

Comprehensive Koala Plan of Management

for

Eastern Portion of Kempsey Shire LGA



Volume I – The CKPoM
(Working Provisions)

April 2011



About the authors

In consultation with the Koala Advisory Group, Kempsey Shire Council engaged the services of Biolink Ecological Consultants to prepare a Comprehensive Koala Plan of Management for the Eastern Portion of the Kempsey Shire LGA. To this end Biolink undertook the appropriate background research (discussion of koala ecology and historical extent of occurrence) and field work (presented results of koala field surveys and provided interpretation of results) to produce the 'Resource Study' (Volume II of this plan), which has been used to formulate the Working Provisions (Volume I of this plan). A full list of the project team and relevant experience of Biolink's lead consultants is provided at the beginning of Volume II. Biolink also provided a draft version of the Working Provisions, which was refined by Council's Planning and Natural Resource Management staff, in consultation with NSW Department of Planning, NSW Department of Environment, Climate Change and Water and the Koala Advisory Group.

Maps

For hard copy production, the maps and figures accompanying the plan should be reproduced at A3 size.

This Plan was formally endorsed by Council at its ordinary meeting on 18 January 2011.

Final approval of the Plan was given by the Director General of the NSW Department of Planning on 25 March 2011.

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Introduction

The following document details working provisions designed to give effect to a Comprehensive Koala Plan of Management (CKPoM) for the Eastern Portion of Kempsey Shire LGA. An advisory group comprised of representatives from Kempsey Shire Council, NSW Department of Environment Climate Change and Water (DECCW), NSW Department of Planning (DoP), NSW Department of Industry and Investment (DI&I) - Forests NSW, NSW Land and Property Management Authority (LPMA) and the local community provided feedback and assisted with the preparation and review of the plan during its formulation.

The CKPoM is consistent with the State Recovery Plan for the Koala, approved in 2008 and has been prepared in accordance with *State Environmental Planning Policy No 44 (Koala Habitat Protection)* and thus shares the primary aim of,

"...the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline".

Amongst other things detailed herein, the plan adopts a landscape-scale approach to providing for the conservation of koala habitat through the delineation of Koala Management Areas, within which the majority of koala populations currently exist. The intent of this approach is to provide a focus for koala management efforts and as a result, maintain and improve koala habitat to an extent that ensures the persistence of populations in their current range. The provisions in the plan aim to provide for conservation of those areas of habitat most important to koala populations in the eastern portion of Kempsey Shire, to increase the extent and quality of koala habitat in key areas and to increase knowledge regarding the current distribution and abundance of koalas where it is currently inadequate.

A CKPoM offers a number of advantages when compared to an Individual Koala Plan of Management (IKPoM) by way of the following:

- (i) A Development Application (DA) or rezoning application on land to which a CKPoM applies need not include an IKPoM provided the DA or rezoning application is consistent with the CKPoM;
- (ii) a CKPoM facilitates a strategic and coordinated approach to the management of koalas and their habitat at an appropriate landscape scale;
- (iii) a CKPoM reduces the resources required by Council to process individual DAs and rezoning applications; and
- (iv) a CKPoM facilitates government, non-government and community involvement with the process of koala conservation.

The overall plan comprises two volumes. Volume I (this document) details working provisions, in the form of specific management intent and actions, koala habitat assessment methodologies and development standards to be applied across the land to which the plan applies. A separate document (Volume II) serves as the resource study upon which the working provisions are based, providing the necessary background data, results of field surveys and discussion of koala ecology in the eastern portion of the Kempsey LGA.

The Planning Context

In order to be effective, the CKPoM should work across all tenures and ideally, without regard for land use zonings. Nearly 85% of land within the study area is zoned “Rural” in one form or another for purposes of the *Kempsey Local Environmental Plan 1987*. This means that the rural community has an integral role to play in terms of the long-term future of koalas in the study area. Rural lands, however, are largely exempt from planning intervention; Routine Agricultural Management Activities (RAMAs) are generally excluded from provisions of both the *Environmental Planning and Assessment Act 1979* and the *Native Vegetation Act 2003*, the latter also governing actions such as forestry activities on private land. Private forestry activities, and to a lesser extent RAMAs have the potential to have a significant negative impact on koalas, especially where the loss of preferred koala food trees such as Tallowwood and Grey Gum are involved. This plan is limited in its ability to control those activities and instead focuses its efforts on reducing the impact of development in areas of preferred and core koala habitat. It proposes to do this through the protection of preferred koala food trees (PKFTs) where possible, or by the imposition of requirements to replace PKFTs, and in some instances the requirement to provide Habitat Compensation where removal of PKFTs exceeds certain thresholds.

State Environmental Planning Policy No 44 – Koala Habitat Protection

State Environmental Planning Policy No 44 – Koala Habitat Protection (SEPP 44) commenced on 13 February 1995, its aim to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and (to) reverse the current trend of koala population decline by:

- a) requiring the preparation of plans of management (individual or comprehensive) before development consent can be granted in relation to areas of *core koala habitat*;
- b) encouraging the identification of areas of *core koala habitat*; and

c) encouraging the inclusion of areas of *core koala habitat* in environment protection zones.

This document is a Comprehensive Koala Plan of Management for the eastern portion of the Kempsey Local Government Area, prepared under the auspices of SEPP 44. Although, the adoption of this plan replaces the requirement for preparation of an individual KPoM in relation to development in areas of *core koala habitat*, IKPoM's may still be pursued by the applicant if they so choose.

Kempsey Local Environmental Plan (LEP) 1987 and proposed new Standard LEP

The Kempsey LEP 1987 details objectives of, and land uses permitted with and without development consent within zones identified by the LEP. Provisions of the plan will be considered when a development or rezoning application is submitted to Council. The new Standard LEP (currently being drafted) notes the requirement for Development Applications (and Rezoning Applications) within the CKPOM application area to address the development control provisions in the CKPOM.

Native Vegetation Act (NVA) 2003

The Native Vegetation Act 2003 regulates the clearing of native vegetation on all land in NSW, except for excluded land listed in Schedule 1 of the Act. The Act, administered by DECCW and local Catchment Management Authorities (CMAs), outlines what landowners can and cannot do in clearing native vegetation. Under the Native Vegetation Act, harvesting of timber for the purposes of Private Native Forestry (PNF) requires approval through the preparation of a Property Vegetation Plan (PVP). Assessments of PNF PVPs under the Native Vegetation Act are not required to consider SEPP 44 and thus are not required to consider the plan. PNF must, however, comply with the PNF code of practice which excludes PNF from areas of *core koala habitat* and details provisions for forestry practices in areas where koala activity is recorded.

