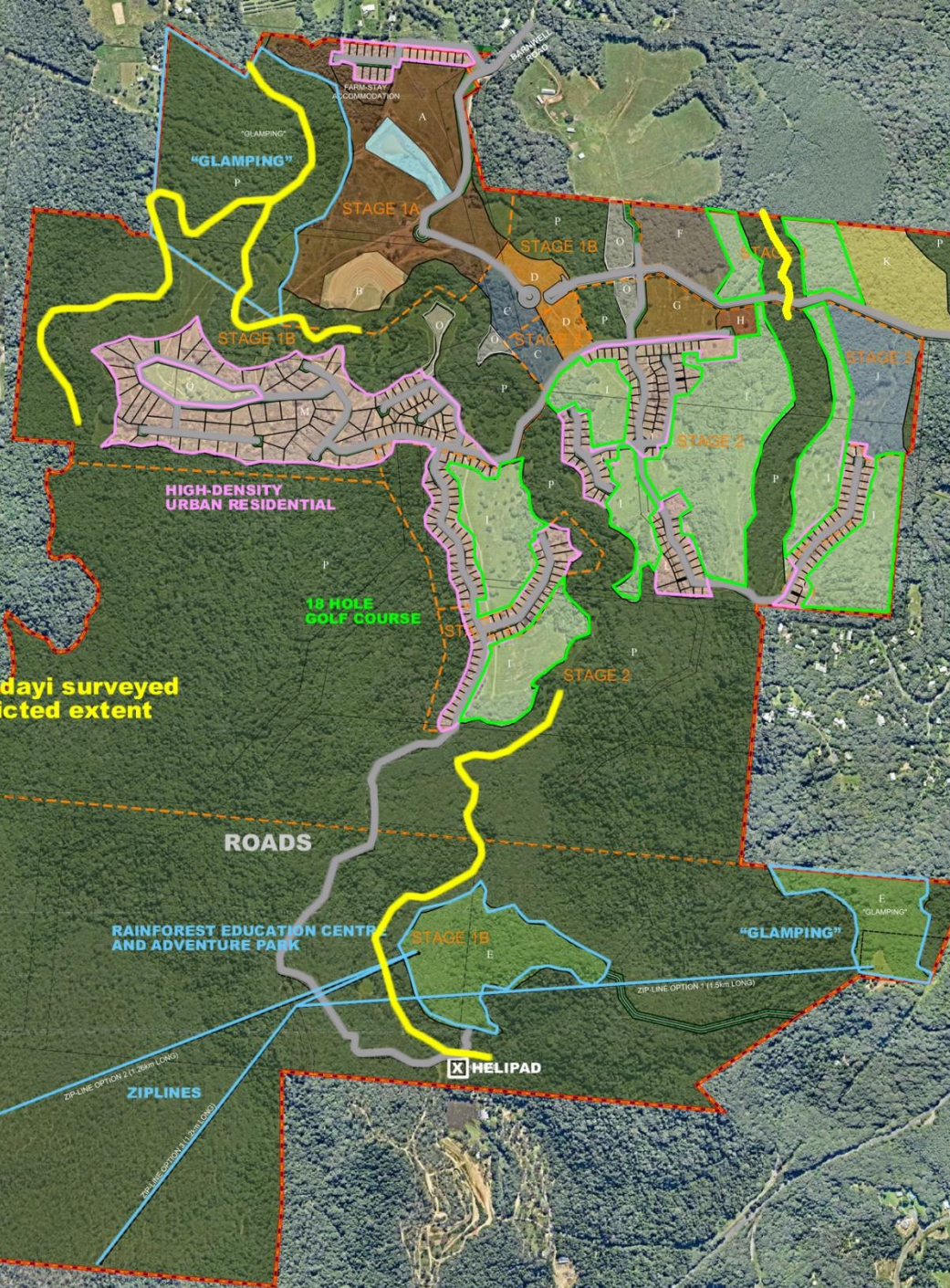
IUCN Red List of Threatened Species:
CRITICALLY ENDANGERED *Decreasing*

