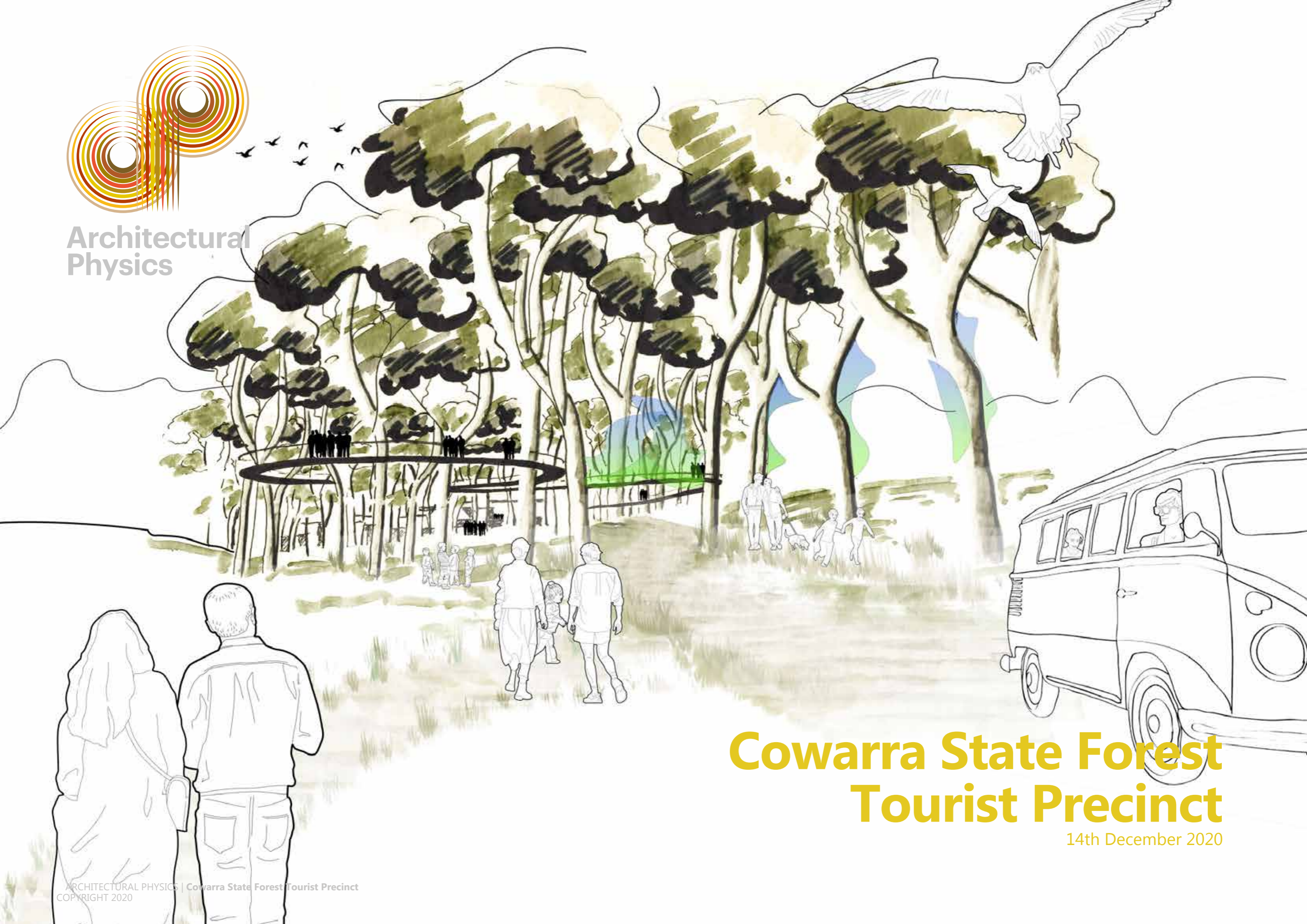





Architectural
Physics



Cowarra State Forest Tourist Precinct

14th December 2020



"We acknowledge the Biripi people who are the traditional custodians of the land on which this project is proposed. Their close and ongoing connection to this land is an important asset to our collective endeavors to broaden and deepen all peoples understanding of how to live on Country.

We pay our respect to Elders both past and present of the Biripi Nations and extend that respect to the Aboriginal representatives who have generously assisted us in the preparation of this work to date.

Moving forward, the Architectural Physics team aspire to design this project by drawing ideas and technology that resides within the traditional knowledge of our First Nations People."

Our ambition for this project is to create an enduring and highly sustainable “ecological circuit”.

Not dissimilar to the principals of complementary forces that keep our solar system in balance, we seek to work with First Nations Peoples’ traditional knowledge, and contemporary evidence based science to create a productive Australian native forest precinct in balance.

The Koalas will attract the visitors. Once those visitors have been immersed in the Cowarra State Forest experience, they will leave committed to make a contribution to the sustainability of our planet.

*Architectural Physics acknowledges the unique insights, friendship, generous support, and inspiring tutelage of Physicist Prof. James Murray-Parkes, Technotia Laboratories.

Cowarra State Forest Tourism Precinct
Corner of the Oxley Highway and
Burrawan Forest Drive
Between Port Macquarie and Wauchope
N.S.W.



**Architectural
Physics**

In collaboration with



James Murray-Parkes

and



Contact Details:
Architectural Physics Pty. Ltd.

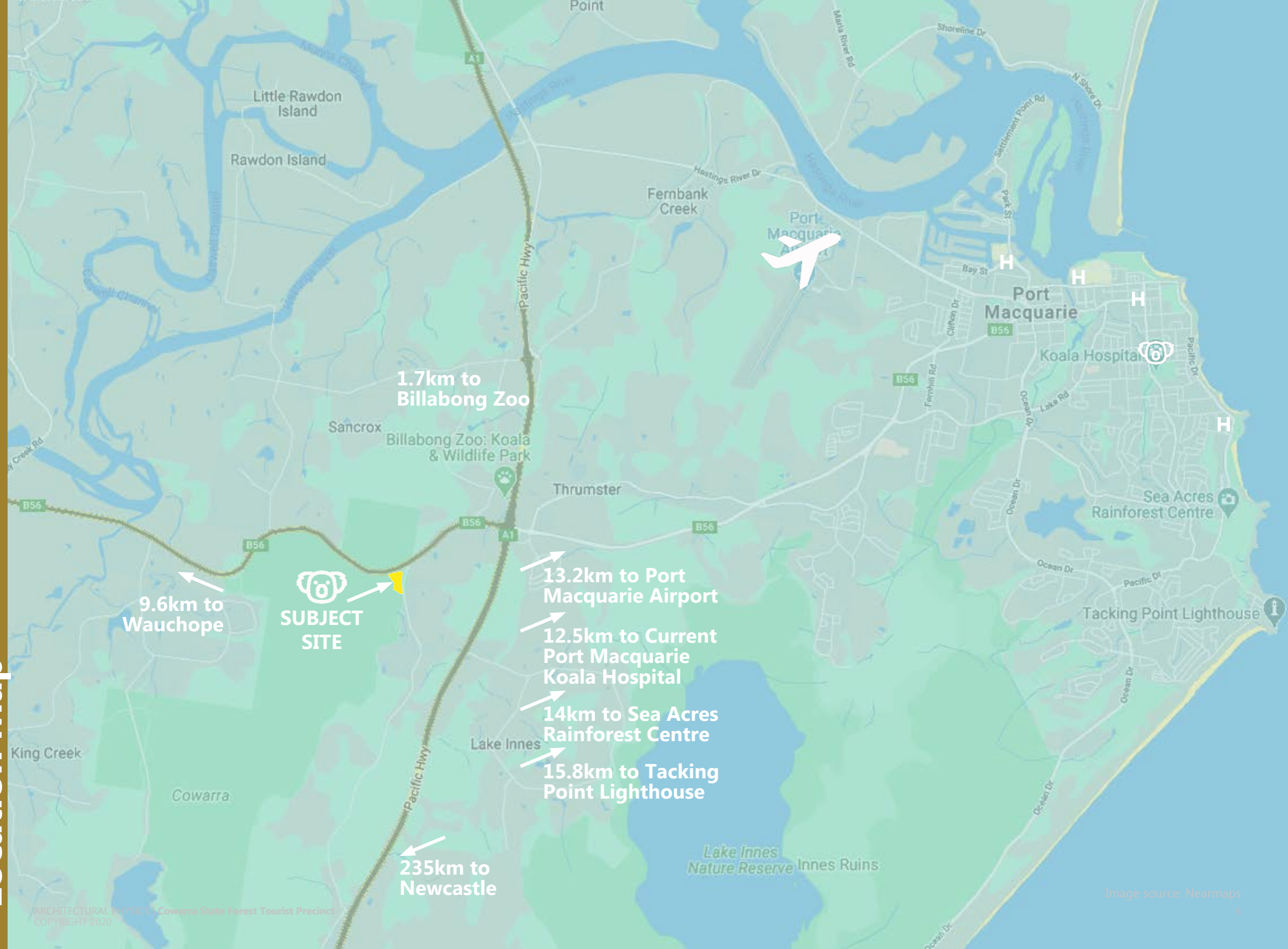
Ken McBryde | Principal
ken@architecturalphysics.com