Environmental Planning and Assessment (EP&A) Act 1979

Section 5A of the *EP&A Act 1979* sets out the factors (known as the 7 part test) to be considered in deciding whether an activity is likely to have a significant effect on threatened species as listed for the purposes of the *Threatened Species Conservation (TSC) Act 1995*. The koala is listed as Vulnerable on Schedule 2 of the NSW *Threatened Species Conservation (TSC) Act 1995*. The adoption of this CKPoM does not negate the responsibility of Council or a proponent to fully consider whether a proposed development or rezoning activity requiring Council consent is likely to result in a significant effect on a threatened species, population, ecological community, or their habitat (including the koala).

Working Provisions

Section 1 – Definitions

The words, acronyms and/or phrases detailed below have the following meanings for purposes of the CKPoM:

“**APZ**” means Asset Protection Zone.

“**CKPoM**” means Comprehensive Koala Plan of Management.

“**CMA**” means Catchment Management Authority.

“**core koala habitat (CKH)**” has the same meaning as that defined by *State Environmental Planning Policy No 44 (Koala Habitat Protection)*, being any land currently supporting a resident koala population.

“**Council**” means Kempsey Shire Council.

“**dbhob**” means diameter at breast height over bark.

“**development**” has the same meaning as that defined by the *Environmental Planning and Assessment Act 1979*.

“**DECCW**” means the NSW Department of Environment, Climate Change and Water.

“**DoP**” means the NSW Department of Planning.

“**EP&A Act**” means the *Environmental Planning and Assessment Act 1979*.

“**IKPoM**” means an Individual Koala Plan of Management prepared in accordance with Part 3 of SEPP 44.

“**Infrastructure**” means all infrastructure associated with the construction of a single dwelling, dual occupancy and/or secondary dwelling and includes but may not be limited to, water tanks, on site waste water management systems, roads and driveways, but does not include farm dams.

“**KAG**” means the Koala Advisory Group.

“**KMA**” means Koala Management Area.

“**LEP**” means the *Kempsey Local Environmental Plan 1987*.

“**NSWKPS**” means the NSW Koala Preservation Society.

“**NVA Act**” means the *Native Vegetation Act 2003*.

“**planning agreement**” has the same meaning as that defined by the *Environmental Planning and Assessment Act 1979*.

“**preferred koala habitat (PKH)**” means any area identified as either Primary, Secondary A or Secondary B koala habitat as defined in the table below and in Part 4 of the resource document.

Preferred Koala Habitat	Primary	Vegetation communities and/or associations wherein <u>primary</u> food tree species comprise the dominant or co-dominant (i.e. $\geq 50\%$) overstorey tree species.
	Secondary A	<u>Vegetation communities and/or associations wherein Primary</u> food tree species are sub-dominant components of the overstorey tree species and usually (but not always) growing in association with one or more <u>secondary</u> food tree species.
	Secondary B	<u>Vegetation communities and/or associations wherein Primary</u> food tree species are absent, habitat containing <u>secondary</u> and <u>supplementary</u> food tree species only.
Other Vegetation	Other	Vegetation communities and/or associations within which preferred koala food trees are absent.
	Unknown	Vegetation mapping polygons for which there was insufficient data available for classification.

“**Preferred Koala Food Tree**” means any of the following tree species:

Primary food tree species		Secondary/supplementary food tree species	
Tallowwood	<i>E. microcorys</i>	Grey Gum	<i>E. propinqua</i>
Forest Red Gum	<i>E. tereticornis</i> *	White Stringybark	<i>E. globoidea</i>
Swamp Mahogany	<i>E. robusta</i>	Stringybark	<i>E. tindaliae</i>

*includes the naturally occurring *E. tereticornis* x *E. robusta* hybrid, referred to as *E. 'patentinervis'* by Bale (1992).

“**Resource Study**” means Volume II of the plan.

“**RFS**” means the NSW Rural Fire Service.

“**RTA**” means the NSW Roads and Traffic Authority.

“SEPP 44” means State Environmental Planning Policy No. 44 - Koala Habitat Protection.

“significant koala activity” means an activity level of 9.47% or greater where a site is located on erosional and/or residual soil landscapes, or 22.52% or greater where a site is located on alluvial and associated soil landscapes (refer to Part 3 and Appendix I in Volume II for further details).

“SAT” means ‘Spot Assessment Technique’.

“stadia survey” means the recording of the precise location and taxonomic identity of all preferred koala habitat food trees on a site, carried out by a registered surveyor.

“suitably qualified and/or accredited koala specialist” means an individual with qualifications and experience in tree species identification and, in the case of koala habitat assessment, qualification in biological science and fauna survey and management, including experience in conducting koala surveys. A brief curriculum vitae of each person involved with conducting these assessments should be appended to the survey report.

“The Department” means the NSW Department of Planning.

“The Determining Authority” means that authority responsible for determining a development or rezoning application.

“The Levy” means Kempsey Shire Council’s Environmental Rates Levy.

“the plan” means the *“Comprehensive Koala Plan of Management for the Eastern Portion of Kempsey Shire LGA”*.

“TSC Act” means the *Threatened Species Conservation Act 1995*.

“TPO” means Tree Preservation Order.

“VCA” means Voluntary Conservation Agreement.

Section 2 – Plan Aims and Objectives

The primary aims of the plan are to ensure to the maximum extent possible that the extent of habitat currently being occupied by koalas is not reduced further on land to which the plan can be effectively applied, and that processes currently working to limit an increase in occupancy rate and/or population size are mitigated. These tasks are reflected by way of the following objectives:

- (i)** Minimising the potential for adverse impact within current and future areas of *core koala habitat*;
- (ii)** Ensuring that preferred koala food trees are effectively managed and conserved across all land to which the plan can be effectively applied;
- (iii)** Establishment of a number of KMAs over some of the land to which the plan applies, within which the management of koalas and their habitat is a primary focus; and
- (iv)** Ensuring that all future koala habitat assessments undertaken on land to which the plan applies are done to a minimum standard and assessment criteria as determined by Council so as to best inform future planning decisions.

These objectives will be realised through the actions and measures that are detailed in the sections that follow.

Section 3 - General Provisions

a) Land to which the plan applies

- (i)** The plan shall apply to all lands encapsulated by the study area boundary detailed in Map 1, those areas detailed in (ii) and b) below.
- (ii)** The plan does not apply to DECCW estate (National Parks and Nature Reserves) or Forests NSW estate.

b) Relationship to other Koala Plans of Management

The plan does not supersede any approved Individual Koala Plans of Management (IKPoM) that are currently in force over land to which the plan applies. Approved IKPoMs are currently in force over three locations within the boundaries of land to which this plan applies.

These are:

- Lot 622 DP1064471 Inches Lane, Verges Creek
- Lot 23 DP260716 Rodeo Drive, Kundabung
- Lot 1 DP196559 Beranghi Road, Crescent Head

c) Duration of the Plan

The plan will come into force once approved by the DoP and shall remain in force for a minimum period of 15 years unless otherwise amended or superseded.

