Moreton Bay Rail Link

Workshop Report

Managing Koalas workshop for the Moreton Bay Rail Link project

26 May 2012

Australian Government Nation Building Program

Moreton Bay Regional Council

Queensland Government

Contents

Executive Summary

This report provides a summary of the workshop hosted by the Moreton Bay Rail Link project at the Redcliffe Leagues Club on Saturday 26 May 2012. The workshop aimed to provide an opportunity for local environment and conservation groups to comment on and discuss the draft Koala Action Plan (KAP) for the Moreton Bay Rail Link project. The workshop was facilitated by BBS Communications Group (BBS) on behalf of the project team.

The workshop provided an opportunity for participants to ask questions of the project team and technical experts who developed the draft Koala Action Plan. The project team presented on the requirement for a KAP, the impacts of the project, a suite of measures to manage these impacts, and other initiatives to benefit the local koala population.
Questions from the groups spanned areas including: disease and welfare, tree clearing, connectivity and offsets, as well as questions directly related to the project and opportunities for the project to consider moving forward.

Overall, one hour was taken providing a PowerPoint presentation to participants and two hours were utilised in answering questions and the discussions associated with clarifying details.

The overall tone of the workshop was positive with participants appreciating the information provided by authors and the opportunity to quiz them for more details. The presenters and project team appreciated the chance to explain the rationale of their plans and to shed light on details. The workshop feedback forms suggest that most participants felt the time was well spent.

The workshop was notable for the willingness of participants to offer observations, suggestions and practical assistance to achieve the ultimate goal of ensuring that project work has the minimum impact on the koalas during construction and operation.

The project will continue providing updates and discussing other environment plans as they become available.

Background

A team of environmental experts has been brought together to develop a draft Koala Action Plan for the Moreton Bay Rail Link project. These professionals are recognised for their expertise in koala ecology, conservation and environmental management.

The Moreton Bay Rail Link will provide a 12.6km dual-track passenger rail line between Petrie and Kippa-Ring, including six new rail stations, a new rail connection to the North Coast line at Petrie and a path for pedestrians and cyclists between Petrie and Kippa-Ring. The line will integrate with the local road network through a series of road-over-rail crossings and rail-over road crossings.

The purpose of the workshop was to:

- **share our plans** for the draft koala action plan
- **listen to comments** from local environment and conservation groups
- **answer questions** about the draft plan
- **find mutual opportunities**
- **continue the conversation**.

To ensure the purpose of the workshop was achieved, certain aspects of the project were identified as out of the scope of discussion of the day. Such topics included discussion on:

Government legislation

- Dept Environment and Heritage Protection (Qld)
- Dept of Sustainability, Environment, Water, Population and Communities (federal)
- Moreton Bay Regional Council

Authorities

- Queensland Rail (operators)

Project scope

- project alignment
- station locations
- stabling yard.

It was acknowledged that because the design process is still ongoing, some questions would not be able to be answered during the workshop. The project team provided a commitment that any questions that fell within the scope of the draft plan that were unable to be answered on the day, would be answered in later stages of the project and the outcomes communicated back to the group accordingly.

Most participants had been involved in a preliminary workshop with the project held in early 2011 and the views and understanding expressed then have been used to assist in developing this workshop.

Preparation

In preparation for the workshop, copies of the draft Koala Action Plan were provided to all participants a week prior to the workshop. Stakeholders were encouraged to draft their questions prior to the workshop in preparation and bring them along on the day for discussion. Appendix Two is the introductory text supplied with the plan.

Agenda

The agenda for the workshop was developed by the Moreton Bay Rail Link project team in conjunction with BBS Communications Group. A copy of the agenda was included with the draft Koala Action Plan when it was provided to participants in the lead up to the Workshop.

Workshop Agenda

8:30am	**Arrival** • Tea and coffee, networking and posting of first questions
9:00am	**Introductions and welcome** – Facilitator, Nathan Williams – BBS
9:05am	**Project overview** – Malcolm Paterson, Moreton Bay Rail Link project • Project context and update • Purpose of this workshop, items for discussion today
9:10am	**Session One - Presentations** • Overview of the Koala Action Plan • Why prepare a plan? • Project legislative requirements • Project impacts on the local koala population • Managing these impacts, including Fauna Management and Tree Clearing Strategy • Habitat and non-habitat offset measures • Koala disease management program and Chlamydia vaccine trial Speakers: Wayne Moffit – SMEC, Dr Jon Hanger – Endeavour Veterinary Ecology, David Dodd – Moreton Bay Rail Link project. With specialist input from Dr David Sharpe – SMEC, Prof Peter Timms- QUT, and Queensland Rail as required.
10:20am	**Morning tea** • Opportunity to post questions for Session Two
10:45am	**Questions and topics for Session Two agenda**
10:50am	**Session Two – Questions, comments and opportunities** • Responses to questions grouped by theme/topic • Exploring opportunities
12 noon	**Workshop close** – Facilitator, Nathan Williams and Malcolm Paterson • Summary of main talking points • Where to from here?