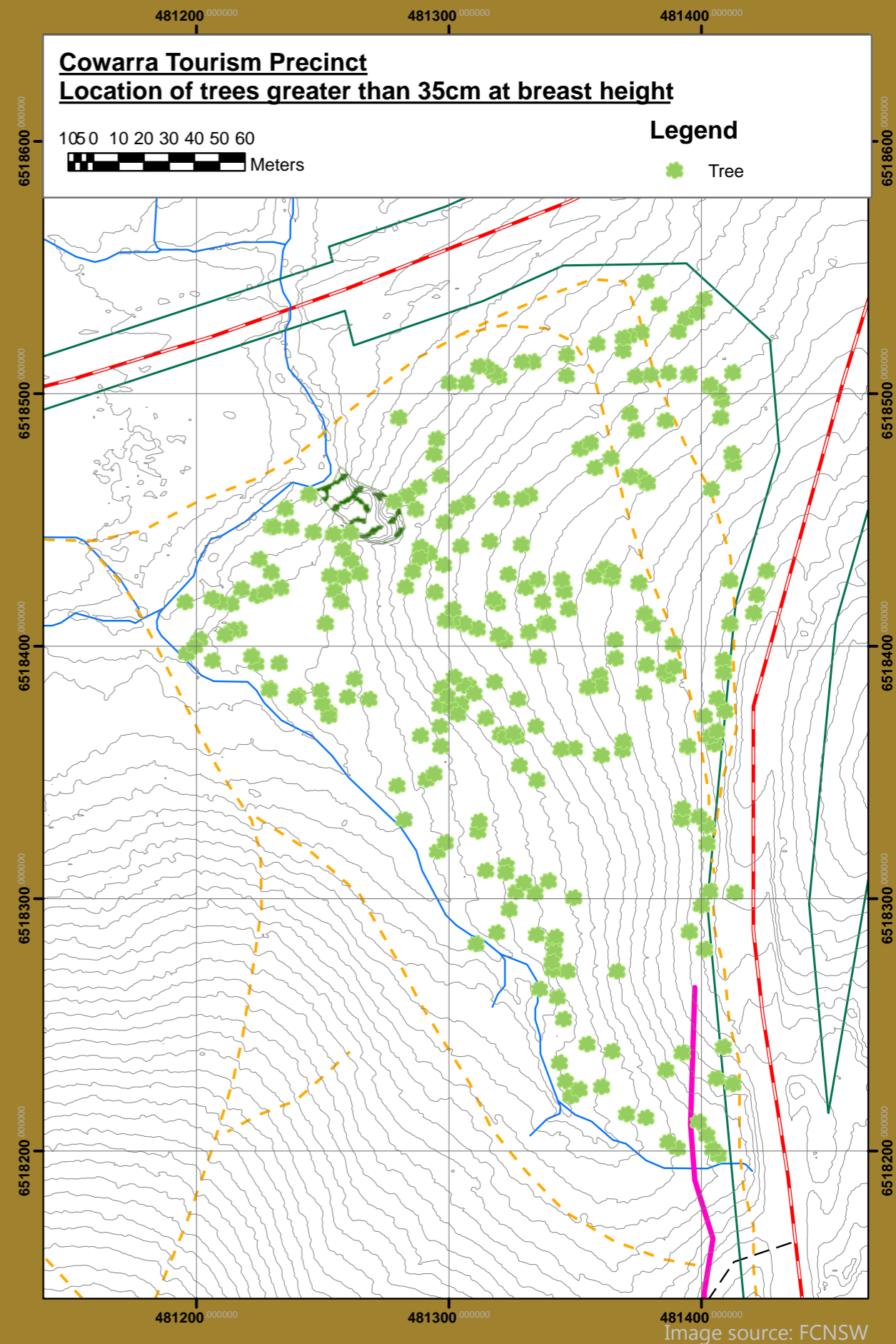
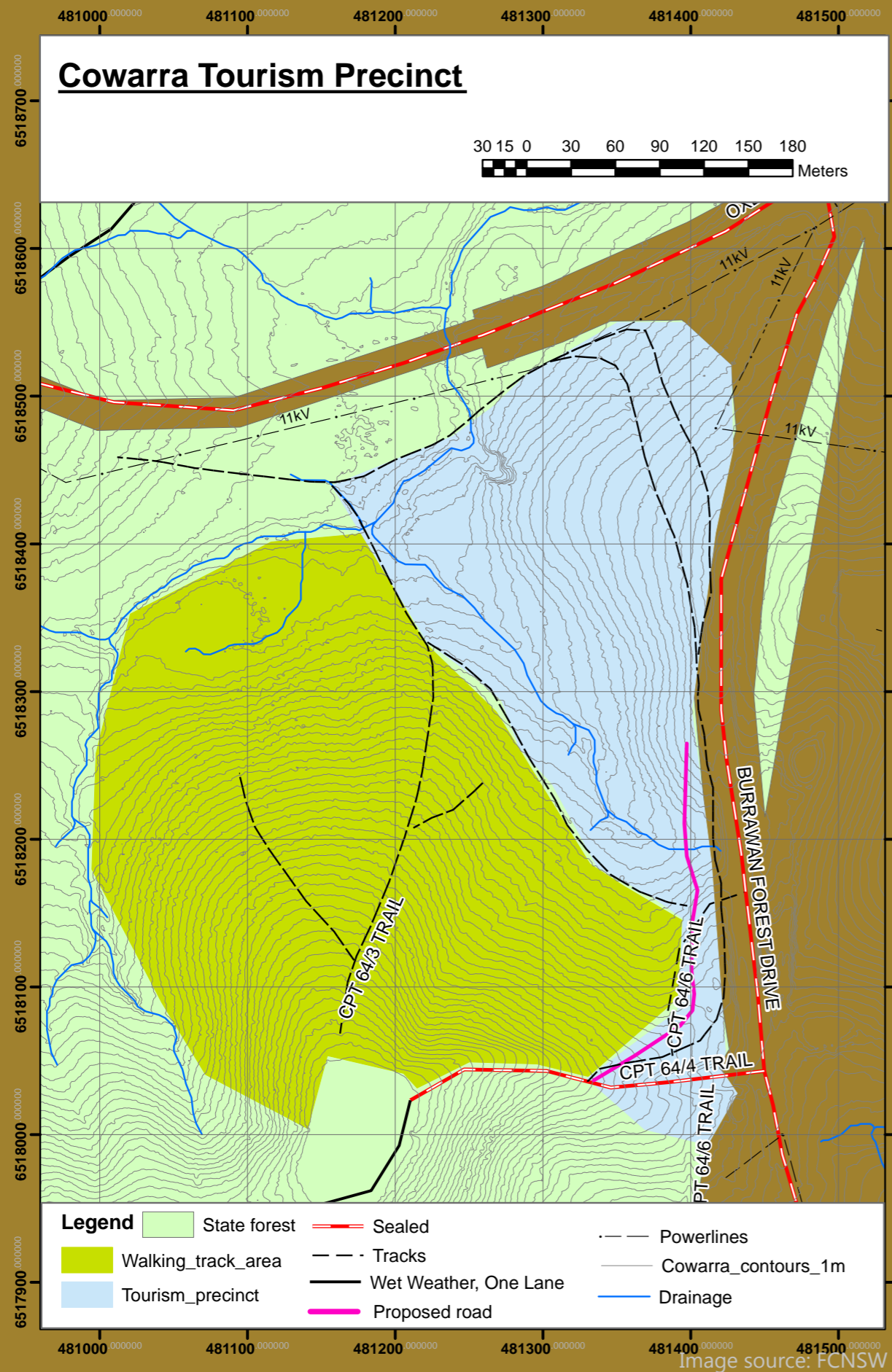
Image source: FCNSW