Section 4 – Planning Provisions

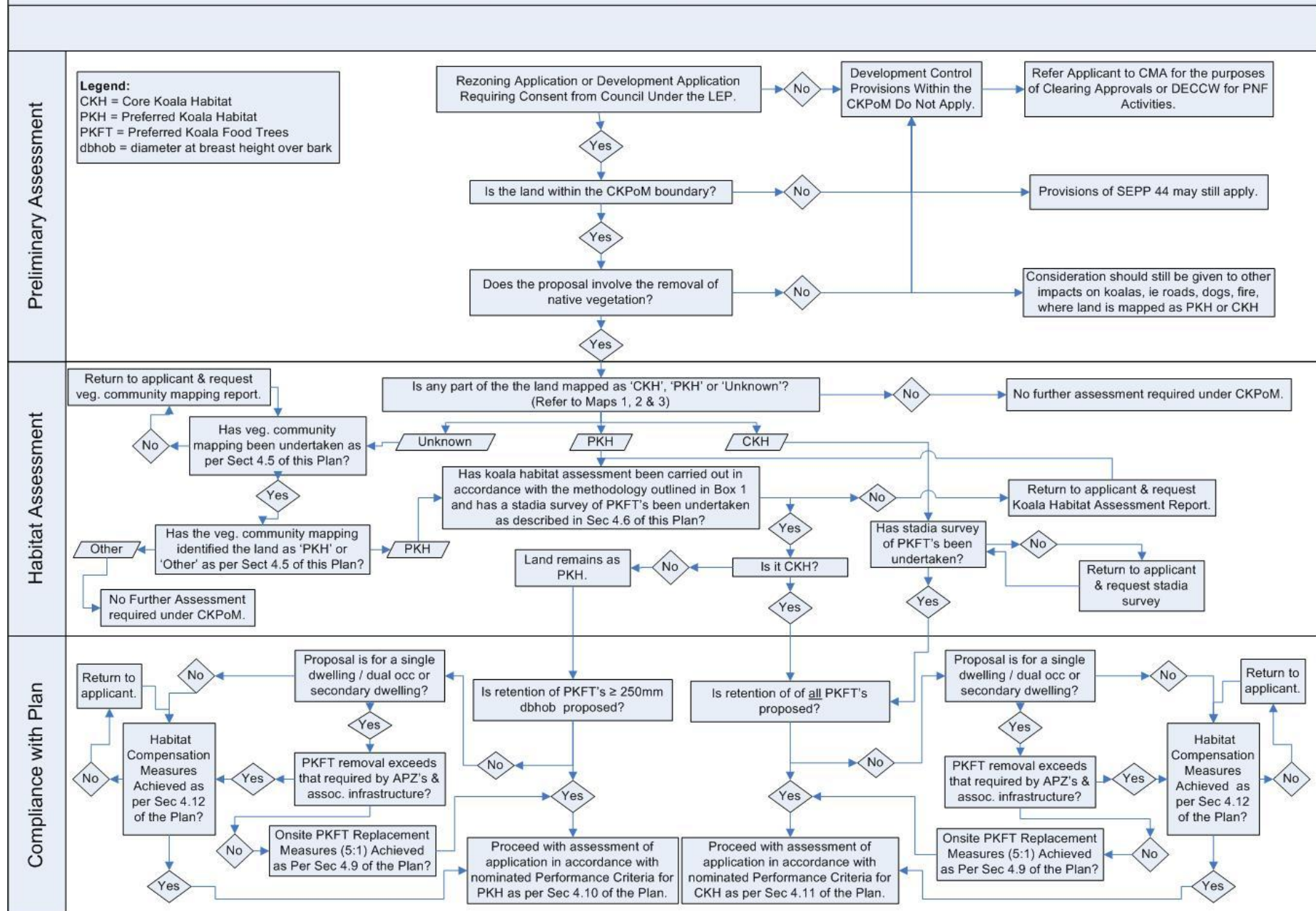
Appropriate land use planning and regulation of development via assessment of development applications (DA) and rezoning applications is essential for protecting and effectively managing remaining koala habitat and as such represents an integral component of this plan. In order to comply with SEPP 44, all DA and rezoning applications that require consent under Council's LEP and fall within the CKPoM boundary, will be required to comply with the provisions of this Section of the plan. The following process should be followed to determine what, if any, provisions are required. The flowchart on the following page has also been included to assist in the decision making process.

4.1 The Development and Rezoning Assessment Pathway

The following sections apply to DA and rezoning applications (Planning Proposals under the Gateway procedures) which are within the boundary of the CKPoM and that propose, or require the removal of native vegetation. If no removal of native vegetation is proposed in the DA / rezoning application, consideration of the Management Provisions described in Section 5 of the plan may apply for certain developments.

Note: If this section applies to a DA or Rezoning Application, Koala Habitat Assessments and Stadia Surveys are required in all areas which are not currently mapped as "Other".

Illustration 1: The Development and Rezoning Assessment Pathway – CKPoM for eastern portion of Kempsey Shire LGA



4.2 Land Mapped as Other or Non vegetation

If the land is mapped as Other vegetation or Non–Vegetation no further assessment of the DA or Rezoning Application is required under the plan.

4.3 Land Mapped as Core Koala Habitat (CKH)

If the land is mapped as CKH (refer to Maps 2 & 3) a stadia survey of preferred koala food trees that may be impacted by the proposed development or rezoning application, must be submitted with the DA or Rezoning application. Assessment of the application can then proceed as per Section 4.8 Assessment of DA and Rezoning Applications in Areas of Mapped CKH and Areas Determined to be CKH.

4.4 Land Mapped as Preferred Koala Habitat (PKH) and Unknown

- (a) If land is mapped as Unknown, proceed to Section 4.5 DA and Rezoning Application Requirements for Land Mapped as Unknown; or
- (b) If land is mapped as PKH proceed to Section 4.6 DA and Rezoning Application Requirements for land mapped as PKH.

4.5 DA and Rezoning Application Requirements for Land Mapped as Unknown

- (a) Development and rezoning applications for land mapped as Unknown vegetation in Map 1, must undertake vegetation community mapping as follows:
 - (i) vegetation community mapping must be undertaken in sufficient detail to enable unequivocal classification to either PKH (Primary, Secondary A or Secondary B), or Other vegetation;
 - (ii) as a minimum, the data to be reported for the purposes of 4.5 (a)(i) above is detailed mapping and description of tallest stratum cover as well as species composition of each vegetation community on the land under assessment;
- (b) where vegetation community mapping identifies the land as PKH, proceed to Section 4.6 DA and Rezoning Requirements for Land Mapped as PKH; or

- (c) where the vegetation mapping is undertaken in accordance with 4.5 (a)(i), identifies the land as Other, no further assessment of the DA/rezoning application will be required under this plan.