- SPECIES THREATS / PRESSURES**
- Deforestation
 - Invasive species
 - Pollutants in rainforest creek habitats
 - Domestic predatory animals (pet cats and dogs)

KUR-World

CONCEPT MASTER LAYOUT
REV-G ISSUED 29 SEPTEMBER 2017

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Q	OPEN SPACE	1.75 ha



Australian Lace-lid *Litoria dayi*

- 3 rainforest creeks on site
- 50% total habitat downstream of site

EPBC Act Listing Status: Endangered

IUCN Red List of Threatened Species: ENDANGERED *Decreasing*

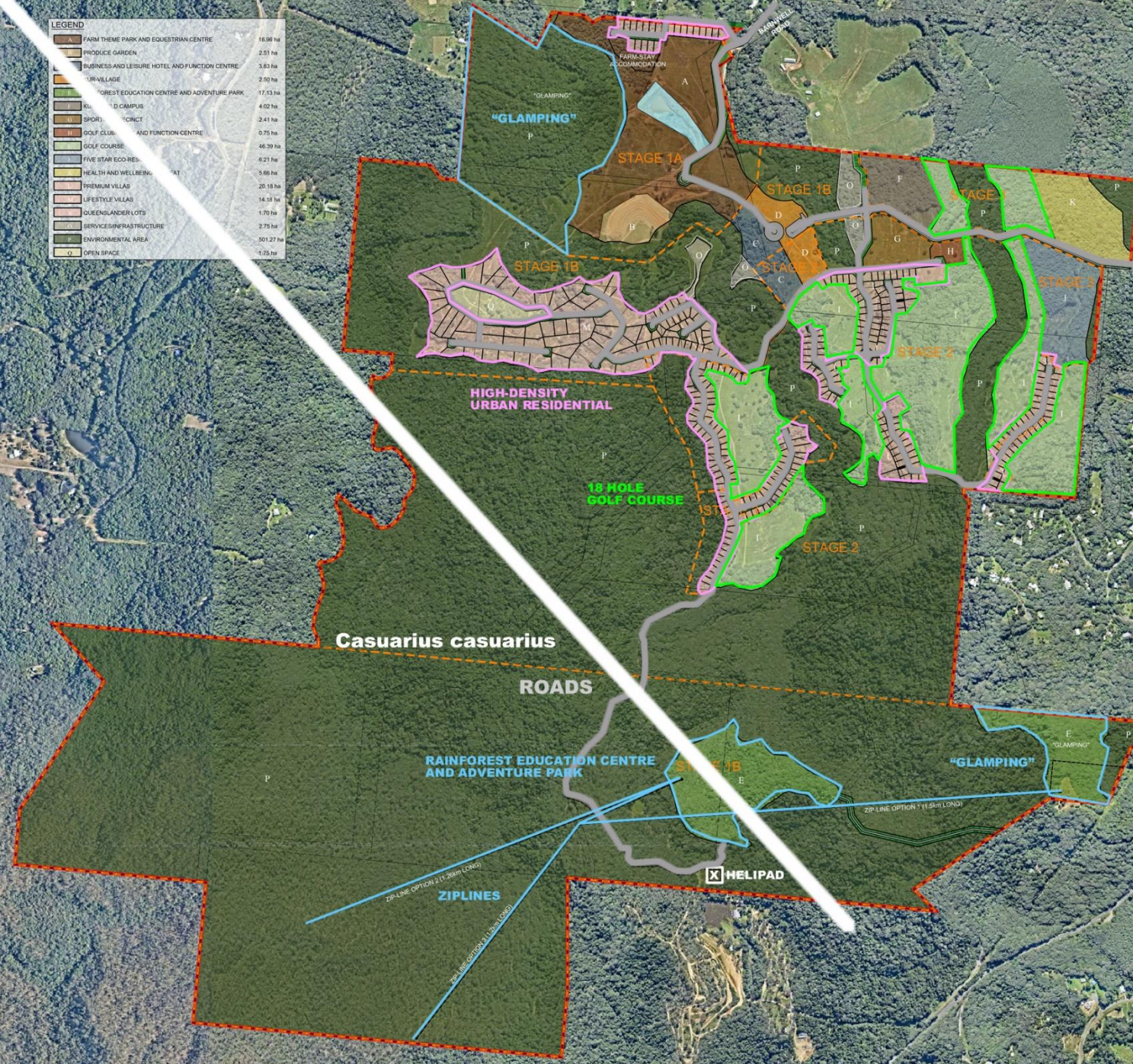
SPECIES THREATS / PRESSURES

- Deforestation
- Invasive species
- Pollutants in rainforest creek habitats
- Domestic predatory animals (pet cats and dogs)

KUR-World

**CONCEPT MASTER LAYOUT
REV-G ISSUED 29 SEPTEMBER 2017**

LEGEND	