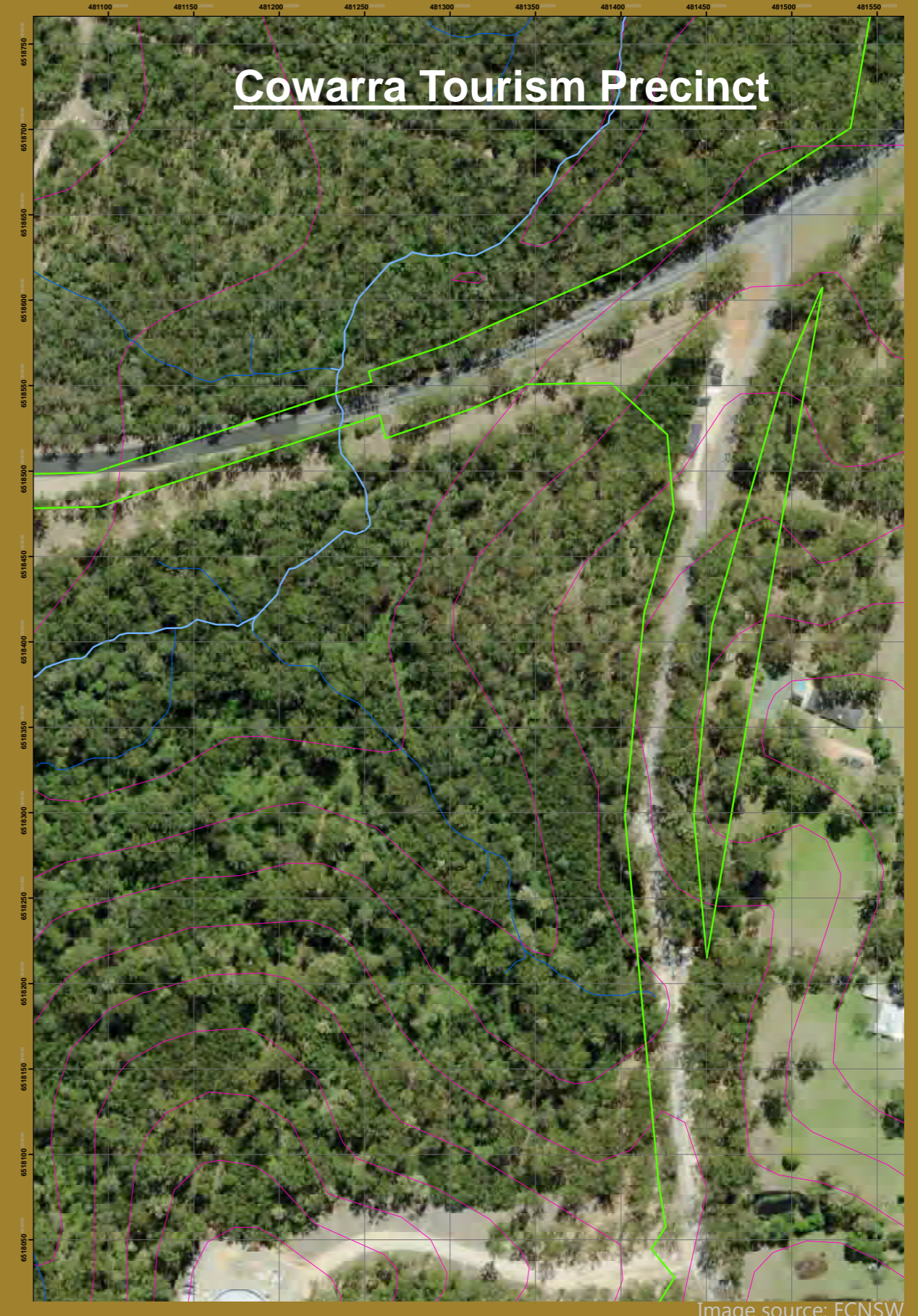
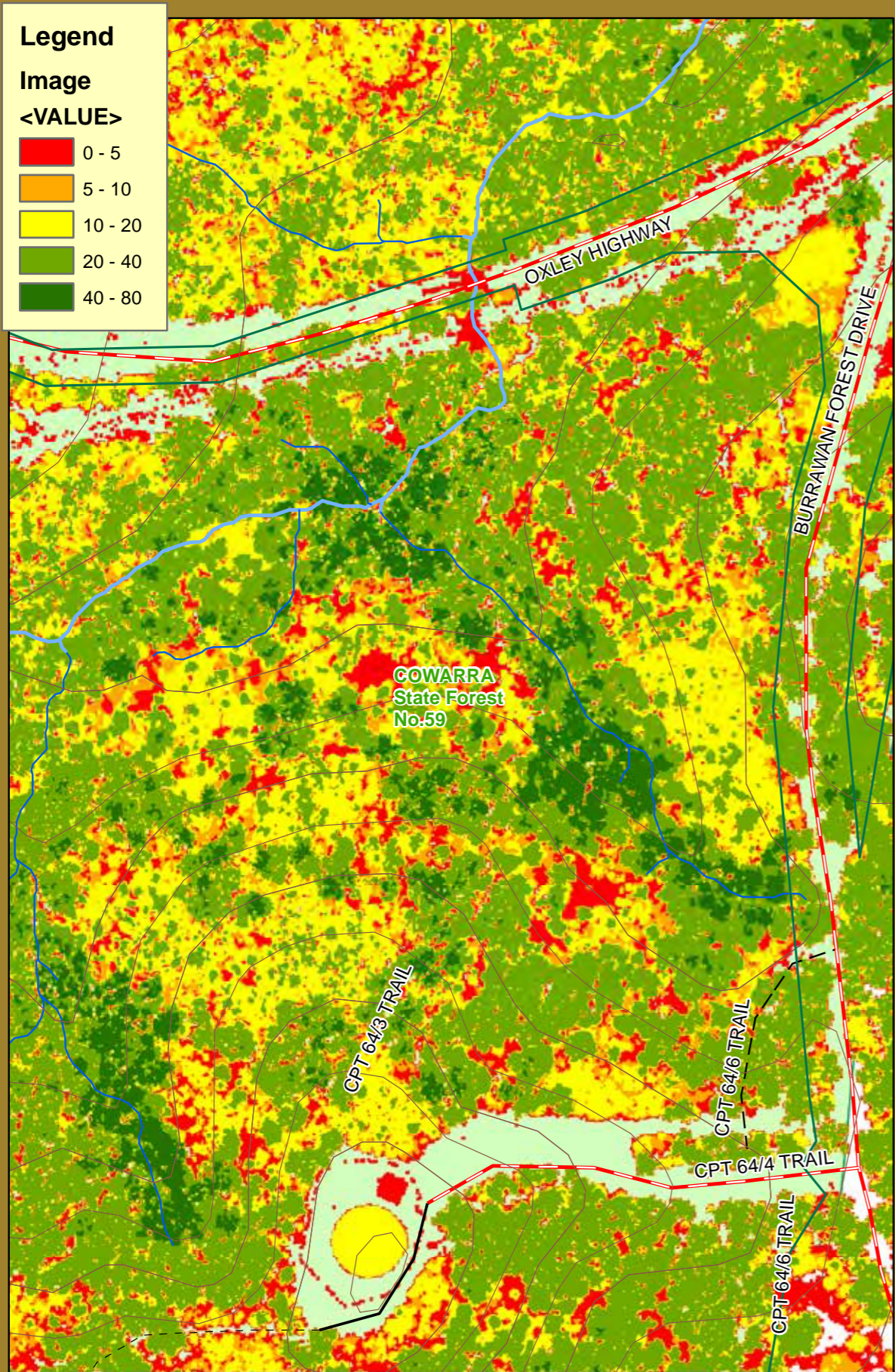
Page.	
06	_Location Map
07	_Site Context
08	_Site Analysis
10	_Traditional Knowledge
12	_Educational Environment
14	_The Experience
23	_Process
24	_Stakeholder Priorities
25	_Initial Masterplan
26	_Precinct Arrival
28	_The Hub
30	_Bunyah Theatre
32	_Synthesis Sections
36	_Ecological Precinct

Location Map









Deep analysis of the Landscape

Traditional Knowledge



_current state

Image source: FCNSW



_learn what causes catastrophic fire events, and how traditional knowledge served our native forests well for millennia prior to white settlement.

Image source: Google



_a new environment to pass on knowledge

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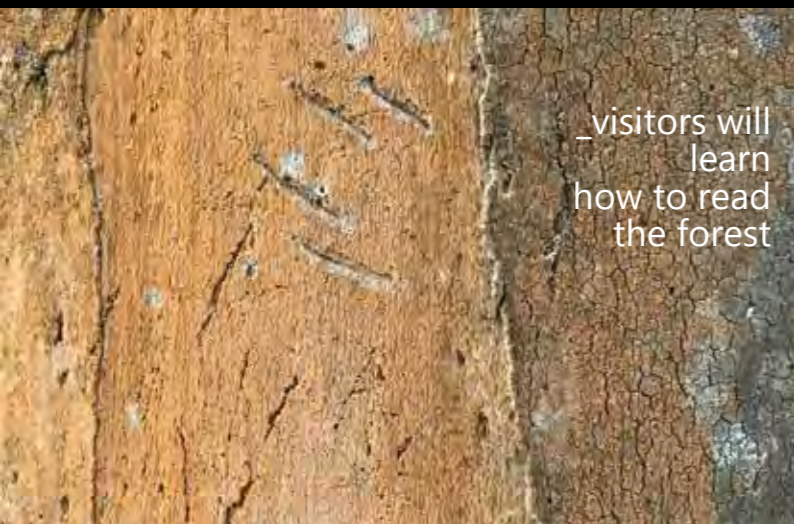
Image source: FCNSW



Image source: FCNSW



Image source: FCNSW



_visitors will learn how to read the forest

Image source: Ken McBryde



Image source: Ken McBryde



_desired healthy state forest

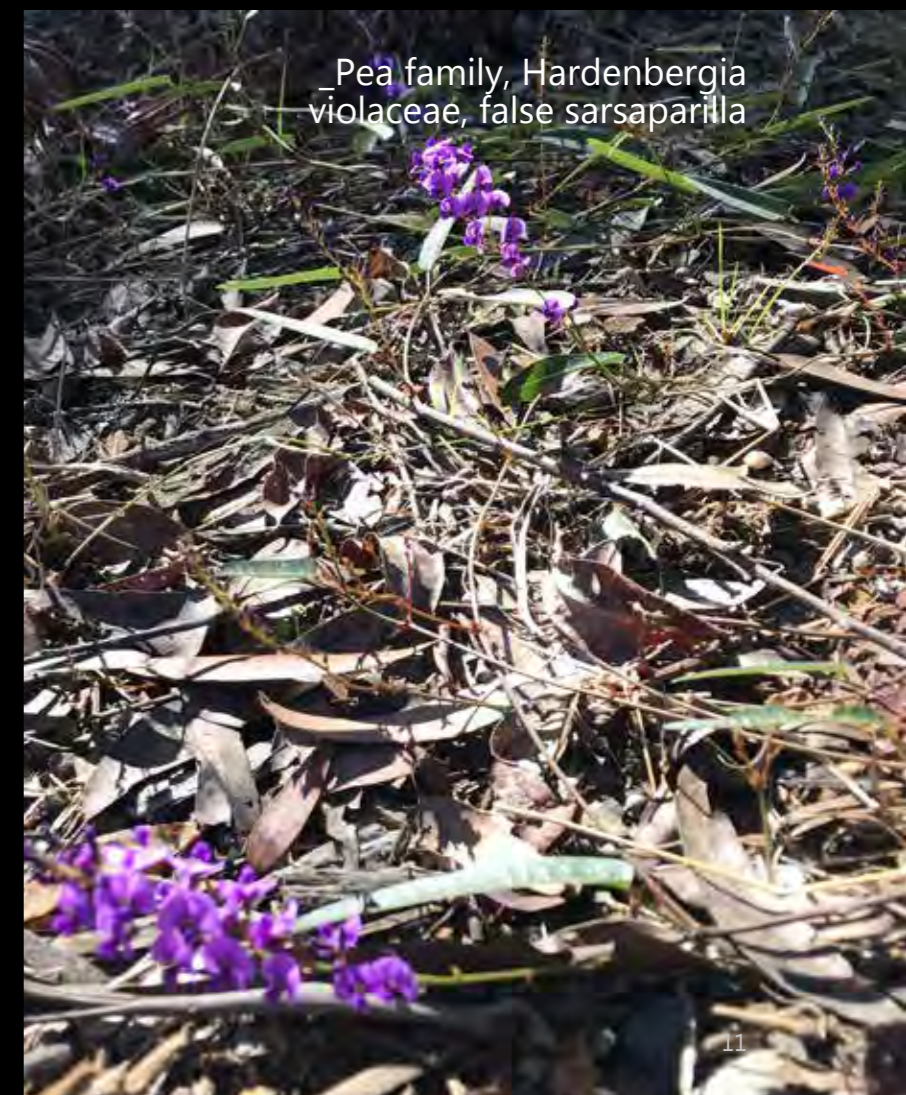
Image source: FCNSW



Image source: Ken McBryde



Image source: FCNSW



_Pea family, Hardenbergia violaceae, false sarsaparilla

Image source: Ken McBryde



Vistors will be attracted to see the Koalas, and will learn the many factors that threaten their survival. Cats, Dogs, Foxes, Cars, Chlamydia, Fires & loss of habitat

This photo capturing "Franklin" aka "George Clooney" during his time in rehabilitation



Image source: Google



Image source: Google



Image source: Google



to reinstate balance in the ecosystem



Image source: Troy Borg

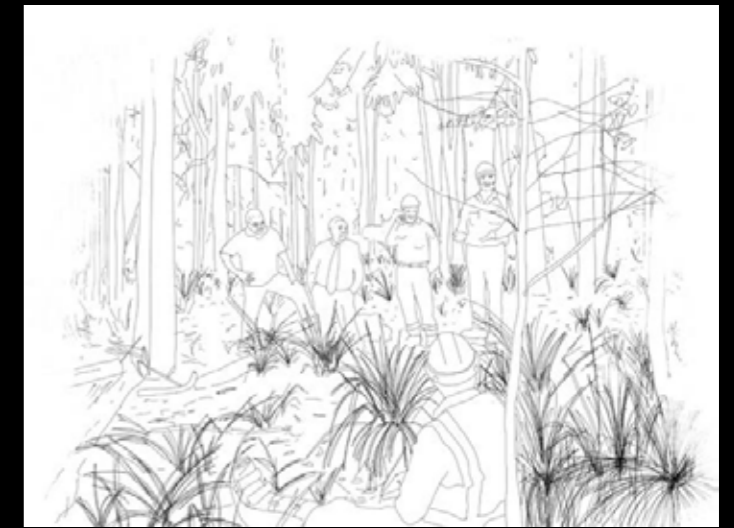


Image source: Jim Orr, University of Newcastle

School of Architecture students from the University of Newcastle were correctly educated on forestry principles by Forestry Corporation, particularly on sustainable hardwood harvesting practices, understanding how to “read the forest” to aid in revitalising flora and fauna and creating healthy environments, and the intrinsic connection between the flora and fauna in enticing future tourism.