4.6 DA and Rezoning Application Requirements for Land Mapped as PKH

- (a) Development and rezoning applications for land mapped as PKH habitat in Map 1, or determined to be so in Section 4.5 (a)(i) must undertake a Koala Habitat Assessment in accordance with the methodology outlined in Box 1 and as generally described in Part 3 of the accompanying Resource Study;
- (b) a stadia survey of preferred koala habitat food trees that may be impacted by the proposed development or rezoning application must be undertaken and submitted with the DA or Rezoning Application;
- (c) Where the Koala Habitat Assessment as per Box 1 concludes that the subject land contains CKH proceed to Section 4.8 Assessment of DA and Rezoning Applications in Areas of Mapped CKH and Areas Determined to be CKH; or
- (d) If the Koala Habitat Assessment as per Box 1 concludes the land does not contain CKH, the land remains PKH. Go to Section 4.7 Assessment of DA and Rezoning Applications in Areas of Mapped PKH and Areas Determined as PKH.

Box 1. Methodology for undertaking koala habitat assessment

STEP 1

Determine appropriate sampling intensities as per table below

Area of land	Initial SAT sampling intensity	High SAT sampling intensity
<15ha	Every 150m	Every 75m
15-50ha	Every 250m	Every 125m
>50ha	Every 350m	Every 175m

STEP 2

Overlay the land subject to a DA or rezoning application with a square grid at intervals as detailed under the heading “high sampling intensity” in the table above and determine location of SAT sampling points.

STEP 3

- a) Sampling is to be undertaken at each sampling point using the Spot Assessment Technique (SAT) methodology as detailed in Appendix I to Volume II of this plan.
- b) Initial sampling must be undertaken at intervals commensurate with the initial sampling intensity shown in Step 1.
- c) In the event that significant koala activity is recorded at a SAT site, then the surrounding high sampling intensity SAT sites within the boundary of the land under assessment are also to be sampled.

STEP 4

All SAT sites wherein significant koala activity has been recorded must become the central point of a grid cell, the size of which must be commensurate with sampling intensity as follows.

- For 75m sampling intersections, the grid cell size will be 75m x 75m (0.56ha)
- For 125m sampling intersections, the grid cell size will be 125m x 125m (1.56ha)
- For 175m sampling intersections, the grid cell size will be 175 x 175m (3.06ha)

All areas within a grid cell identified in Step 4 must be regarded as *core koala habitat* for the purposes of the plan.

Note: Council reserves the right to have any koala habitat assessment work done for the purposes of this plan peer-reviewed.

4.7 Assessment of DA and Rezoning Applications in Areas of Mapped PKH and Areas Determined as PKH

In drafting this section, Council has divided the provisions between developments which are considered to be of low intensity (single dwelling, dual occupancy or secondary dwelling) and those which are considered to be of a higher intensity (all other development which includes things such as subdivision, rural tourist facility, industrial, commercial etc). What is required to mitigate the impacts of the two categories of development differs, with the mitigation measures increasing from low intensity to higher intensity development.

- (a)** If retention of Preferred Koala Food Trees (PKFT) greater than or equal to 250mm at dbhob is proposed across the land to which the DA/Rezoning application relates, the nominated Performance Criteria for Areas Mapped as PKH and Determined to be PKH in Section 4.10 of this plan are to be applied to the application where relevant; or

If Development is for Dwelling House, Dual Occupancy, Secondary Dwelling

- (b)** If retention of Preferred Koala Food Trees (PKFT) greater than or equal to 250mm at dbhob is not proposed across the land to which the DA/Rezoning application relates, but the application is for a single dwelling house, dual occupancy or a secondary dwelling and the removal of PKFT's does not exceed that required for APZ's or associated infrastructure, the Onsite PKFT Replacement Measures in Section 4.9 and nominated Performance Criteria for Areas Mapped as PKH and Determined to be PKH in Section 4.10 of this plan are to be applied to the DA/Rezoning application where relevant; or
- (c)** If retention of Preferred Koala Food Trees (PKFT) greater than or equal to 250mm at dbhob is not proposed across the land to which the DA/Rezoning application relates, but the application is for a single dwelling house, dual occupancy or a secondary dwelling and the removal of PKFT's exceeds that required for APZ's or associated

infrastructure, Habitat Compensation Measures in Section 4.12 and nominated Performance Criteria for Areas Mapped as PKH and Determined to be PKH in Section 4.10 of this plan are to be applied to the DA/Rezoning application where required; or

All other Development

- (d) If retention of Preferred Koala Food Trees (PKFT) greater than or equal to 250mm at dbhob is not proposed across the land to which the DA/Rezoning Application relates and the application is for development other than a single dwelling house, dual occupancy, secondary dwelling, Habitat Compensation Measures in Section 4.12 and nominated Performance Criteria for Areas Mapped as PKH and Determined to be PKH in Section 4.10 of this plan are to be applied to the DA/Rezoning application where relevant.

4.8 Assessment of DA and Rezoning Applications in Areas of Mapped CKH and Areas Determined to be CKH

In drafting this section, Council has divided the provisions between developments which are considered to be of low intensity (single dwelling, dual occupancy or secondary dwelling) and those which are considered to be of a higher intensity (all other development which includes things such as subdivision, rural tourist facility, industrial, commercial etc). What is required to mitigate the impacts of the two categories of development differs, with the mitigation measures increasing from low intensity to higher intensity development.

- (a) If retention of all Preferred Koala Food Trees (PKFTs) is proposed across the land to which the DA/Rezoning application relates, the nominated Performance Criteria for Areas Mapped as CKH and Determined to be CKH in Section 4.11 of this plan are to be applied to the DA/ Rezoning application where relevant; or

If Development is for Dwelling House, Dual Occupancy, Secondary Dwelling

- (b) If retention of all Preferred Koala Food Trees (PKFTs) is not proposed across the land to which the application relates but the DA/Rezoning application is for a single dwelling house, dual occupancy or a secondary dwelling and the removal of PKFTs does not exceed that required for APZs or associated infrastructure, the Onsite PKFT Replacement Measures in Section 4.9 and nominated Performance Criteria for Areas Mapped as CKH and Determined to be CKH in Section 4.11 of this plan are to be applied to the DA/Rezoning application where relevant; or
- (c) If retention of all Preferred Koala Food Trees (PKFTs) is not proposed across the land to which the DA/Rezoning application relates but the application is for a single dwelling house, dual occupancy or a secondary dwelling and the removal of PKFTs exceeds that required for APZs or associated infrastructure, Habitat Compensation Measures in Section 4.12 and nominated Performance Criteria for Areas Mapped as CKH and Determined to be CKH in Section 4.11 of this plan are to be applied to the DA/Rezoning application where required; or

All other Development

- (d) If retention of all preferred Koala Food Trees is not proposed across the land to which the DA/Rezoning application relates but the application is for development other than a single dwelling house, dual occupancy or secondary dwelling, Habitat Compensation Measures in Section 4.12 and nominated Performance Criteria for Areas Mapped as CKH and Determined to be CKH in Section 4.11 of this plan are to be applied to the DA/Rezoning application where relevant.