Participants

Organisations that were invited to participate in the workshop were chosen based on the following criteria:

- Geographical proximity to the Moreton Bay Rail Link project corridor
- Extensive local knowledge of the koala populations in the study area
- Previous involvement in project community engagement activities.

A list of all participants who attended the workshop has been included below:

Participants	
Organisation	**Representative**
Moreton Bay Koala Rescue	Anika Lehmann Kelly Nalden-Brown Megan Aitken
Chelsea Street Bushcare Group	Peg Walsh Trish Allan
Koala Action Pine Rivers *(members are also active with MBKR)*	Vanda Grabowski Shirley McRae Meghan Halvorson Iris Matzath
Pine Rivers Koala Care Assoc	Gary Bain Sally Elliot
SEQ Catchments	Louise Orr
Redcliffe Environmental Forum	Bob Crudgington Pete Johnson
Pine Rivers Catchment Assoc	Ian Smith Sonya Schmidtchen
WetlandCare Australia	Cheryl Bolzenius
Mango Hill & North Lakes Environment Group (MHANLEG)	Dave Norman
Wildlife Queensland	Carole Green

The project invited environmental officers from Moreton Bay Rail Link partner organisations Moreton Bay Regional Council and Queensland Rail to attend the workshop as observers. The workshop was also attended by technical experts who were involved in the development of the draft Plan and who provided presentations and were available to answer questions on the day.

A list of presenters, event coordinators, support and observers who attended the workshop has been included below:

Presenters, event coordinators, facilitators, support and observers	
Organisation	**Representative**
Moreton Bay Rail Link	David Dodd Malcolm Paterson Rosemary McBain Amber Dornbusch
SMEC	Wayne Moffitt David Sharpe
Endeavour Veterinary Ecology	Jon Hanger
Queensland University of Technology	Peter Timms
Queensland Rail	Julia Miles Darren Brighton Mark Batstone
Moreton Bay Regional Council	Glen Millar Greg Johnstone David Logan
BBS Communications Group	Nathan Williams Jennifer de Bruyn

Feedback about the workshop is recorded in Appendix One. The original feedback form and results are shown.

Session 1: Presentations

The purpose of Session 1 was to provide an overview of the project, the draft Koala Action Plan, the koala disease management program and Chlamydia vaccine trial.

Prior to the commencement of Session 1, as participants arrived they were invited to write down any immediate questions about the draft Koala Action Plan and place these on the 'sticky wall' at the front of the room.

The presenters reviewed these questions prior to their sessions and where possible aimed to address these questions in their presentation.

The following presentations were provided:

- Project overview – Malcolm Paterson, Moreton Bay Rail Link
- Draft Koala Action Plan overview – Wayne Moffitt, SMEC (with specialist input from Dr David Sharpe, SMEC and David Dodd, Moreton Bay Rail Link)
- Koala disease management program and Chlamydia vaccine trial – Dr Jon Hanger, Endeavour Veterinary Ecology and Prof Peter Timms, Queensland University of Technology

A copy of the workshop PowerPoint presentation has been included in Appendix Three.

Please note that during the workshop there was an understanding that the former Queensland government department responsible for environmental legislation, previously known as the Department of Environment and Resource Management, (DERM), is now known as the Department of Environment and Heritage Protection (DEHP). These notes should be read with this in mind.

Session 2: Questions, comments and opportunities

Following the presentations in Session 1, the group broke for morning tea and participants were asked to reflect on the presentations and add any additional questions about the draft Koala Action Plan to the 'sticky wall'.

During morning tea, stakeholders were also invited to remove any of their questions on the 'sticky wall' that they felt were addressed in the presentations. Several participants took up that opportunity and removed their questions from the wall. Generally the group consensus was that the opportunity to pose their questions to the expert panel was still valid even though some questions had been answered.

Toward the end of the morning tea break, facilitator Nathan Williams, in conjunction with David Dodd (Moreton Bay Rail Link), began to group questions on the 'sticky wall' according to areas of commonality. From this process, several natural question headings were actualised, under which most questions could be categorised. These headings were:

- Disease and welfare
- Project questions
- Tree clearing
- Connectivity
- Offsets
- Opportunities.

For questions that were not able to be easily categorised, a category title 'Other' was formed. This category contained questions that were not within the scope of the workshop, as well as statements and comments about the project and the draft plan that could not be readily answered.

Once Session 2 commenced, the facilitator checked with the group to ensure consensus about the category headings that had been developed. Questions were then worked through with the expert panel providing answers where possible.

Questions and answers have been recorded according to the categories identified above. Similar questions have been grouped, with one answer presented where relevant. With ensuing discussion around some topics, further participant and presenter comments have also been recorded.