Image source: FCNSW

Recognising the impacts of surrounding environments in understanding the underlying ecology of native species habitats.



Image source: FCNSW



Image source: FCNSW



Image source: FCNSW



Image source: Troy Borg



Image source: Troy Borg



Image source: Troy Borg



Image source: Nigel Dos Santos, The University of Newcastle



Image source: Nigel Dos Santos, The University of Newcastle



Image source: Nigel Dos Santos, The University of Newcastle



Image source: Nigel Dos Santos, The University of Newcastle

Teaching through observation of traditional land management practices by Elders and representatives of Bunyah and Birpai Local Aboriginal Land Councils



Image source: FNSW



Image source: Nigel Dos Santos, The University of Newcastle



Image source: Stephen Walker, The University of Newcastle



Image source: Troy Borg

Three Aboriginal Councils coming together for a cultural burn to "reset country", representing a handover from contemporary firefighters to traditional Elders employing traditional fire management practices by Local Aboriginal Land Councils.



Image source: Troy Borg



Image source: Malvika Satelkar, The University of Newcastle



Image source: Malvika Satelkar, The University of Newcastle

Opportunity to learn about the ongoing rejuvenation of the koala species and continued impact of the 2019-2020 Mid-North Coast fires on surrounding environments.



Image source: Malvika Satelkar, The University of Newcastle



Image source: Nigel Dos Santos, The University of Newcastle



Image source: Malvika Satelkar



Image source: Nigel Dos Santos, The University of Newcastle



Detailed back of house procedures of the Port Macquarie Koala Hospital.



_Slight hints along Oxley Highway of some activity within the forest

Image source: FCNSW



Image source: FCNSW

Artwork anticipating the arrival to the Precinct



Image source: Troy Borg

Precinct Arrival Experience



Image source: Troy Borg

Local Artists Artwork Feature Wall



Image source: Google



Image source: Reio Avaste

Suspended canopy walk commencing ones' Journey through



Wildnets Arrival Experience



Image source: Google



Image source: Google



Image source: Google



Image source: Troy Borg

**_Koala Spotting among
the tree canopies**



Image source: FCNSW
_Storytelling



Image source: FCNSW
_Sponsored Hello Koala's onsite



Image source: Pinterest
_A space for play



Image source: FCNSW



Image source: FCNSW

_A place to relax and enjoy the all encompassing Australian experience



Image source: Troy Borg

Koala Viewing Experience





Image source: Google

Suspended Treetop Overnight camping experience



Image source: Google

An opportunity to discover the forest at night

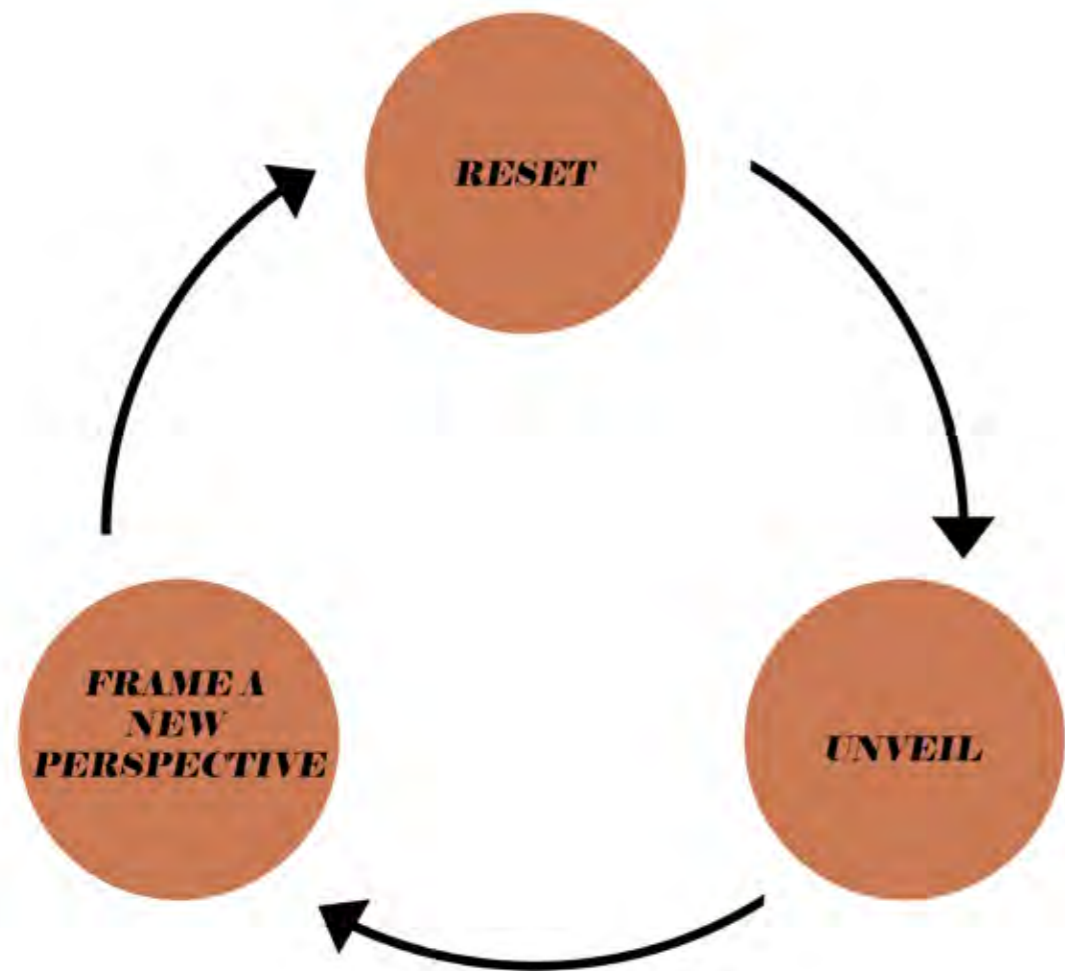


Image source: Arshia Chibber, The University of Newcastle



Image source: Optical Illusion, Nelson Mandella



Image source: Optical Illusion, Nelson Mandella

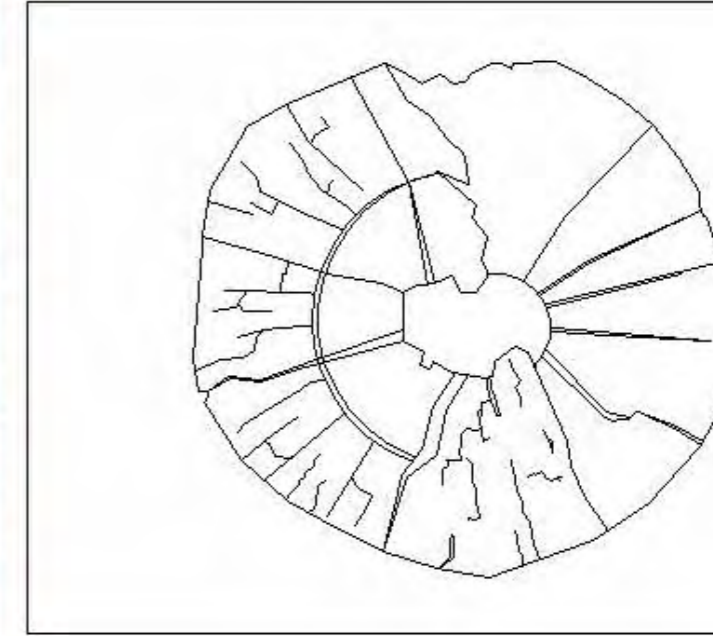


Image source: Arshia Chibber and Krina Patel, The University of Newcastle

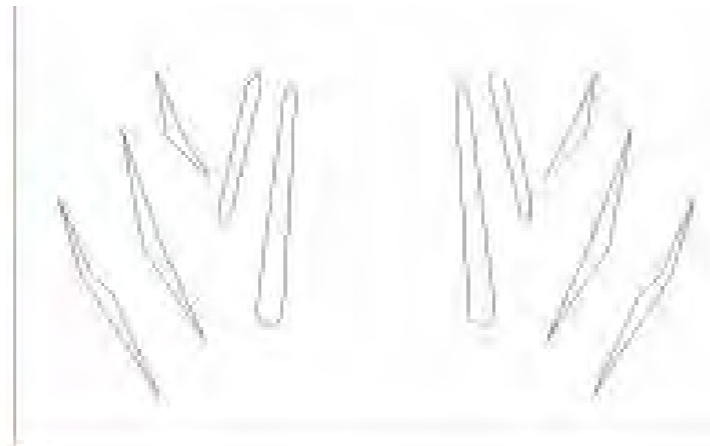


Image source: Arshia Chibber and Krina Patel, The University of Newcastle



Image source: Arshia Chibber and Krina Patel, The University of Newcastle

Extraction of microscopic forest fragments reflecting key project design concepts and details