[Brown]	FARM THEME PARK AND EQUESTRIAN CENTRE 18.96 ha
[Light Green]	PRODUCE GARDEN 2.51 ha
[Light Blue]	BUSINESS AND LEISURE HOTEL AND FUNCTION CENTRE 3.83 ha
[Light Yellow]	TRIVILLAGE 2.50 ha
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[Light Green]	SERVICE INFRASTRUCTURE 2.75 ha
[Light Green]	ENVIRONMENTAL AREA 501.27 ha
[Light Green]	OPEN SPACE 1.75 ha
[Dashed Line]	ROADS
[Dashed Line]	ZIPLINES
[Dashed Line]	HELIPAD



Southern Cassowary *Casuarus casuarus johnsonii*

- Wet Tropics **Keystone Species**
- 25% Wet Tropics habitat remaining, mass deforestation < 60 years
- Australia's Threatened Species Strategy: 20 birds by 2020 (DEE)

EPBC Act Listing Status: Endangered

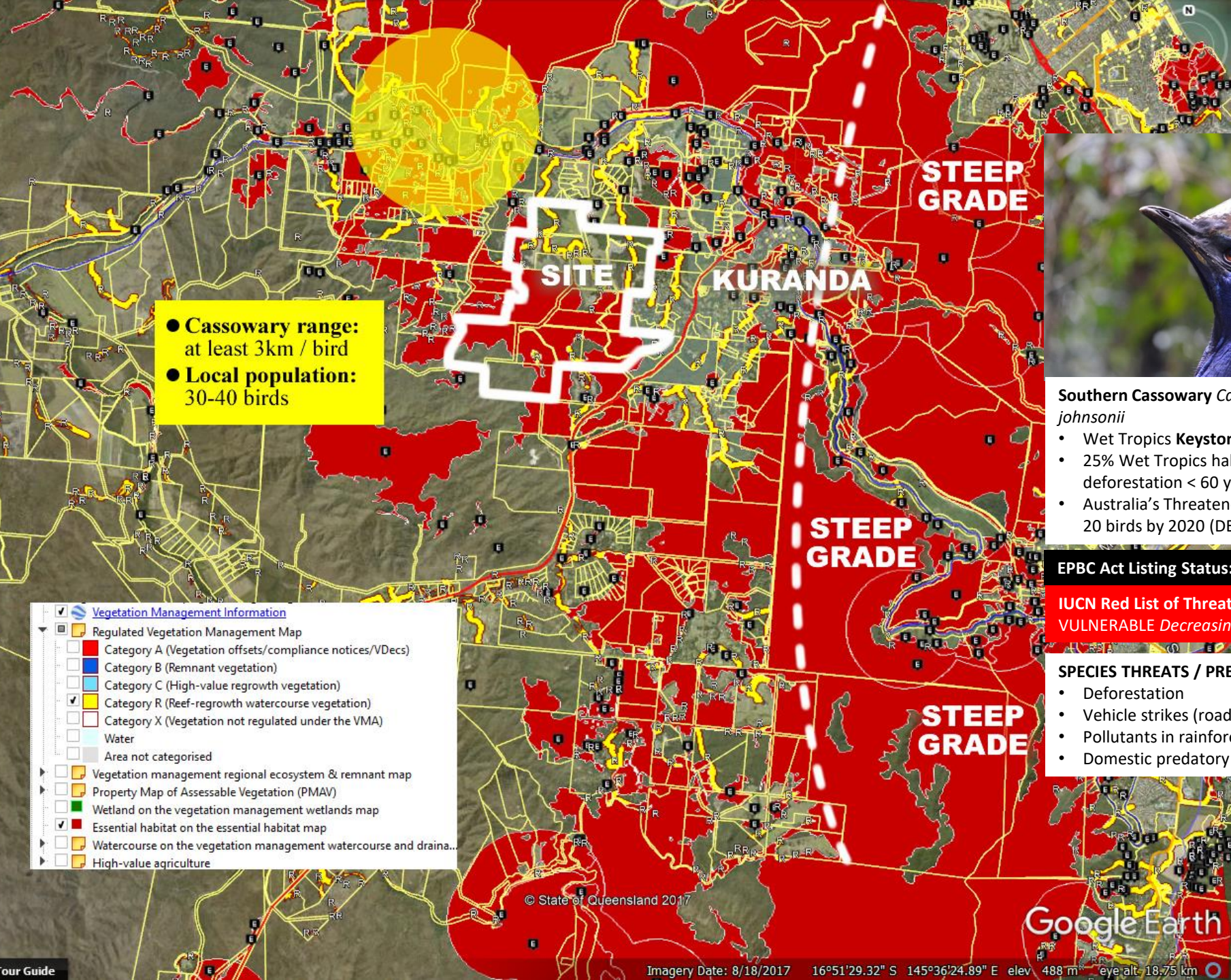
IUCN Red List of Threatened Species:
VULNERABLE *Decreasing*