Disease and welfare

(covered in the presentation, see slides 37 to 40)
Note this topic included some discussion also relevant to clearing and translocation

1.
   a) **Vaccine trial: Are all koalas to be caught and have a health check?**
   b) **Vaccine: All animals or healthy/sick animals?**
   c) **How long will animals be monitored after all (project work) has settled down? i.e. after 2016?**

As part of the Disease Management Program, all animals captured will undergo a thorough health check. The health checks will be undertaken by Dr Jon Hanger in the field where possible or at offsite locations depending on external factors (including weather). Sick animals will be referred to a care facility for treatment. Depending on their treatment they may be reintroduced back to the study area and given either a vaccination or placebo as part of the vaccination program. Approximately 30 koalas will be entered into the vaccine trial based on their suitability (assessment made by Dr Jon Hanger and Prof. Peter Timms) The placebo (an injection of a harmless liquid) is a vital element of the scientific investigation process but does not represent a risk of any sort to the treated animal. Jon will not be aware of which animals receive the vaccine and which receive the placebo, so he won't inadvertently bias any interpretation of his observations of their health.

The aim will be to capture every koala within the study area to perform a health check and to monitor their movement prior to vegetation clearing. However because of animal movements, it cannot be guaranteed that every koala within the study area will be captured and monitored.

The intention is that monitoring of individual animals and the vaccine trial will be ongoing at least for the life of the project. At this stage, funding is being provided to enable the first year of work, with further funding being sought for further field work.

Movements of koalas will be monitored using radio-tracking before, during and after construction to:

- locate and ensure the welfare of koalas during construction
- identify patterns of movements that may affect construction control measures
- analyse general and individual impacts on koalas

All koalas within 100 metres of any clearing or construction will be captured and fitted with radio-controlled collars to assist spotter-catchers monitor their whereabouts and ensure none are within 50 metres of any trees to be felled.

A comment was made that it is possible that collared koalas involved in the study will come into the care of rescuers in the event that they are involved in an accident eg non project-related dog or vehicle incident.

ACTION:
Project to collaborate with rescue groups to develop a notification and action protocol which meets the welfare needs of the koala and assists with the research goals.

2. **When capturing and examining koalas for vaccine trial research, what percentage will be lost in the wild to already existing disease?**

According to recent statistics from Jon Hanger, the number of diseased individuals encountered in the field varies considerably and does not always correlate with quality of habitat.
While Jon is yet to find out during the project what percentage of animals in this area have disease, he guesses about 50 per cent of captured koalas might present with a disease that is severe enough to warrant veterinary treatment.
Should the severity of disease warrant euthanasia, this will be undertaken by Jon Hanger or a veterinarian who is licensed and authorised to undertake this procedure. Based on previous field work, Jon estimates perhaps 10 per cent of the number of captured koalas might present with disease so severe that it warrants euthanasia.
Jon is licenced to carry out all field work including capture and treatment of koalas.

3. **Is this just a koala action plan or can it include other animals?**

The draft Koala Action Plan considers the koala populations in the study area. The Fauna Management and Clearing Plan addresses management of all fauna affected by clearing.
Other plans being developed include a species management plan which outlines how the project will manage other species in the project area, in line with DEHP requirements. This will be available in due course.

ACTION:
Notify environment groups when other environment plans are available.

4.
   a) **Is Australia Zoo Wildlife Hospital the only care facility for project animals (koalas)?**
   b) **Mention Australian Zoo Wildlife Hospital and Moggill Koala Hospital. What about RSPCA Wacol, Moggill is not 24 hour and not trauma specialists?**

DEHP's protocols allow any care facility that meets the requirements to be included in the care of animals as a result of Queensland Government projects. However, Australia Zoo Wildlife Hospital (AWH) is currently the only provider who can meet this protocol. Jon Hanger expects that some other facilities may be able to conform to the requirements in the foreseeable future and could then be considered to play a role.

5. **(What kind of) Financial support/donation (will be provided by the project) to Australia Zoo Wildlife Hospital/wildlife groups i.e. caring/rescuing injured wildlife.**

Remuneration for AWH for their costs associated with care of project animals has been accommodated in the disease management and vaccine trial budget.

6. **What is the effect on the koalas of being captured? Shouldn't this be kept to a minimum?**

While there are potential negative effects associated with the capture of animals, including stress, this should be weighed up against the benefits of the disease program – including monitoring and managing the health of the animals and the potential for significant net benefits associated with research pursuit of testing the vaccine. In Jon's view, the benefits are very significant and outweigh any impacts of the capture and release activities.

7.

a) (What is) the rationale for not opting for translocation?

b) So you are looking at translocation? Who is responsible for it?

Translocation has not been identified as a strategy for koala conservation on this project. The focus will be on clearing vegetation sequentially, giving priority to safety of any koalas in the area and planting koala habitat trees offsets in strategic location. These strategies are designed to ensure habitat links are maintained in and near the rail corridor, and to allow koalas to move independently without human intervention.