4.9 Onsite PKFT Replacement Measures

Where removal of PKFTs is required as part of development proposed for dwelling houses, dual occupancies, secondary dwellings and associated

infrastructure (as per Sections 4.7(b) and 4.8(b)) the following Onsite PKFT Replacement Measures apply:

- (a) PKFTs removed must be replaced elsewhere on the subject site, in a suitable location, at a ratio of 10:1 where possible or a minimum of 5:1 where it is demonstrated that the higher ratio cannot be achieved;
- (b) PKFTs must be of the same species as those removed, sourced from local seed stock;
- (c) PKFTs seedlings must be of a minimum size and maturity to best ensure survival. Any loss of seedlings must be replaced by the applicant;
- (d) Applicant is required to state how they intend to ensure ongoing maintenance and protection of PKFT seedlings (ie, exclusion of stock, program for weed suppression and removal etc).
- (e) A Revegetation Plan must be prepared, which addresses the requirements (a) to (d) above, but also specifies:
 - (i) the species to be planted (all should be endemic natives not horticultural hybrids), number of trees/plants to be planted, location of plantings, and plantings densities;
 - (ii) details of the sourcing of all seedlings (demonstrating local seedstock has been used);
 - (iii) a schedule of management, monitoring and maintenance activities to ensure establishment and ongoing protection and management of planting(s);
 - (iv) the length of proposed monitoring and management periods, the timing of key milestones, and reporting requirements;
 - (v) provisions for planting mortality replacements; and
 - (vi) responsible parties for the undertaking of all works and activities included in the plan.

4.10 Performance Criteria for Areas Mapped as PKH and Determined to be PKH

Consent may be granted with or without conditions where the following criteria are met:

Note: In the case of rezoning applications, the following performance criteria will be requested to be addressed in any site specific studies prepared in support of the rezoning application.

- (a) maximise retention and minimise degradation of native vegetation across the subject land;
- (b) minimise the removal of any identified preferred koala food trees, where they occur across the subject land;
- (c) ensure such trees will not be negatively impacted by subsequent development works including the construction of buildings, associated infrastructure and/or provision of public utilities;
- (d) maintain key linkages across the landscape, where they occur, to reduce the effects of habitat fragmentation;
- (e) comply with the Habitat Compensation Measures where relevant as per Section 4.12 of this plan;
- (f) Where Onsite PKFT Tree Replacement Measures have been applied, as per Section 4.9 of this plan, measures to ensure the retention of replacement trees over time, which may include but are not limited to restrictions on title; and
- (g) Where koala habitat and associated linkages are proposed to be retained on the development site to mitigate impacts, measures to ensure the protection of those areas in the long term, which may include but are not limited to restrictions on title;
- (h) Appropriate measures (ie erection of exclusion fencing) are to be in place to ensure koalas are protected during site construction works. Should koalas be found on site during clearing, construction or site works then provisions (i) and (j) in Section 4.11 apply.

4.11 Performance Criteria for Areas Mapped as CKH and Determined to be CKH

Consent may be granted with or without conditions where the following criteria are met:

Note: In the case of rezoning applications, the following performance criteria will be requested to be addressed in any site specific studies prepared in support of the rezoning application

General Performance Criteria:

- (a) ensure there is no net loss of core koala habitat across the subject land;
- (b) minimise the removal of any identified preferred koala food trees, where they occur across the subject land;
- (c) ensure such trees will not be negatively impacted by subsequent development works including the construction of houses, associated infrastructure and/or provision of public utilities;
- (d) ensure key linkages across the landscape are maintained, where they occur, to reduce the effects of habitat fragmentation;
- (e) comply with the Habitat Compensation Measures, where relevant as per Section 4.12 of this plan;
- (f) Where Onsite PKFT Tree Replacement Measures have been applied, as per Section 4.9 of this plan, measures to ensure the retention of replacement trees over time, which may include but not be limited to restrictions on title; and
- (g) Where koala habitat and associated linkages are proposed to be retained on the development site to mitigate impacts, measures to ensure the protection of those areas in the long term, which may include but are not limited to restrictions on title;
- (h) Appropriate measures (ie erection of exclusion fencing) are to be in place to ensure koalas are protected during site construction works. Should koalas be found on site during clearing, construction or site works then the following provisions, (i) and (j) apply.

Special Conditions**i) Clearing of vegetation**

- (i) If clearing of certain vegetation is to occur following consideration of Section 4.8 of this plan, clearing for development purposes must not proceed until the area has been

inspected for the presence of koalas and approval given in writing by a suitably qualified and/or accredited koala specialist.

- (ii) Approval to proceed with the clearing of vegetation in accordance with this section is only valid for the day on which the inspection has been undertaken.
- (iii) The koala specialist referred to in (i) above must remain on site during clearing of vegetation.

j) Protection of koalas from undue disturbance

The clearing of native vegetation and/or earthworks undertaken in accordance with this section or for any other purpose must be temporarily suspended within a range of 25m from any tree which is concurrently occupied by a koala and must not resume until the koala has moved from the tree of its own volition.

k) Swimming Pools

- (i) Measures, such as restrictions on title, to ensure all new swimming pools installed on land mapped as or determined to be core koala habitat must include a stout rope (minimum 50mm diameter), one end of which must be secured to a stable poolside fixture, the other end of which must trail in the pool at all times.
- (ii) Swimming pool fencing must be of a type that prevents access to the pool area by koalas (eg not be of timber or have timber posts or have shrubs and trees either side of the fence that would allow koalas to climb over).

l) Keeping of domestic dogs

For the purposes of new subdivision applications on land mapped as or determined to be core koala habitat, the keeping of domestic dogs must be prohibited by covenant.

m) Fencing

Fencing (notwithstanding provisions of the *Swimming Pools Act 1992*) on land mapped as or determined to be core koala habitat, must not inhibit the movement of koalas by virtue of providing regularly spaced gaps or other measures which result in a minimum 250mm ground clearance being achieved.

n) Road design standards

Road design standards and/or approved vehicle calming devices must be incorporated into any development proposal on land mapped as or determined to be core koala habitat such that motor vehicles are restricted to a maximum speed of 40km/hour within the development area.

o) Rezoning

Upon assessment of a DA or rezoning application, Council should consider the merit of rezoning for environment protection of all or a part of any land that has been identified as core koala habitat.