SPECIES THREATS / PRESSURES

- Deforestation
- Vehicle strikes (road kill)
- Pollutants in rainforest creek habitats
- Domestic predatory animals (pet dogs)

KUR-World

CONCEPT MASTER LAYOUT
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● Cassowary range:
 at least 3km / bird
 ● Local population:
 30-40 birds



Southern Cassowary *Casuarius casuarius johnsonii*

- Wet Tropics **Keystone Species**
- 25% Wet Tropics habitat remaining, mass deforestation < 60 years
- Australia's Threatened Species Strategy: 20 birds by 2020 (DEE)

EPBC Act Listing Status: Endangered

IUCN Red List of Threatened Species:
VULNERABLE *Decreasing*

SPECIES THREATS / PRESSURES

- Deforestation
- Vehicle strikes (road kill)
- Pollutants in rainforest creek habitats
- Domestic predatory animals (pet dogs)

Vegetation Management Information

- Regulated Vegetation Management Map
- Category A (Vegetation offsets/compliance notices/VDecs)
- Category B (Remnant vegetation)
- Category C (High-value regrowth vegetation)
- Category R (Reef-regrowth watercourse vegetation)
- Category X (Vegetation not regulated under the VMA)
- Water
- Area not categorised
- Vegetation management regional ecosystem & remnant map
- Property Map of Assessable Vegetation (PMAV)
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Watercourse on the vegetation management watercourse and drain...
- High-value agriculture

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Archontophoenix myolensis records



Myola Palm *Archontophoenix myolensis*

- Endemic
- 3 locations identified on site
- Myola Palm Nature Refuge downstream from site

EPBC Act Listing Status: Endangered

IUCN Red List of Threatened Species:
 VULNERABLE 400-500 mature trees, remains unprotected