Image source: Jordyn Bush, The University of Newcastle

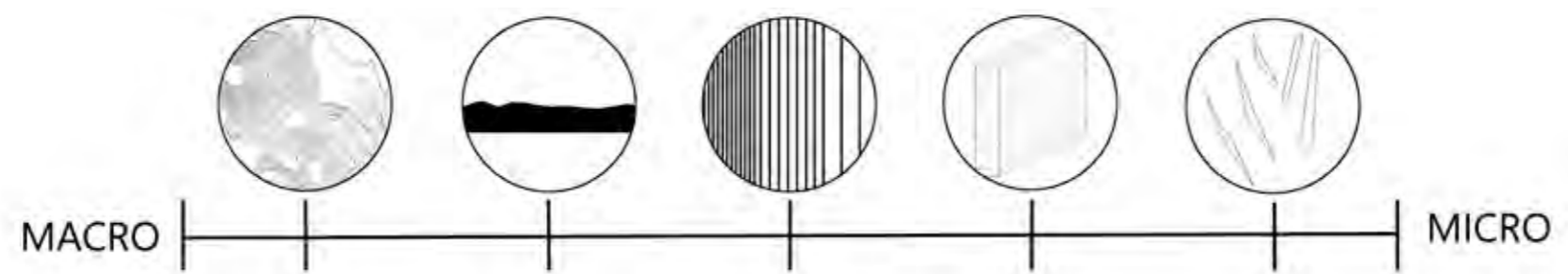


Image source: Jim Orr, The University of Newcastle



Image source: Curtis Lang, The University of Newcastle

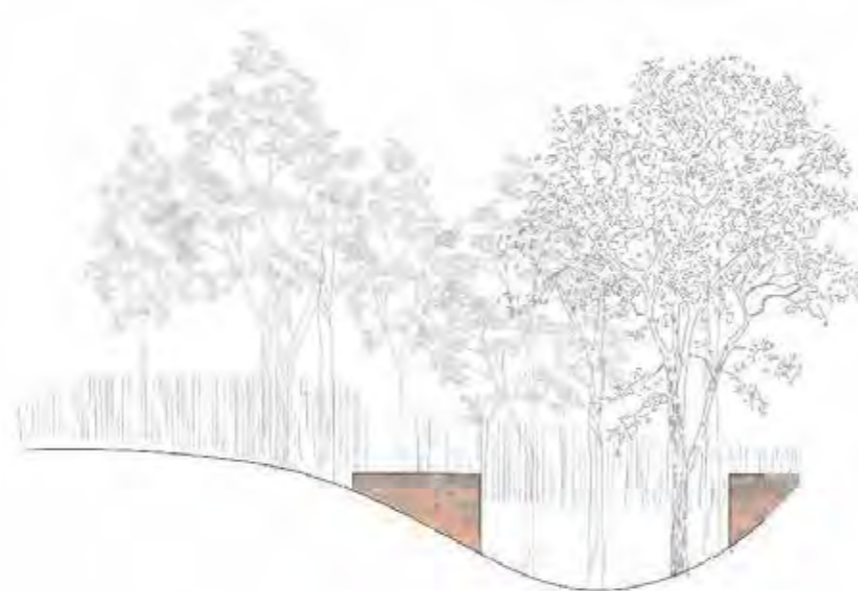


Image source: Curtis Lang, The University of Newcastle

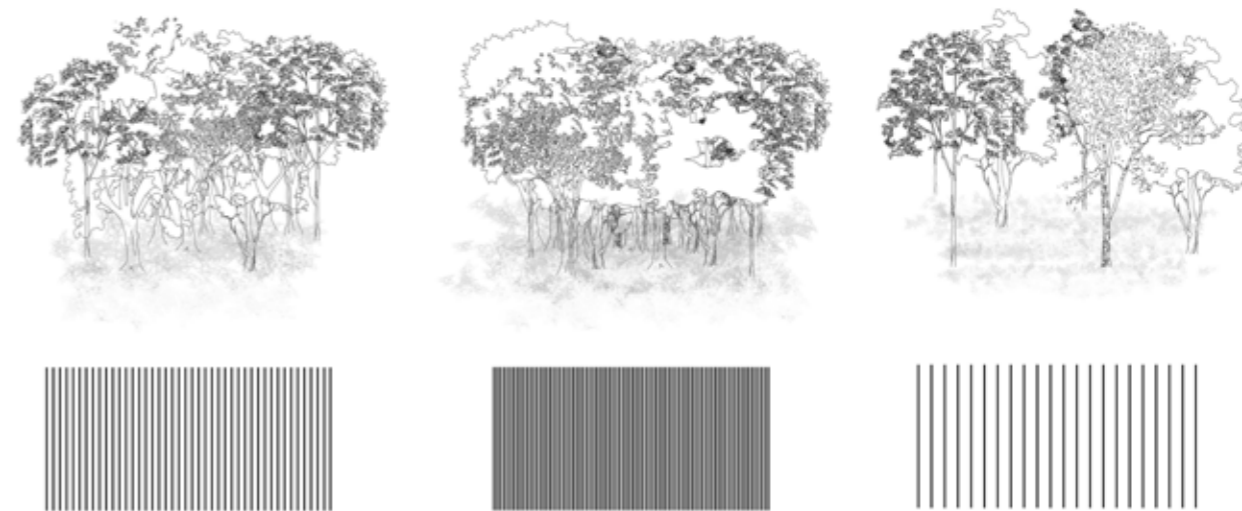


Image source: Jim Orr, The University of Newcastle

Concept of illustrating the knowledge of "reading the forest" to create a parametric design reflecting the density of the forest through an entry experience.

Conceptual Models and Prototype



Image source: Kirsten McIntosh, The University of Newcastle



Image source: Kirsten McIntosh, The University of Newcastle



Image source: Kirsten McIntosh, The University of Newcastle



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Image source: Kirsten McIntosh, The University of Newcastle



Construction of 1:1 prototype conceptual model of the entry experience

Image source: Arshia Chibber, The University of Newcastle



Image source: Harriet Scales The University of Newcastle



Image source: Troy Borg



Image source: Arshia Chibber, The University of Newcastle



Image source: Harriet Scales The University of Newcastle



Image source: Hakon Haga, Curtis Lang, Harith Hason, Jim Orr,
The University of Newcastle



Image source: Hakon Haga, Curtis Lang, Harith Hason, Jim Orr,
The University of Newcastle



Image source: Hakon Haga, Curtis Lang, Harith Hason, Jim Orr,
The University of Newcastle





Image source: FNSW



Image source: FNSW

The Architectural Physics team, and the students, benefit from the tutelage of physicist Professor James Murray-Parkes



Image source: Troy Borg



Image source: FNSW



Image source: Troy Borg

Koalas will be given a rehabilitation environment comparable to none.



Image source: Ken McBryde



Image source: Ken McBryde



Image source: Ken McBryde



26.05.2020
Stakeholder Meeting on site

Image source: FCNSW



06.08.2020
Presentation to stakeholders of the Initial Masterplan for comment

Image source: Troy Borg



09.06.2020
Walking the Perimeter

Image source: FCNSW



09.06.2020
Discussing Koalas with Sue Ashton

Image source: FCNSW



06.08.2020
Architectural Physics answering questions from stakeholders

Image source: Ken McBryde



09.06.2020
Access Presentation

Image source: FCNSW



06.08.2020
Discussing all things Wildnets

Image source: Troy Borg



18.08.2020
Working Session at Bottlebutt

Image source: Troy Borg



18.08.2020
Working Session at Bottlebutt

Image source: Troy Borg



“To showcase the Aboriginal Culture and Heritage of the Biripi people, sharing the knowledge of the land and how ‘We’ can have a sustainable ecosystem by showing the ways in which these can be performed.”

This venture will bring employment and training for the local Aboriginal people.



“To be the leader in the conservation of wild Koalas.

“Their future is in our hands.”

Create the first ever conservation breeding facility for Koalas for return to the wild.

Focus on the visitor experience and maximising the feeling of being within the forest.

Focus on being an iconic tourist destination and being an Ecological Sustainable Development with renewable resources, sustainability and a low carbon footprint.

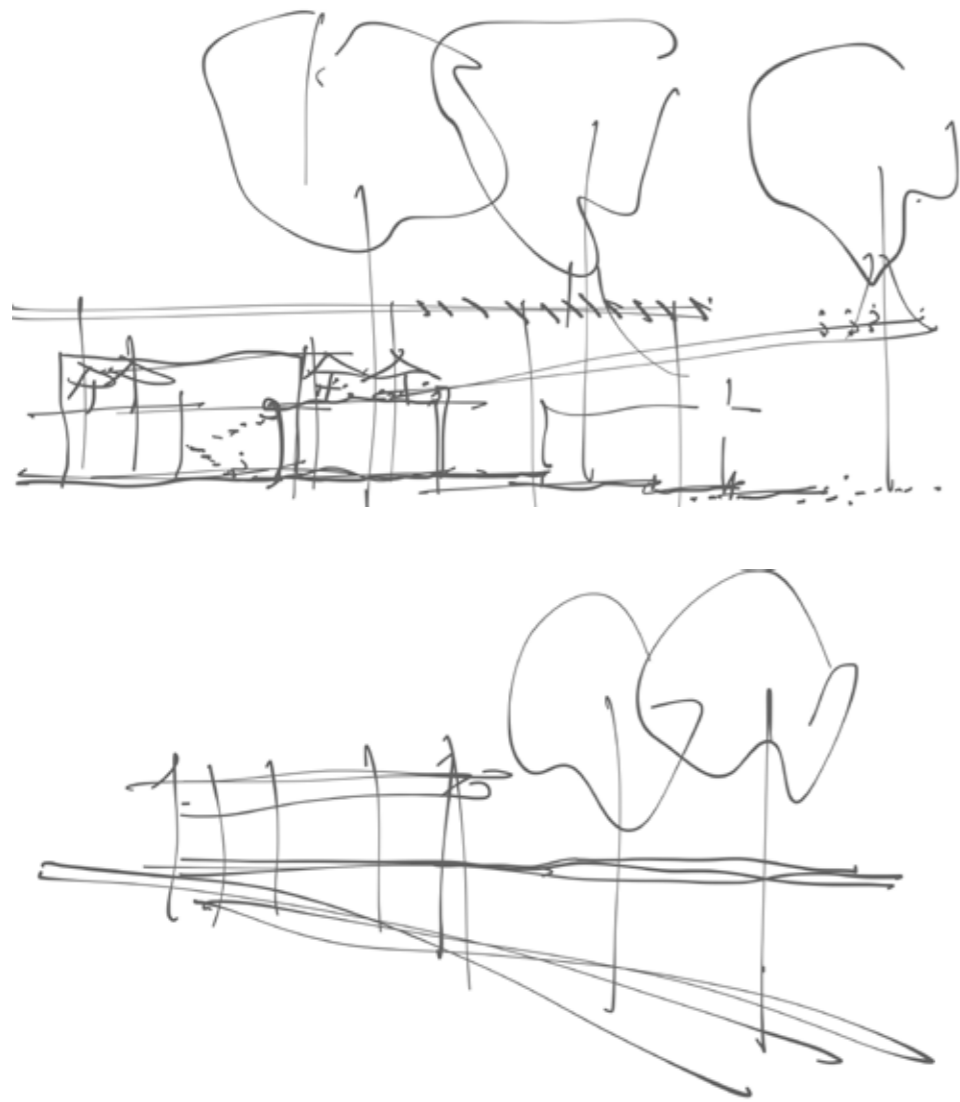


Support Koala conservation and rehabilitation through unique, exciting and eco-friendly activities.