4.12 Habitat Compensation Measures

- a)** Loss of koala habitat must be compensated via the securement of a corresponding measure of land that equates to no less than two times the total area to be affected by vegetation removal. Habitat Compensation should be undertaken on the same site as clearing where possible;
- b)** The Habitat Compensation Measures must take the form of a valid legally binding agreement between the proponent of the development and any person being the lawful owner of land that is (preferably) within a KMA, or otherwise on land to which the plan applies, to the satisfaction of Council. Consideration will be given to habitat compensation measures taking place outside the CKPoM boundary, but within the Kempsey Shire LGA, on a case by case basis, if the proponent can sufficiently demonstrate securement of appropriate habitat quality and area as per c) below, as well as evidence of a koala population on or near the habitat compensation site;

- c)** For purposes of a) and b) above, the area to be secured as compensation must comprise no more than half existing preferred koala habitat, the remaining area comprising cleared or partially cleared land for revegetation purposes;
- d)** Secured existing preferred koala habitat must be at least of equivalent habitat value to koalas as that to be impacted by development. If the land to be secured is of a lesser quality to that subject to impact, enhancement of the secured existing habitat will also be required;
- e)** Cleared, or partially cleared land for revegetation purposes must be planted out with a species mix to establish a vegetation community (including an appropriate understorey, midstorey and overstorey) equivalent to the area being disturbed. The proportion of preferred koala feed trees in the vegetation community must be equivalent to that being disturbed, or 15%, whichever is the larger. Half of all replanted preferred koala feed trees must be tallowwood.
- f)** Areas being the subject of the compensation measures must be protected by a valid legally binding agreement, that ensures the protection of the habitat compensation area in perpetuity through the rezoning of land for habitat protection and/or the application of restrictive covenants on title. Development Consent must be conditional upon the agreement being in place (ie signed registered or otherwise as per the legal requirements of the relevant agreement) prior to any work related to the Development Application occurring on the site, or where the proposed development involves the erection of a building, prior to the release of the Occupation Certificate. The agreement must include, to the satisfaction of Council, a Vegetation Management Plan, that specifies details of:

 - (i)** pre-revegetation forest cover and composition;
 - (ii)** post-revegetation forest cover and composition targets;
 - (iii)** the species to be planted (all should be endemic natives not horticultural hybrids), number of trees/plants to be planted, location and density of replanted vegetation;

- (iv)** PKFTs seedlings must be of a minimum size and maturity to best ensure survival. Any loss of seedlings within the agreed maintenance period must be replaced by the applicant.
 - (v)** details of the sourcing of all seedlings (demonstrating local seedstock has been used);
 - (vi)** bush regeneration methods, timeframes and objectives;
 - (vii)** a schedule of management, monitoring and maintenance activities to ensure establishment and ongoing protection and management of replanted vegetation;
 - (viii)** the length of proposed monitoring and management periods, the timing of key milestones, and reporting requirements;
 - (ix)** provisions for planting mortality replacements; and
 - (x)** responsible parties for undertaking and funding all works and activities included in the plan.
- g)** All costs associated with enacting the valid legally binding agreement, including funding and maintenance of the revegetation component, must be borne by the applicant; and
- h)** Landholders will be invited to register their land with Council as a potential site for use as a habitat compensation area and a register of same will be maintained by Council.

Section 5 – Management Provisions

The intent of this section of the plan is to provide an appropriate management framework, in addition to those requirements already listed under Section 4 – Planning Provisions, to ensure that remaining koala habitat is maintained and improved, where possible, throughout the study area.

5.1 Koala Management Areas

- a)** For the purposes of the plan the following three KMAs must be recognised:
 1. Eungai Rail – Stuarts Point – Grassy Head
 2. South West Rocks
 3. Dondingalong – Kundabung – Crescent Head
- b)** Boundaries of each KMA are provided in Map 1 which should be referred to when reading this section of the plan.
- c)** Changes to the boundaries of a given KMA, or boundaries of any new KMA, can only be enacted as a consequence of Section 6.2 (Monitoring) of the plan.

5.1.1 Eungai Rail – Stuarts Point – Grassy Head KMA (1)

Management intent

- a)** The initial management objective for this KMA is that of determining the conservation status of the population. Once this information is known, it is to be used to guide future management actions.

Recommended management actions

- b)** Within the first three years of endorsement of the plan by DoP, Council, in consultation with the KAG, should initiate a community-based survey that is designed to solicit koala records from the local community that specifically relate to the KMA.
- c)** Any koala records that *post* date 1990 in the case of the Eungai Rail area, or 2004 in the case of the Yarrahappini, Stuarts Point and Grassy Head areas, should be further investigated by a suitably qualified and/or accredited koala specialist to determine whether or not a

resident population is present at the locality and if so, the likely population size and extent of occupancy.

5.1.2 South West Rocks KMA(2)

Management intent

- a) The initial management objective for this KMA is that of determining the conservation status of the population. Once this information is known, it is to be used to guide future management actions.

Recommended management actions

- b) Within the first three years (pending funding) of endorsement of the plan by DoP, Council should initiate a survey of the KMA using the procedures described in Box 1 in Section 4 – Planning Provisions and generally as described in Part 3 of the Resource Study.
- c) The survey referred to in 5.1.2 b) should be undertaken and reported upon by a suitably qualified and/or accredited koala specialist who must also consider and report on issues such as population viability, recruitment and habitat linkages both within and outside of the KMA.

5.1.3 Dondingalong – Kundabung – Crescent Head KMA(3)

Management intent

- a) To sustain the resident koala population and encourage both an increase in population size so as to allow a viable source population to persist in the KMA.
- b) To facilitate an increase in both habitat quality and extent such that the KMA is able to support the increasing resident koala population.

Recommended management actions

- c) Within the first two years of endorsement of the plan by DoP, Council should develop and forward information brochures on koala welfare issues to all landholders in the KMA.
- d) Once the TPO has been reviewed and adopted by Council as per Section 5.3, Council should advertise the revised TPO and make it available on website.

5.1.4 KMA Incentive packages

- a) Council in collaboration with the KAG and relevant Government agencies, shall develop an incentives package designed to encourage landholders within a given KMA to manage their lands for koala conservation under the auspices of a VCA, planning agreement or other suitable restriction as to user on title.

5.2 Habitat Linkages

Fundamental to the maintenance of koala (meta) population dynamics across the planning landscape is the issue of habitat linkages, or connectivity. Such connectivity within the southern-most KMA(3) currently occurs across a broad interface of predominantly rural lands, national park and forestry estate. The KMA is effectively bisected by the Pacific Highway, which contributes significantly to annual koala mortalities within the study area. The current lack of data relating to the populations in the north (KMA1) of the study area limits the extent to which any clear conclusion can be drawn in relation to habitat linkages in this area. In relation to the South West Rocks KMA(2), opportunities for establishing meaningful east-west links are heavily compromised by the existing development footprint. Further discussion on habitat linkages can be found in Part 5 of the Resource Document.

Recommended management actions

- a) When undertaking further koala survey work in the northern areas (both KMA's 1 & 2) of the study area, consideration should be given to determining the location of appropriate habitat linkages across the landscape.
- b) Council and DECCW should liaise with the RTA and other relevant authorities to investigate means by which riparian areas and associated bridge crossings on the Pacific Highway can be improved and/or modified to better facilitate and accommodate koala movements.

5.3 Koala Advisory Group

- (a)** Council should establish a Koala Advisory Group (KAG) comprising as a minimum representatives of KSC, DECCW, DoP, RFS, NSWKPS, CMA, RTA and local community representatives.
- (b)** Council should consult with the KAG regarding the implementation of the plan.

5.4 Tree Preservation Order (Development Control Plan)

Within the first 12 months of the plan, Council, in consultation with the KAG, should revise the TPO with consideration of preferred koala food trees identified in this plan.