However, translocation has not been ruled out as an option for discussion with DEHP in certain circumstances, for example where an individual faces a low chance of survival if not translocated. Negotiation with DEHP will ascertain whether the option may exist for particular individuals to be translocated on a case-by-case basis.
Jon Hangar noted that translocation precedents had been set but that those cases of translocation had been with mixed results, not always successful.

The option to translocate individuals must be balanced with a number of factors including the health and age of the individual and the safety and capacity of the relocation area.

It was noted that there was some variance among workshop participants about the value and success of translocation but that most seemed comfortable with the project keeping translocation as an option for discussion with DEHP in certain circumstances.

One participant said she thought it should be an option for animals up to four years that were not fully mature or territorial or mature. But for animals older than eight years the choices are more limited. The 'no-translocation' policy of DEHP was short sighted as koala habitat tree areas currently mapped were not conducive to long-term survival.
Another participant expressed concern that translocated animals may want to get back to their home ranges and that previous experience had shown that translocation of five km was not far enough. There was some discussion about the parameters, strategies and considerations required to address that issue.

This option is yet to be confirmed with DEHP and will be subject to future conversations between the Department of Transport and Main Roads and DEHP. Participants have asked to be kept informed of the discussions on this topic.

ACTION:
Notify environment groups of the outcome of any discussions with DEHP regarding translocation.

Offsets

(covered in the presentation, see slides 33 to 36)

1.
   a) **How can the project overcome the time lag in growth of offsets before they become useful food trees?**
   b) **Offsetting should have started years ago. What will koalas do?**
   c) **Offsets take time to mature. What is the interim plan for displaced koalas?**
   d) **Are any trees for offsets planted yet?**

Offset planting will begin as soon as possible and the project is in the process of securing suitable sites. No offset planting has taken place to date.

Discussions are underway with relevant landholders and although this is a lengthy process, it has been occurring for the last six months. The aim is to have some plants in the ground before the major works of the project start and a substantial area of offsets planted by the end of construction.

Offset planting in 2012 means that by the time the project is complete in 2016 some of those koala habitat trees will potentially have had sufficient time to reach non-juvenile status and support koalas. The project has identified appropriately 120 – 140 hectares of land within a 10 kilometre radius of the rail alignment as potentially suitable for the offset requirements. These sites provide strategic links to existing koala habitat as well as new habitat areas.

The project acknowledges that there is an unavoidable situation where koalas will have to move out of the project corridor and into adjacent habitat. The team has evaluated this adjacent habitat with a view to understanding its suitability and carrying capacity and contrary to what might be expected, there are some good patches of habitat which could sustain more koalas than currently occupying those habitats.
The habitat along creek lines is also expected to be of value to koalas moving out of the project area.

In addition, the project will also investigate non-habitat offsets, which may include increasing and encouraging connectivity along creek lines, exclusion fencing, disease management and feral dog management to mitigate other risks to the population.
Two examples given in the presentation (slide no 36) relate to minor construction work to change arrangements under existing bridges in the area, which would allow koalas to move successfully from one area to another where they are currently prevented by physical structures associated with the bridges.

The project team noted that offsets are typically considered as part of the final stages of a project eg at landscaping stage, but that the project team is aiming for early plantings for the reasons outlined above.

The team highlighted its need to meet the offset requirements and the current strategy is to meet those requirements with sites near the current corridor. This is a particular challenge because of the dense urbanisation of the area where parcels of land earmarked for future developments and road networks rule out some suitable sites. Hence the choice of sites is narrowed. Some sites may be near urban settings and roads. This may be unavoidable and ultimately there may be a need to ‘agree to disagree’ about some sites.

ACTION: Participants are invited to suggest locations that they are aware of; also to outline specific risks or undesirable factors which could be considered by the team as part of selection process for offset sites.

2.
   a) **Offset at Anzac Avenue, Mango Hill: Why? High mortality in the vicinity, who selected it? Based on what?**
   b) **What is the project's position about the 3 hectare site for offsets at Anzac Avenue?**

Early work on possible offset sites identified a site near Anzac Avenue, Mango Hill which meets the criteria proposed for offset sites, including current utilisation by koalas and strategic links to existing habitat as well as new habitat areas. Exclusion fencing was part of the development plan for the site.
However, as a result of community concerns, the use of this offset location has been put on hold.

3. **Where is the koala offset plan? (mentioned in page 24 of the draft Koala Action Plan)**

The Koala Offset Plan has been developed but cannot be made public at this time due to the sensitivity of negotiating with land owners for proposed sites.

Once sites have been identified as suitable and negotiations with the landholder(s) have been undertaken, the project will advise the locations to stakeholder groups on the suggested site(s). The project also welcomes any suggestions for additional sites that may be suitable.

ACTION:
Participants are invited to suggest suitable locations for consideration as offset sites and also to identify any specific concerns which the team could consider in evaluating suitability of sites.
The project will keep participants informed as negotiations progress as appropriate.