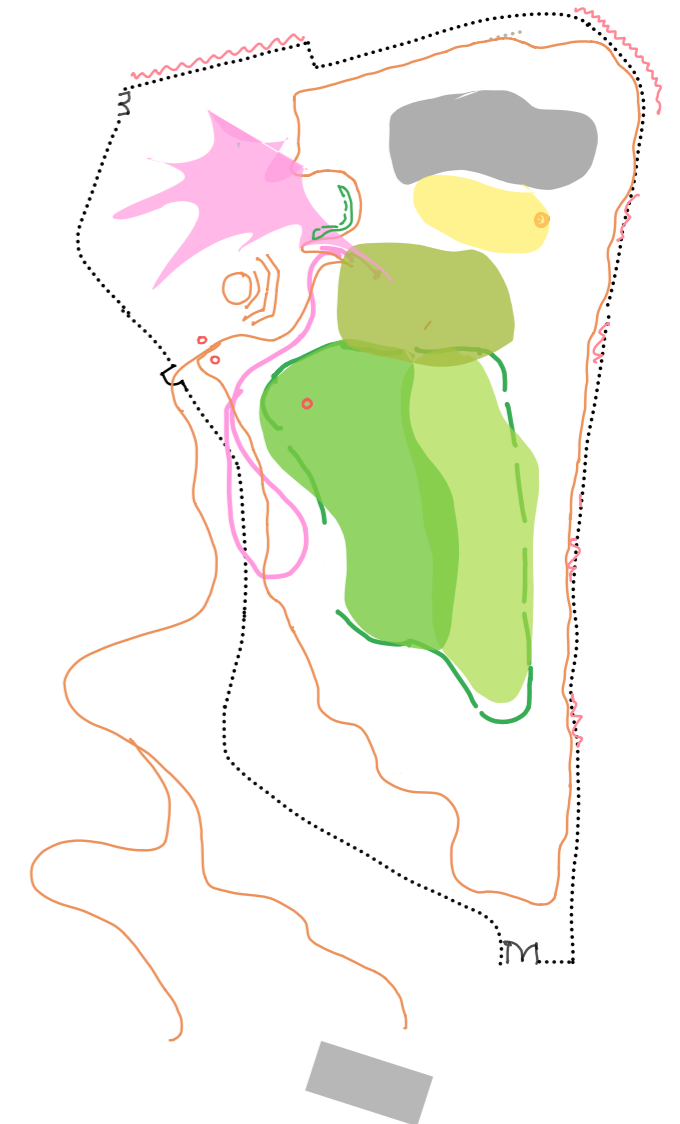
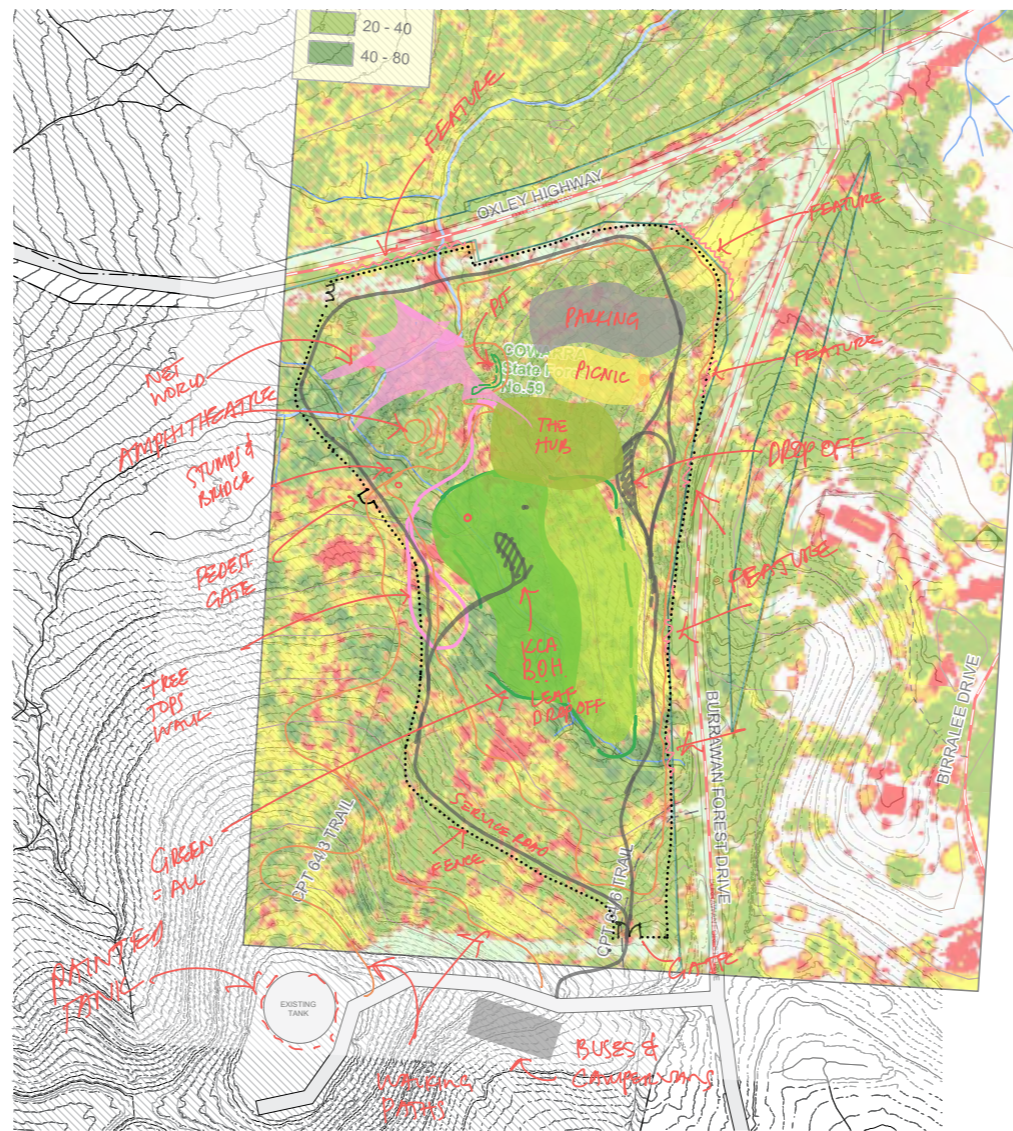
Participate in the community’s well-being while fostering educational experiences of the beautiful surrounding natural environment.



An award-winning forest-based tourism precinct encompassing nature-based visitor experiences focussing on Koala conservation & breeding; sustainable forest management; native timber as showcased; Traditional Aboriginal management practices including forest management and culture; treetop adventures; and education including Planet Ark messaging (low carbon footprint).



Initial Section sketches



Initial Masterplan sketches



Artists Impression Precinct Arrival



Image source: Ema Peter

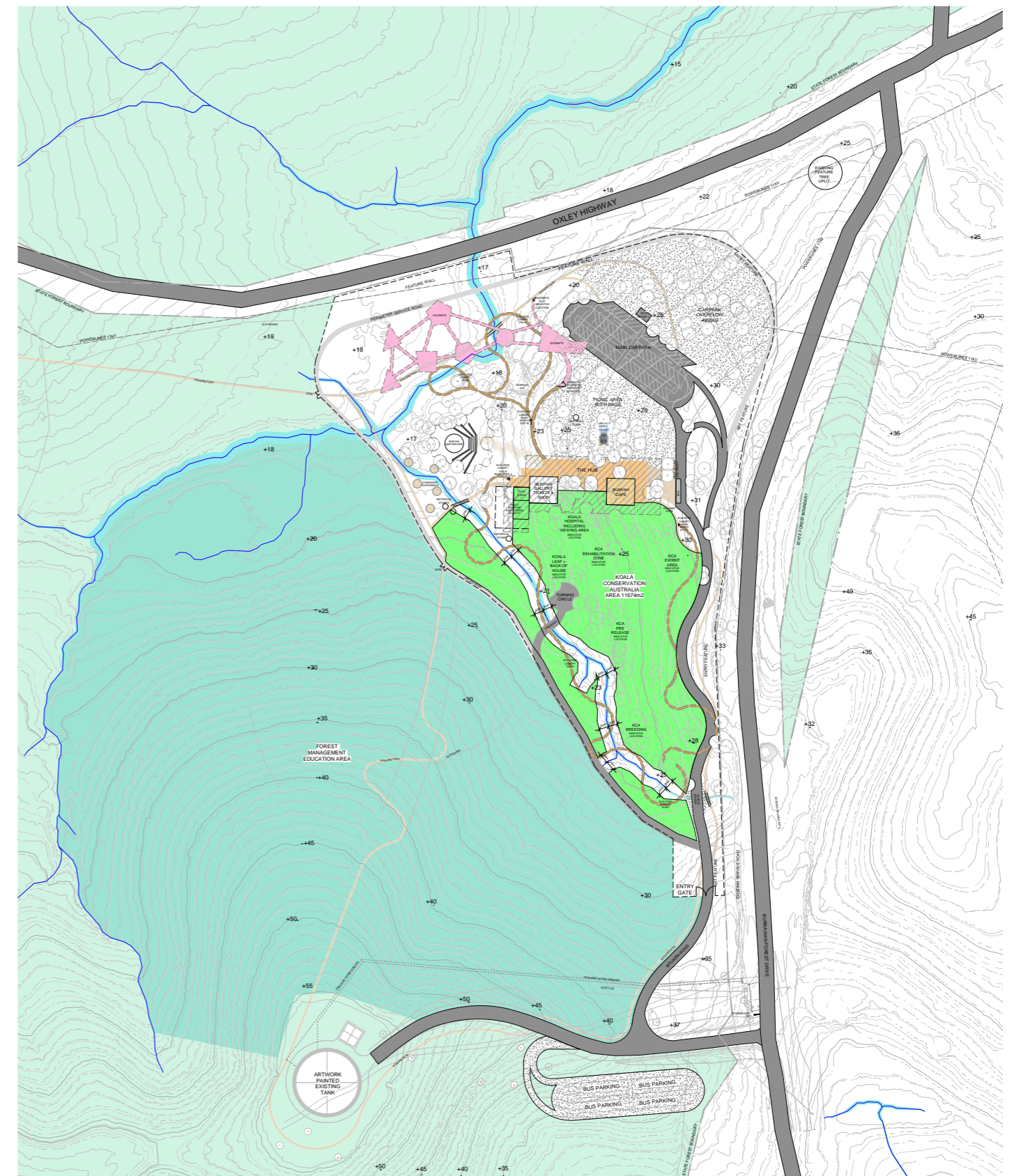
Cowarra State Forest
Tourist Precinct
Masterplan Architectural
Guidelines will include
the following:

_Predominant use of
sustainable Australian
hardwoods sourced from
the North Coast State
Forest and timber mills
for architecture and
landscape elements

_Implementation of
the regenerative &
ecologically sustainable
design principles



EUCALYPTUS PERENNIAL BARK
PHOTOGRAPH BY TOMAS ADOMAITIS



1:1000 WHEN PRINTED AT A1 PORTRAIT
0 10 50 100

GENERAL NOTES
AREA WITHIN BOUNDARY FENCE = APPROX 46,980m2
BOUNDARY PREDATOR FENCE 1.8M HIGH FLOPPY TOP
300MM MAX SIZE MESH DUG INTO THE GROUND WITH FLOODWATER GATE ON THE CROSSING
4WD/VEHICLE ON INSIDE UP TO 3M WIDE
ANNUAL PRUNING 2M CLEAR ON FERAL SIDE
TREES SHOWN ARE 350MM DIAMETER OR GREATER IN LOCATIONS RECEIVED BY FCNSW APPROX +/- 5MTRS
CONTOURS ARE DERIVED FROM INFORMATION PROVIDED BY GEO LOCATION DWGS PROVIDED BY FCNSW AND
TRAFFIC ENGINEER

Cowarra State Forest Tourism Precinct

Project Number 2011
BUNYAH LAND COUNCIL, KOALA CONSERVATION AUSTRALIA,
FORESTRY CORPORATION NEW SOUTH WALES, WILDNETS

Drawn by Troy Borg
Checked by Ken McBryde

Scale 1 : 1000 Date 31.09.2020



KCA AREA CALCULATION

COPYRIGHT KEN MCBRYDE ARCHITECTURAL PHYSICS PTY. LTD





Artists Impression The Hub



Timber Pavillion +
Canopy Inspiration FCNSW Coffs Harbour



Walkways and rammed earth inspiration



Integrated Living Landscapes



Artists Impression Bunyah Theatrette



Australian Natives
Regeneration Planting
throughout precinct



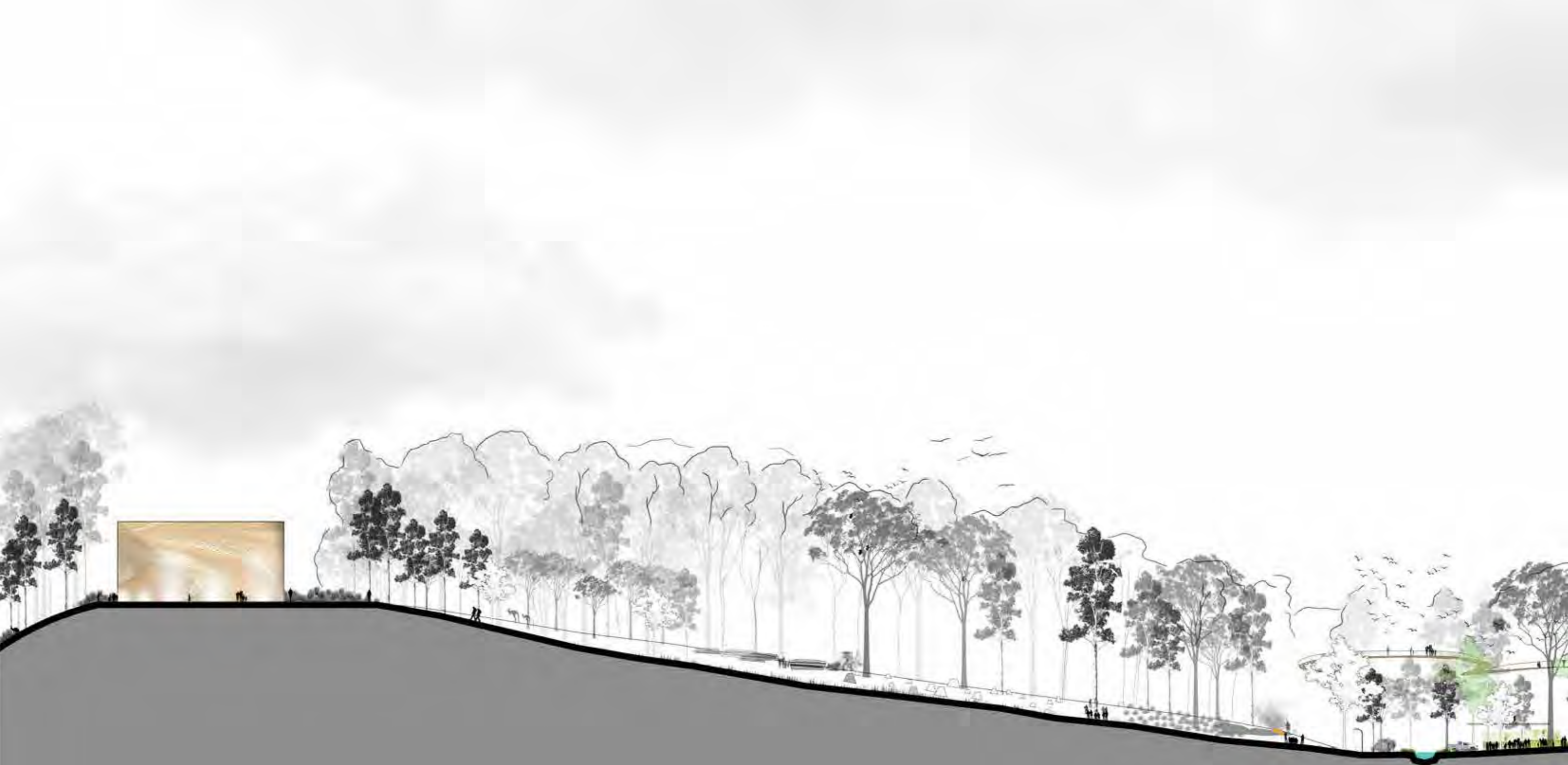
Celebrations of
Indigenous lead
Artworks and
Placemaking Narratives



Meeting places for
storytelling and
knowledge sharing

Section A - South to North





Artwork Feature and Storytelling

Forest and Timber Learning Space

Nature Walks and Knowledge sharing spaces

Koala Breeding
Canopy walk
Koala Leaf
KCA back of house



Bunyah Cafe
Multi purpose
Training Facility
Bunyah Gallery
The Hub
Koala Clinic Viewing

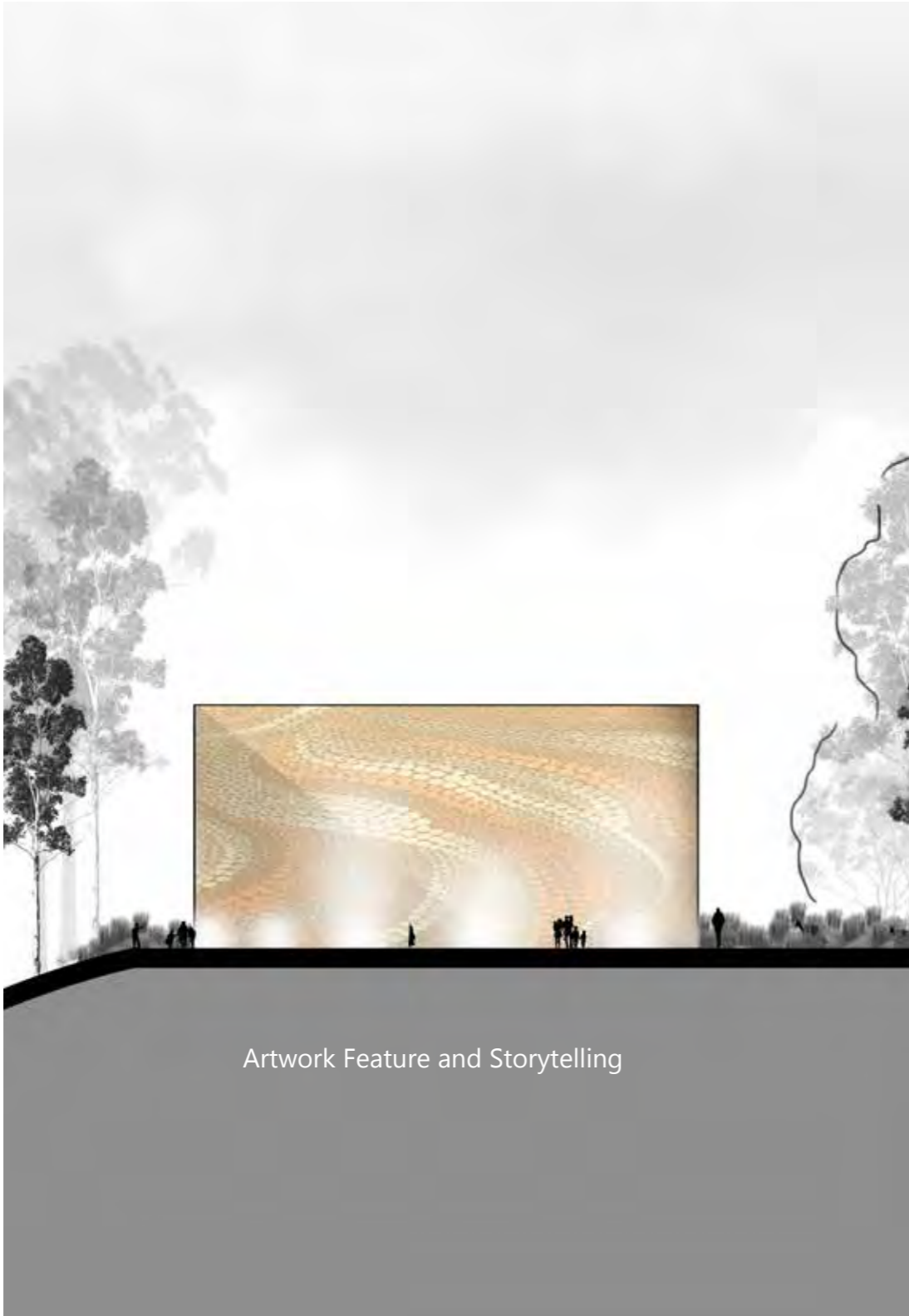
Picnic Area
Hello Koala
Canopy walk beyond