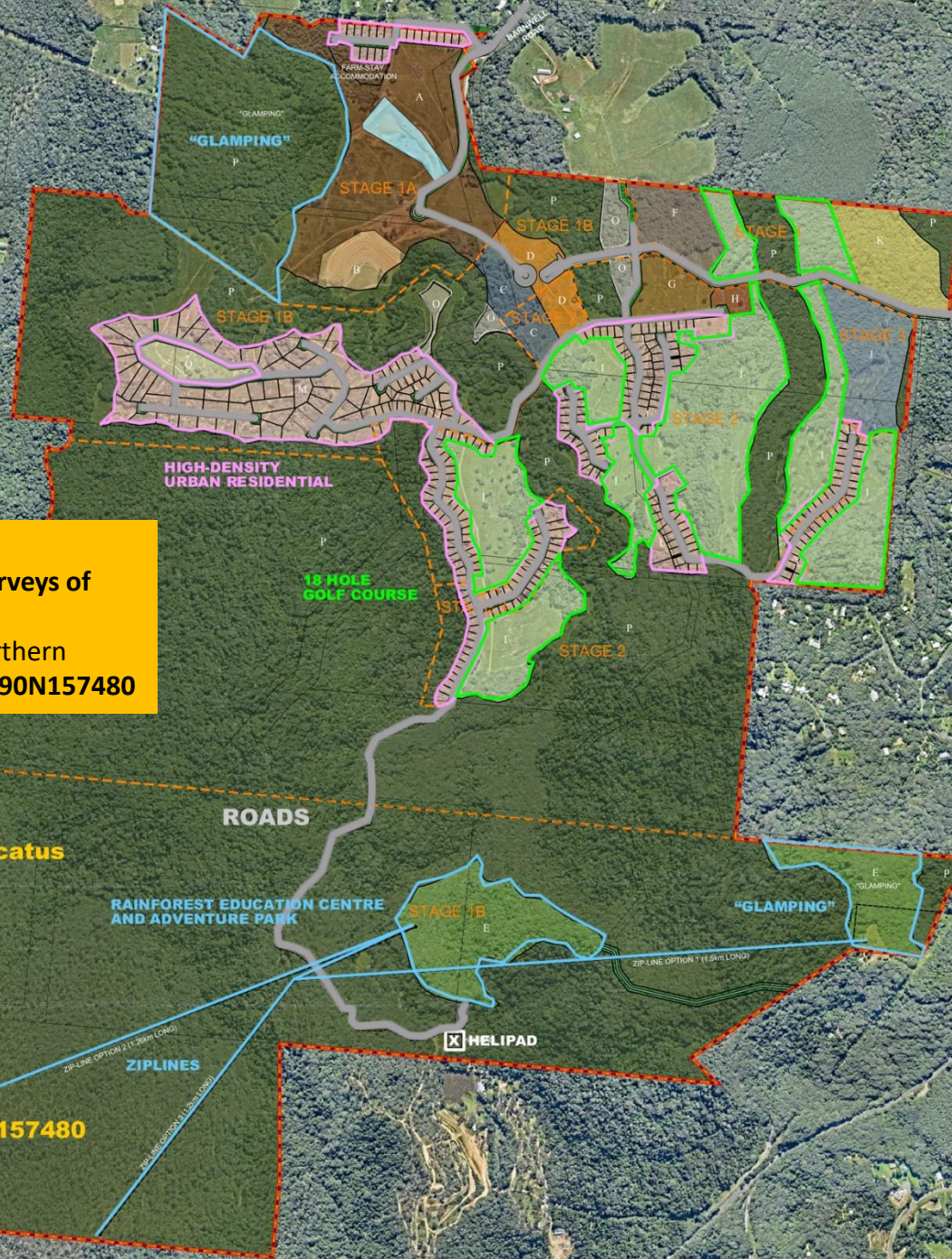
SPECIES THREATS / PRESSURES

- Deforestation
- Invasive species
- Pollutants in rainforest creek habitats

KUR-World

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JCU Dr Conrad Hoskin
Suggested actions for further surveys of endangered species
 Perform targeted surveys for Northern Quolls in lots 131N157491 and 290N157480

- Northern Quoll *Dasyurus hallucatus***
- Adequate surveys not attempted, see Hoskin report
 - Record within 1km of site