The philosophy behind the offset strategy is to select and plant offset sites which create or enhance connectivity between existing habitat already being utilised by koalas, locally and then regionally, with the wider movement patterns of koalas in mind for example out to other habitats such as Lake Kurwongbah and Lake Samsonvale.

4. **a) What resources is the project putting into ongoing maintenance of offsets? (how much? Who? How long for?)**
   b) For how long will the trees planted by maintained. Who will be responsible?

As part of the South East Queensland Koala Conservation State Planning Regulatory Provisions 2010 (SPRP), the project is required to manage offsets until they achieve non-juvenile koala habitat tree status. Trees must grow to a height of four metres, or a trunk diameter of more than 10 centimetres at 1.3 metres above ground to achieve non-juvenile koala habitat tree status.

Best practice planting methodologies and techniques will be utilised to promote tree growth. Non-habitat offsets (e.g. weed management) can be included in the mix but are not accepted by DEHP as offset for example as per the suggestion from a participant about managing weed invasion at Chelsea St reserve.

ACTION:
Project to consider if and to what extent weed management beyond immediate corridor and works area could be addressed by contractor.
Project and Chelsea St Bushcare Group to work together to identify specific concerns in more detail.

5. **What is the total area of koala area within the study area?**

Up to 23,000 non-juvenile koala food trees may need to be removed which equates to about 50 hectares of koala bushland and regrowth based on current project designs. Five koala habitat trees must be planted for each non-juvenile one removed.

It is expected that innovative design and construction methodologies will reduce the size of the project's footprint and this area and the number of trees affected will be smaller. That will not be evident until a successful contractor is appointed to complete the design for the rail corridor in mid 2013.

ACTION:
Project team will ensure that the need to minimise habitat loss is included in tendering documents.

6. What percentage of the $1.2 billion project is allocated to environmental mitigation?

The budget for environmental work is spread across various components by the project.
For example, offset planting includes allowances for purchasing land, preparing the area, weeding and watering etc. The rail component of the budget includes an allowance for structure-related costs such as underpasses etc.
Funding of the project's proposed environment plans has been accounted for in the overall project plan.
Detailed design of the project will define the costs of various activities and construction-related strategies.

7.

a) Why are we destroying the corridor at Kinsellas Road East when a road already exists? Why not widen the existing road?
b) How many trees will be cleared for the bridge construction at Kinsellas Road East?
c) Is it possible to preserve the vegetation on southern side of Kinsellas Road station?

The road cannot be widened without clearing because a bridge is required to go over the rail line at this location. A significant structure is required to build the bridge and approaches.
On current design estimates, approximately 3,000 koala habitat trees will need to be cleared for the construction of the road over rail bridge at Kinsellas Road East.
The land on the southern side of Kinsellas Road station is privately owned and earmarked for residential development.

8. Comments

One participant suggested that the spacing between individual offset trees would be very important.

ACTION:
Project team to provide more details about proposed spacing regime as it becomes available.

One participant suggested that flooding along creek lines might threaten koalas residing there.
Another suggested that offset areas along creek lines needed to be a minimum of 100 metres wide to be viable, while acknowledging that this would require substantial changes probably beyond the scope of the project.
There was some concern that there wouldn't be enough offset sites near the project.

There was an extended discussion amongst participants regarding the viability of the koala population in this area which grew out of the information about offsets, translocation and clearing.
One participant suggested that the future of the population is in jeopardy and losses of koalas is almost inevitable. "That's the elephant in the room."
Jon Hanger suggested that the existing vegetation would be enough in the intervening period, and that the project was keen to ensure that no koalas died. However there was a view among some participants that despite the efforts of the project, koalas viability was at risk because of all the other development in the area, further fragmentation and habitat loss.

Some participants were concerned about the possible underestimating of fauna numbers in the areas to be cleared based on their own local experience and knowledge. Eg when the Bunnings site was cleared.
Participants alerted the team to the presence of and the need to be mindful of other species such as sugar gliders and kangaroos when planning for clearing.

Dave Sharpe suggested that the fauna preload reduction would assist in lowering the numbers of fauna present when clearing started.

There was some discussion from participants about proactive euthanasia as a strategy for being more humane about handling displaced other territorial fauna such possums, but the team suggested that they took an approach of giving the wildlife a chance to re-establish rather than judge that they couldn't survive the displacement.

There was a question from participants about the possibility of using radio tracking on other species than koalas to help safeguard them during clearing operations.

Wayne Moffitt indicated that it would be an enormous job and there were the risks and doubtful welfare outcomes for smaller animals escaping from any controlled area while wearing tracking devices which could later become a welfare problem for them.

Questions about the numbers of koalas in the project area were raised and the team indicated that the disease management program would be an effective way to identify the numbers in the area.
It was also noted that rather than rely on any particular estimate to base the management of koalas in the project area, the program would address each koala encountered regardless of the number found.