5.5 Community Education

- a)** Within the first 12 months of the plan being endorsed by DoP, Council should include on their website details of koala management measures and actions that people can take to assist longer-term koala conservation efforts.
- b)** The plan and associated maps will be made available on Council's website.
- c)** Hard copy documentation of the above must also be available at all normal Council outlets.
- d)** Council, in conjunction with DECCW, should undertake a widespread community education program aimed at raising awareness and directed at schools, residents, landholders and community groups. Measures may include, but are not limited to:
 - i)** A brochure aimed at tourists, available at tourist outlets;
 - ii)** A program targeted at providing informative sessions at schools; and
 - iii)** Signage on roads through areas of significant koala activity and on the approach to Kempsey.
- e)** Council should provide information and relevant contact details on their website for the various programs available from both DECCW and DII, which provide incentives for and assistance to landholders to manage vegetation on their property in a sustainable manner.

5.6 Roads

- a) Council and DECCW should liaise with the RTA with a view to seeking retro-fitting of underpasses and wildlife exclusion fencing along suitable sections of the Pacific Highway that traverse identified KMAs, in addition to ensuring provision of same for all new upgrades.
- b) The Determining Authority should ensure that all roads located within a KMA that have a designated speed limit of 50km/hr or greater must be suitably signposted to alert motorists to the presence of koalas.
- c) Outside of residential subdivisions, where new roads are proposed that traverse vegetated areas of *core koala habitat* or are within a designated KMA and predicted to accommodate in excess of 500 vehicle movements/day the following provisions will apply, where practical:
 - (i) 1200mm high floppy-top or other approved wildlife exclusion fencing must be installed along both sides of the road, the lower half of which must be clad with galvanised tin sheeting on the outside face.
 - (ii) Cattle grids or other approved devices must be installed at fence-ends and/or any driveways or other access points to prevent koala access to the exclusion area.
 - (iii) Where possible, koala underpasses comprising a minimum of 1.2m X 2.1m reinforced concrete box culverts must be installed at regular intervals that approximate one underpass per 250m of exclusion fencing.
- d) In areas where the installation of exclusion fencing and underpasses is not possible due to topographical or engineering constraints, signage, street lighting and appropriate vehicle calming devices such as speed humps, roundabouts and/or chicanes must be deployed.
- e) Detailed design for areas affected by provision c) and d) above must be prepared in consultation with a suitably qualified and/or accredited koala specialist.

5.7 Fire Management

a) Minimising fire risk

- (i)** The use of fire for the purposes of reducing perceived fuel loads on land within KMAs should be carefully managed so as to affect the minimum area necessary to achieve management objectives at any one time.
- (ii)** All practical attempts should be made to immediately contain and extinguish bushfires within designated KMAs.
- (iii)** Maps detailing KMA boundaries and desired management responses should be made available to all RFS stations.

5.8 Dogs

Dog attacks on koalas are a significant threat to the viability of many koala populations. The management of dogs is therefore an important threat mitigation measure which requires broad community support. Its basis relies on the awareness by dog owners of the needs of koalas and an overall responsible attitude to dog ownership. The measure which will result in domestic dogs being prevented from coming into contact with koalas is to prevent dogs roaming and in rural areas, control of feral dogs. This requires better regulation of roaming dogs and education and awareness for dog owners.

Under the Companion Animals Act 1998 dogs must be under the control of a competent person when in public places, and must not roam or attack other animals. In practice, enforcement of these aspects of the Act can be difficult. The total banning of dogs in new subdivisions where koalas occur, by a restriction under section 88 of the Conveyancing Act, has been implemented in a number of areas on the north coast, and this may be necessary in appropriate areas.

The following strategies are recommended to be employed to mitigate the threat of dogs on koalas within the boundaries of this plan:

- (a) Education of dog owners is essential to achieving effective dog control. The community should be made aware of the nature of the problem for koalas, the requirements of the law and the penalties for breaches.
- (b) Council rangers should target and impound roaming dogs in areas of known koala habitat.
- (c) Council's Companion Animals Management Plan should be updated to include measures to minimise impacts of dogs on koalas. These should include placing sign-posts in urban and rural residential koala habitats, requesting dog owners to prevent their dogs entering the area or as a minimum, requiring that dogs be restrained on a leash.
- (d) Dog registration should include educational information for dog owners to make them aware of the threats dogs can pose to koalas.

5.9 Koala Health and Welfare

Koalas are often found sick, injured or orphaned as a result of dog attack, collisions with cars or events such as fires or tree clearing. Depending on the type and severity of the injuries, koalas can often be rehabilitated and released back to the wild. One of the most prevalent health problems for koalas that come into care is related to Chlamydia infection. Current information indicates that all wild koala populations in NSW carry Chlamydia, although animals may not show clinical signs of infection. Chlamydial symptoms may be instigated or exacerbated by additional stress related to a number of factors such as habitat clearing or disturbance. In some instances female fecundity levels may be severely reduced by Chlamydia infection resulting in low to nil population increase. Other injuries occur as a result of collisions with vehicles or by dog attacks. Resourcing for koala care groups, sourcing suitable food trees for cutting leaves for koalas in care, and identifying suitable relocation and release sites for koalas of unknown origin or for orphans can be an on-going problem.

To help maximise the care and management of sick or injured koalas the following actions are recommended:

- (a) Through consultation with the KAG, resources for koala care should be maximised to ensure they are adequate for koala welfare;

- (b)** Through consultation with the KAG, identify suitable release areas for koalas which are of unknown local origin;
- (c)** Through publicity, a list should be compiled of property owners able to supply suitable leaf for koalas to browse while in care; and
- (d)** Through consultation with the KAG, develop a system to collect and incorporate records of welfare groups on a database that includes spatial locations as well as other information on koala health and welfare.

Section 6 – Implementation and Monitoring

6.1 Implementation

- a)** Within the first 3 months of endorsement of the plan by DoP, Council should forward hard copy maps and relevant digital data layers delineating the extent of preferred and core koala habitat as shown in Maps 1, 2 and 3 to DECCW and the CMA.
- b)** In regards to 6.1 (a), Council, on a regular basis, or upon request should forward updated hard copy maps and relevant digital data layers delineating the extent of preferred and core koala habitat.