Carpark
WildNets Beyond

Artwork in the trees
Precinct Boundary
Overflow Carpark

Artwork Feature Wall
Uplit Feature Eucalyptus Tree

Oxley Highway

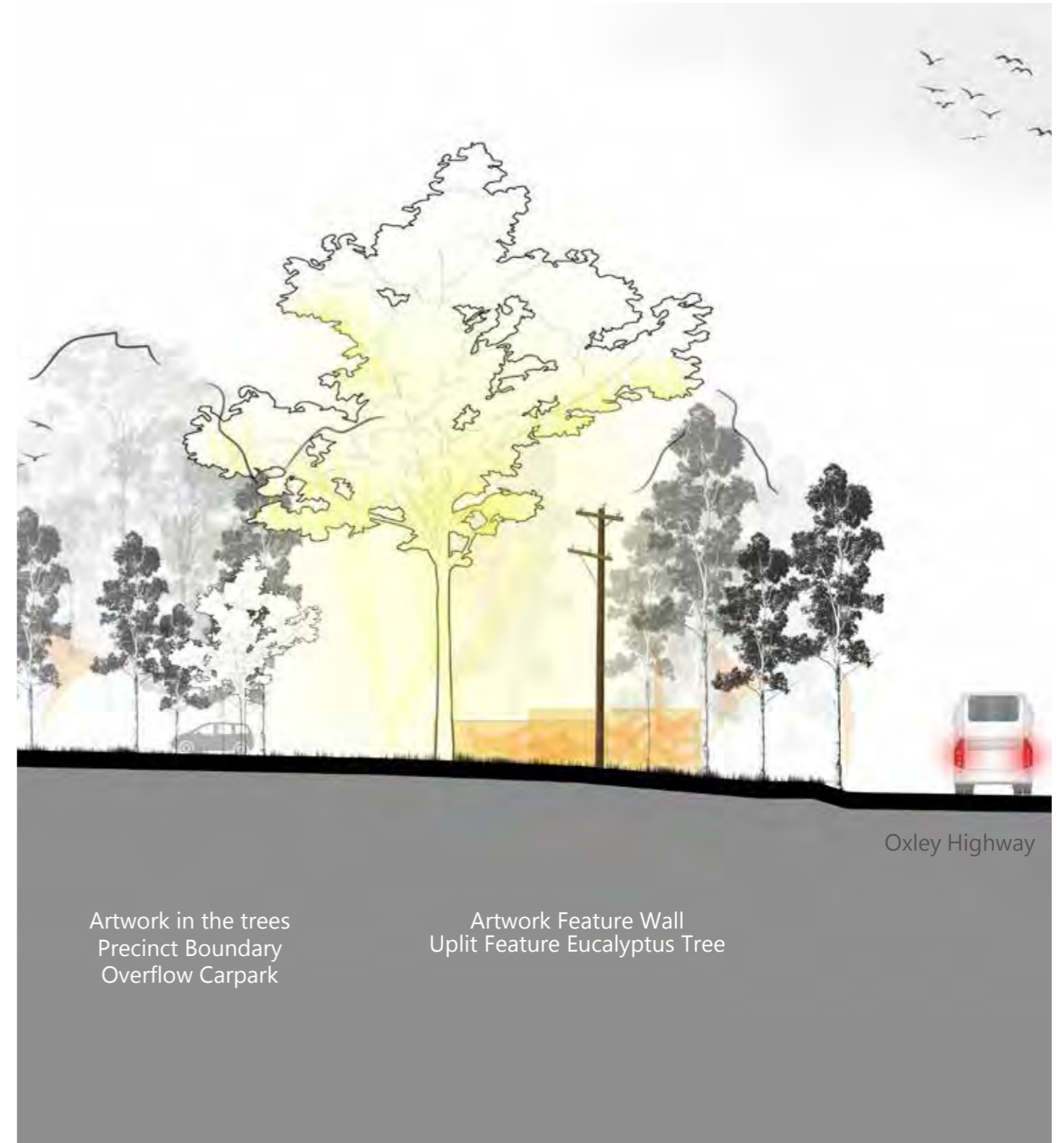


Artwork Feature and Storytelling



Nature Walks and Knowledge sharing spaces

Koala Breeding
Canopy walk
Koala Leaf
KCA back of house



Section B - East to West





Burrawan Forest Drive

State Forest

Artwork in the trees
State Forest Boundary

Artwork in the trees
Precinct Boundary

Precinct Arrival
Canopy walk above
Wildnets Arrival
Nature walks

Bunyah Cafe
Deck and Canopy opening to
Picnic Area and Wildnets
Koala Clinic Viewing

Multi purpose
Training Facility
Bunyah Gallery
Entry to Canopy walk
Hello Koala

SECTION B - East to West



Bunyah Dance Theatrette

Suspended Tents

Canopy Walk

Forest and Timber Learning Space

Nature Walks



Artwork in the trees
Precinct Boundary

Precinct Arrival
Canopy walk above
Wildnets Arrival
Nature walks

Bunyah Cafe

Koala Clinic Viewing
Deck and Canopy opening to
Picnic Area and Wildnets



Bunyah Gallery
Entry to Canopy walk
Hello Koala

Multi purpose
Training Facility

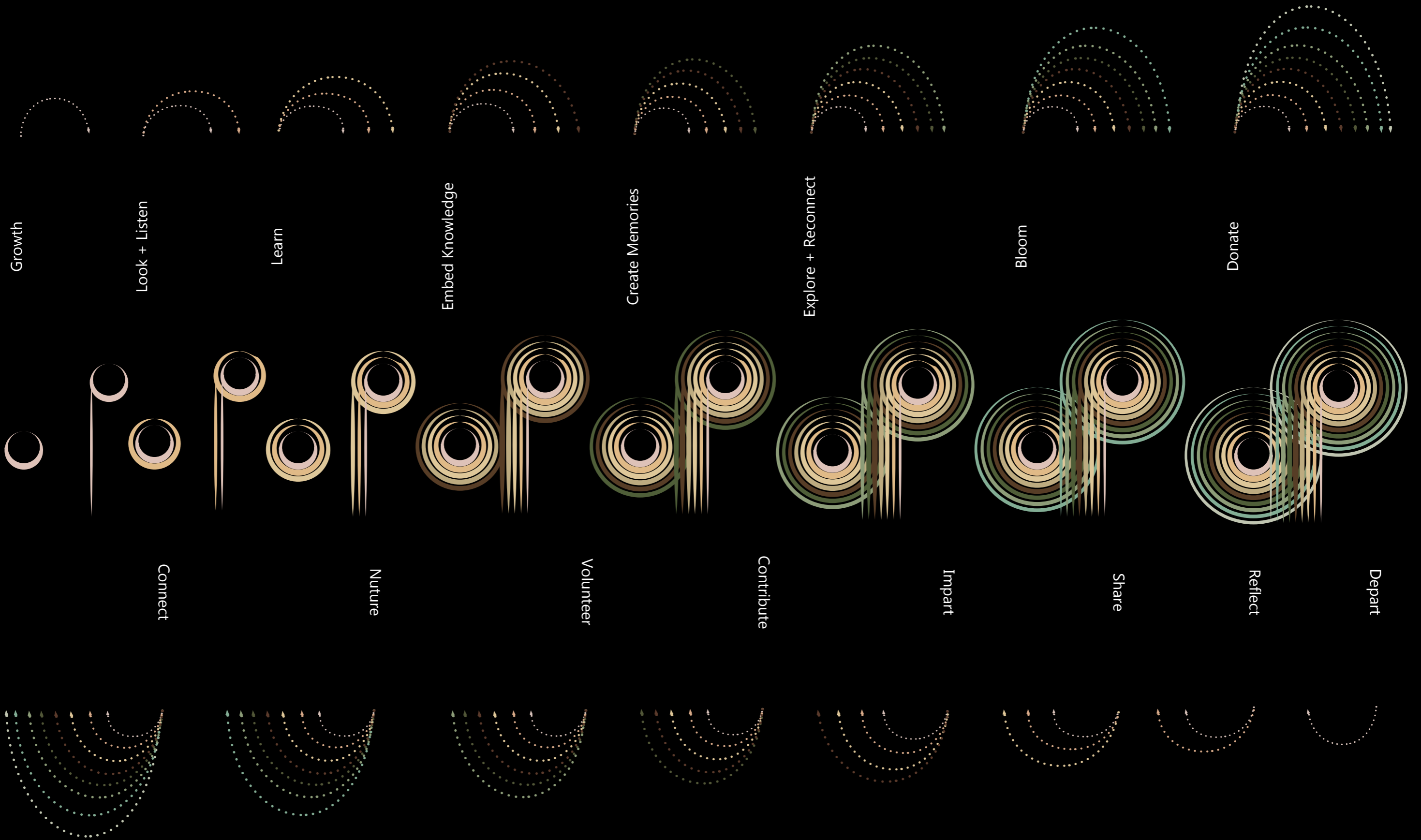
Bunyah Dance Theatre

Suspended Tents

Canopy Walk

Forest and Timber Learning Space

"From little things, big things grow!"
Cowarra State Forest Tourism Precinct Ecological Circuit Diagram





“Cowarra State Forest Tourism Precinct will have taught us about the unique qualities of the various Eucalyptus species in this location.

We will have learned their contribution to our modern developing world, but also the contribution they have made through history as managed by the people who first inhabited this country.

We will have seen that life on earth is a delicate circuit of energy - of symbiotic relationships that needs to be respected by all when we leave Cowarra State Forest, the visit will have changed our outlook on the planet.

Irreversibly, in ways we can no longer ignore. It will have taught us to see the contribution trees make to not only the threatened Koalas but also to our survival.”

Prof. Ken McBryde

Image source: Bronwyn Ellis, FCNSW

#visitnswforests



**Architectural
Physics**

Contact Details:
Architectural Physics Pty. Ltd.

Ken McBryde | Principal
ken@architecturalphysics.com
+61 416 020 040