Participants indicated that based on their experience, the Amcor site had a good sized population of koalas because it was good quality, high density habitat. Wayne Moffitt wondered if this was partly because of the site being used to by rescue groups as a repatriation point for rehabilitated koalas. He also noted that the habitat is good in some sectors but not suitable in other parts eg pine trees.

There was concern about preserving the forest at Chelsea Street and specifically if any offset could be found that would be a replica of this habitat type. There was a unique aspect to the transition through that habitat from woodland to marsh.
Wayne Moffitt gave an indication that offsetting that ecosystem, Regional Eco System 12.5.2, was possible and he thought that the team had identified a suitable site already for further consideration.

The issue of Myrtle Rust being spread by the disturbances of construction was raised.

ACTION:
Project team to consider if and how the issue of Myrtle Rust is relevant and manageable.

Chelsea St Bushcare asked why weeding of existing areas, such as part of the Chelsea Street Reserve, was not included as a strategy for achieving habitat offsets and was advised that this was not acceptable to DEHP.

Project questions

(covered in the presentation in various places)

1. **Who polices/checks contractors to ensure wildlife safety?**

The project clearing plans will be site-specific to each clearing area and will adopt best practice guidelines that exceed minimum requirements. Once these plans are complete they will be made public. All contractors appointed must show demonstrated commitment to wildlife safety as part of the selection process and proactive and reactive third party auditing will be undertaken to ensure compliance at all times.
See section on Tree Clearing for more details discussed.

2. **Does the number of trees being removed include an allowance for construction access roads?**

In certain areas the number of trees being removed includes an allowance for construction access roads and in some areas it does not. Because the corridor is linear, contractors and other groups who need access to the site will be encouraged to use already cleared sections of the corridor as a first preference for movements. Exactly where they will or won't require additional access is yet to be determined. However to maintain non-corridor habitat, education of contractors (toolbox talks) and exclusion fencing will be included as part of the Environmental Management Plan – Construction to avoid fragmenting habitats.

3. **What is the source of mapping? DERM mapping etc?**

The project team used the DERM mapping as a starting point for mapping koala habitat and then validated this with investigations on the ground by David Sharpe and Wayne Moffitt at SMEC for the project. As a result, the team has determined new, more accurate mapping.

4. **Where is flora and fauna management plan? (referenced on page 22 of the draft Koala Action Plan)**

The Flora and Fauna Management Plan, will be developed as part of the Environmental Management Plan - Construction. See more detail under Tree Clearing question 3.

5.
   a) **Most of us were at the last "workshop" and a series of recommendations were made. Where are the responses?**
   b) **How come we still have the same questions as in 2010? What's been done with our input then? (offset, monitoring, spotter catchers etc)**

The report from the last stakeholder workshop was provided to the design team and SMEC to consider when developing the draft Koala Action Plan. It was taken on notice that the project team would communicate back to the groups represented at both the last workshop and this workshop about how their input has been used to date and might be used from here in the project.

ACTION:
Project team to provide an update about how the inputs from participants have been used and what and how they may be used in the project.

6. **When history shows that offsets have not improved conditions for koala populations, how will this current plan be effective?**

Offset planting is a relatively new requirement and as such, detailed data on historical effectiveness is not available. However the project's view is that despite the limitation of the time lag, offset planting helps to balance the equation. It was suggested that programs to educate the public may help in conjunction with offsets.

The project presents opportunities to communicate with the public, not only on construction and project related matters but environmental management. At the very least the contractor workforce that is engaged to construct the rail line should be the carriers of positive environmental messages.

ACTION:
Project and participants to collaborate and identify any opportunities for project and its contractors to deliver relevant environment messages to the community for example as part of the works notifications.

7. **With more clearing recently, koala home range has extended. What data was used to ascertain this distance? Also, where did the figures come from – i.e. 30 – 60 koalas affected?**

Home range data was provided by Dr Bill Ellis in his capacity as consultant to the team.

The 30 – 60 koala estimate was based on a number of sources of information including field work by Dr Bill Ellis, Jon Hanger and DEHP. It is believed that the number may be closer to 60. Part of the work undertaken by Jon Hanger will be to clarify the koala population within the study area, taking into consideration any indications of an artificial population created from repatriation to sites within the area (eg the Amcor site). Permits exist for capture of up to 130 koalas as part of the vaccine program.

8.
   a) **Fencing – same as that along the Bruce Highway does not work. Who maintains the fencing?**
   b) **Maintenance of wildlife bridge/underpass annually inappropriate?**

The primary difference between fencing on the Bruce Highway and the fencing proposed as part of this project is that Queensland Rail will be responsible for this fencing because it is an operational issue, with the focus on keeping people out of the rail corridor. The whole of corridor exclusion fencing will have anti-climb features and will be checked weekly as part of routine safety checks required by Queensland Rail. Unlike a road project, obstructions such as broken fencing or overhanging trees are regarded by Queensland Rail as a safety hazard for people and will maintained and problems fixed promptly where identified.