6.2 Monitoring

- a)** In consultation with a suitably qualified and/or accredited koala specialist, the Council should assess the efficacy of the plan by undertaking a formal review and amendment (if necessary) of the working provisions every five years from the date of commencement.
- b)** For the purposes of monitoring:
 - (i)** Council should maintain a register of development and/or rezoning applications that fall within the boundaries of a KMA or in an area of preferred koala habitat. This should include a spatial register to ensure that any conditions listed in the DA for preferred koala food tree removal and/or plantings as well as any koala habitat cleared, secured and/or replaced can be easily tracked and mapped for any review purpose of this plan;
 - (ii)** additional field sites must be created at 1.25km intervals for the Eungai Rail – Stuarts Point – Grassy Head and South West Rocks KMAs, in addition to;
 - (iii)** a minimum of 4-6 randomly selected, permanent spotlighting transects collectively sampling > 50ha of preferred koala habitat within that area captured by the Dondingalong – Kundabung – Crescent Head KMA boundary.
- c)** Pending available funding, monitoring of the study area's koala population should be undertaken upon review of the plan (scheduled to

take place five years from the date of commencement of the plan) as follows:

- (i)** by way of a random selection procedure, monitoring must involve a reassessment of no less than 50% of the original macro-landscape field sites described in the Resource Study, including those arising as a consequence of 6.1b)(ii) above;
 - (ii)** each spotlighting transect must be sampled on a minimum of two occasions at each monitoring period.
- d)** The minimum data set to be collected from each field site must include the koala activity level, while that from spotlighting transects will be the number of koalas sighted.
- e)** Monitoring must be undertaken by a suitably qualified and/or accredited koala specialist.
- f)** The individual referred to in 6.1 a) above must also liaise with the NSWKPS or their local representative for the purposes of gathering data on any koala incidents that may have occurred in the intervening five year period.
- g)** A community koala survey should be undertaken by Council with the assistance of DECCW (pending funding availability), to gather further information on koala sightings across the study area.
- h)** A report detailing the results of the monitoring program must be forwarded to the Council, DoP and DECCW within one month following completion of the field assessment. The report must include the following:
 - (i)** a comparison of koala activity using data from past surveys;
 - (ii)** a revised density estimate based on the number of koalas sighted on spotlighting transects referred to in 6.1b)(ii) above;
 - (iii)** a breakdown of koala incidents obtained as a result of 6.1 f) above;
 - (iv)** a breakdown of outcomes from development and/or rezoning applications that have been approved by Council in accordance with 6.1(b)(i) above;
 - (v)** any other observations of relevance to koala management;
 - (vi)** discussion of the findings of the program; and

- (vii) recommendations for amendment of the CKPoM or for further action by Council.

6.3 Performance Criteria

Notwithstanding the influence of events, outside the control of Council, provisions of the plan will be deemed successful if:

- a) the number of active field sites increases over the life of plan;
- b) there is an increase in the number of koalas sighted along spotlighting transects; and
- c) there is an increase in the total area of preferred koala habitat protected by legally binding agreements.

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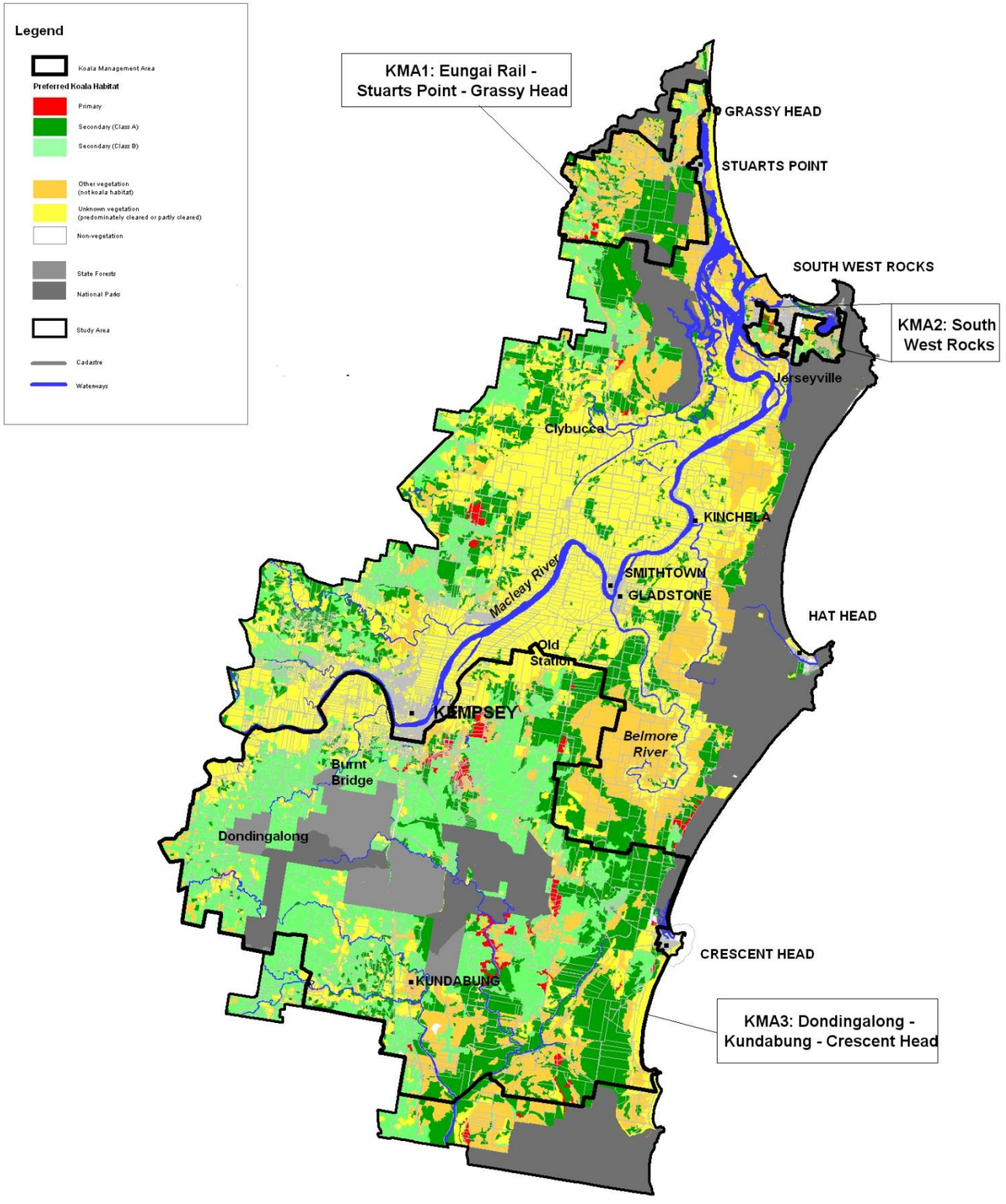
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Comprehensive Koala Plan of Management Eastern Portion of Kempsey Shire LGA



Map 1. Preferred Koala Habitat & Koala Management Areas

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Comprehensive Koala Plan of Management Eastern Portion of Kempsey Shire LGA

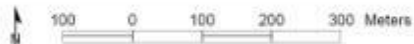
-  Kempsey East study area boundary
- Metapopulation boundaries**
-  Core koala habitat
-  High activity
-  SAT sites
-  Property boundaries



Map 2 Core koala habitat boundaries for the Kempsey East study area



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Comprehensive Koala Plan of Management Eastern Portion of Kempsey Shire LGA



Map 3 Core koala habitat boundaries and koala sightings for the Kempsey South study area



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