EPBC Act Listing Status: Endangered

IUCN Red List of Threatened Species:
 ENDANGERED *Decreasing*

- SPECIES THREATS / PRESSURES**
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 - Pollutants in rainforest creek habitats
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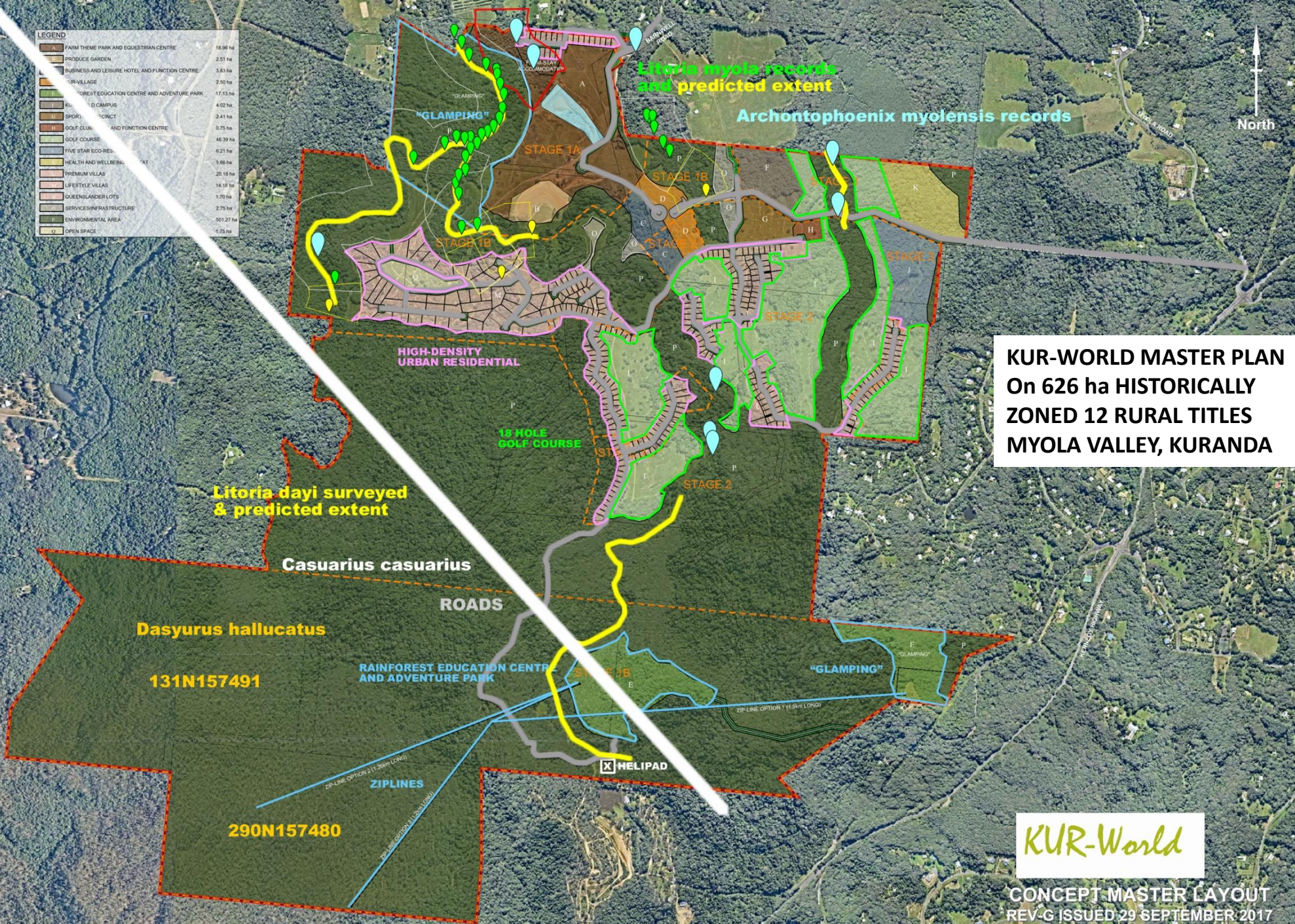
Dasyurus hallucatus
 131N157491

290N157480



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KUR-WORLD MASTER PLAN
 On 626 ha HISTORICALLY
 ZONED 12 RURAL TITLES
 MYOLA VALLEY, KURANDA

KUR-World

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 REV-G ISSUED 29 SEPTEMBER 2017