Tree clearing

(covered in the presentation, see slides 27 to 28)

1.
   a) **Fauna spotter-catchers: who decides what is "appropriately qualified?" and is the spotter-catcher authorized to euthanize an animal on the spot if required?**
   b) **In my experience some spotter-catchers have not truly understood animal social needs. Who will be ensuring any displaced animals are taken into care with appropriately licensed carers and not put back into any tree?**

Specific clearing plans are being developed for each work site, that is Kinsellas Road, the site around Dohles Rocks Road in Kallangur, and a third plan for rail corridor works.
The appointed fauna spotters-catchers will be required to demonstrate experience working in similar areas as well as demonstrate their ability to implement procedures outlined in Department of Environment and Heritage Protection (DEHP) protocols. They would for instance be required to demonstrate their ability to identify species (eg the difference between a bush rat and a black rat). Because of the stringent requirements of the fauna management and tree clearing plan, only the best operators will be short listed to undertake fauna spotting on the project.

Should on-the-spot euthanasia be required, the appointed fauna spotter will be required to comply with DEHP's protocols. This applies to species other than koalas.
Moreover, the clearing plans developed by SMEC are regarded as best practice by Jon Hanger and include third party reviews and a process for both proactive and reactive auditing to ensure compliance.

Fauna preload surveys and monitoring will be undertaken prior to the commencement of clearing, and the risk of injury to fauna will be minimised because the likelihood of them inhabiting the area at that time is reduced.

2.
   a) **Displaced (other than koalas) animals: where do they go? Are they euthanized?**
   b) **Clearance day 1 connects to clearance day 2: Where do animals disperse?**

As part of their role in the vegetation clearing strategies, spotters/catchers will be required to relocate displaced fauna to areas of continuous habitat within the corridor where possible. The project team has evaluated the adjacent habitat with this in mind.
At Kinsellas Rd for instance, the area of vegetation to the south east of the project clearing area has been evaluated as valuable habitat for displaced animals from this project area's clearing activities. Through sequential clearing from north to south fauna will be directed to move in a south westerly direction away from both Kinsellas Road and Anzac Avenue.
Exclusion fencing will prevent fauna from moving onto these roads.
(see slides 28 and 32)

3. **Who devises protocols when a koala is found during construction phase?**

The protocol for dealing with koalas (both collared and un-collared) that are located within the corridor during construction will be determined as part of the site-specific clearing plans. Specific clearing plan for each area are being developed.
The Kinsellas Rd plan is in draft form as provided to participants to this workshop. A plan is in development for the road and bridge works at Dohles Rocks Rd Kallangur and a further plan will be developed for the rail corridor works.
.

These plans become part of the project's Environment Management Plan (Planning) and become part of the contract obligations of constructors. They will then be used as the basis for constructors to devise more refined and specific actions and protocols for each contactor's team. So for example, in the construction phase, the environment manager for the constructor's team will use the clearing strategy as a blueprint from which they derive specific protocols for foremen, engineers, designers and daily work activities including safety briefings and fauna management responses.
It was noted that the construction consortia most likely to win the project contracts have highly professional environment specialists who bring expertise and much previous experience to this project. Through the tendering process, the need to respond to the project's environmental commitments and plans will play a part in their evaluation.

ACTION:
Notify environment groups when further clearing plans are available.

4. Site plan – how does it do what it should?

The clearing strategies for each site will adopt best practice guidelines above the minimum requirements. In conjunction with fauna load reduction, tracked wildlife will be monitored to ensure they are not within the clearing area when it comes time to clear.

5. Other comments:

The project is planning public notification and some public education as part of the clearing strategy to ensure that local residents are aware of its activities and are empowered to assist in the case of movements of fauna near or through their property.

In the case of koalas, the team sees that the koala rescue organisations have an important role to play in assisting with relocations and rescues where koalas may have strayed into property or situations that require intervention. Further discussion of likely scenarios and needs should be explored to ensure the most effective people and skills are in place prior to any work happening.

ACTION:
Project and rescue organisations to collaborate on plans and protocols for providing the most effective advice to local residents adjoining work activities.
Project to consider how key koala welfare messages can be incorporated into material provided to the community as part of the works notifications.

Connectivity

(covered in the presentation, see slides 29 to 32)

1. **Where are other "offsets" located? Are koalas already resident there?**

Other areas that are being considered as potential "offset" locations are home to resident koala populations, are part of the strategic corridor as defined by DEHP and are outside areas where future development may conflict.

2. **What will happen to the displaced wildlife? Is there an option to create a land bridge to North Lakes Reserve?**

A land bridge to North Lakes Reserve was considered, however the cost associated with this option deemed that it was unfeasible with more significant benefits to the koala population seen as coming from extending connections with the Pine River and Lake Kurwongbah.

3. **How will habitat degradation be addressed post construction? i.e. maintenance provision/resources. What common management practices is MBRC expecting?**

Addressing potential habitat degradation post-construction is something that is still developing and that will be developed in consultation with appointed contractors. The project has a responsibility to manage habitat during and after construction but specific roles and responsibilities will be outlined in the Environmental Management Plan – Construction.

4. **Comments**

Participants said that koala furniture in underpasses needs to be higher off the ground to prevent koalas being caught by large dogs. Nothing in the plan specifies the height.

ACTION:
Project to include this factor in development of furniture specification for construction contractor, where possible.

Opportunities

1. **Collaborative partnership with wildlife rescue groups**

Participants and project members agreed that there are potentially many ways that they can work together. The project is particularly keen to recognise the possible value that organisations can add to the project and acknowledged their years of local knowledge, passion and commitment.

ACTION:
Participants to give feedback and make suggestions to project where they identify expertise, needs or opportunities for collaboration.
Also groups should indicate particular areas they are interested in working in.

In terms of ongoing involvement, groups should advise their specialties and capabilities so that they can be informed where and when the project is undertaking work and there can be discussions about how they might be able to help.

2. **Is it going to be possible for carers to get browse from the clearing process?**

Yes! It will be a great value for the project to be able to provide a mechanism for wildlife carers to collect browse as part of the clearing process. The process will be managed to ensure that browse collection does not create a safety risk for carers or others nor infringe site safety rules.

ACTION:
A procedure will be developed to ensure that browse is readily available either at the site office or in an offsite location and is available in a condition that is suitable for use by carers (i.e. kept in water etc). Local wildlife care facilities will also be notified with sufficient lead time so that it can be written into their collection schedules.

Other

Following is a list of questions/statements grouped into the category 'Other' that were not answered on the day for one of the following reasons:

a) The question/statement was out of the scope of workshop and could not be answered in the forum.
b) The question/statement was a statement only and an answer was not able to be provided.

Question/Comment/Statement	Response (if available)
Koalas are only one aspect of environmental impact. What is being proposed in terms of mitigation of other impacts? i.e. hydrology, wetlands etc.	*The project is preparing an Environmental Management Plan which includes a suite of strategies to manage all aspects of the environment. Information will be made available as these plans are complete.*
Reasons not to do all necessary things, because the koala population is not viable anyway?	*The project is required by state legislation to mitigate its impacts with the aim of providing a net benefit to the local koala population and where possible improving populating viability through a suite of measures including offsets.*
Given recent documented evidence of koala population decline – severe. How can any koala habitat not be of high value?	*The project has undertaken a survey of state government mapping to confirm the quality of habitat in the area and accuracy of the current mapping.*
How can we take out more trees and state offsets will solve the problem when virtually no green space is going to be available in the future that is sustainable?	*All offset areas will be protected from development by the DEHP mapping preventing them from being cleared.*
Corridors for humans seem to be priority yet koala corridors are already lacking.	*The project is aiming to maintain koala connectivity through existing corridors by building on structure or providing fauna underpasses and where possible by planting offsets to improve the connectivity of these corridors.*
Each non-juvenile koala tree = $920. How much is our wildlife worth?	*Under the current state planning regulatory provisions a fee of $920 per KHT removed is to be paid should that tree not be offset by planting.*
How do you compensate a koala that has been killed?	*The project has a zero harm policy for koalas and is working with the contractors to ensure no koalas are harmed during construction.*
Linking corridors using offsets to revegetate the linkages.	*See section on Offsets*
On site vet when major clearing is in progress.	*See section on Disease and welfare*
Current accurate survey of koalas in areas to be cleared not retrospective evidence.	*See comments under Offsets section*
Where can you plant 115,000 trees that will benefit the koalas in the project area?	*See comments under Offsets section*
Suggestion about collecting valued seed from the corridor before construction will also be explored in association with Chelsea St Bushcare.	*Will be followed up by project team with Chelsea St Bushcare and Redcliffe Botanic Gardens.*
Myrtle rust on leaves.	*The project notes the issue and will investigate the potential impact*
What about the impacts of climate change when trees are being removed.	*The overall long term result of the offset strategy is that the project will plant five times as many trees as are currently found in this area. When those trees reach maturity, they will represent a positive contribution to lessening atmospheric CO2.*
End line at Rothwell to avoid Chelsea Road habitat. Why not stop at Rothwell?	*The project alignment has been determined to deliver a benefit to the local community through*

	increasing public transport options and reduce carbon emissions by taking cars off the roads. The development of the station precincts is seen as a catalyst for longer term development of the region economically.
Why?	*See above*
Why is the briefing with MPs next week?	*The project team meets elected representatives from all three levels of government on a regular basis to provide a project update.*

Positive remarks

There were several comments from participants at the end of the workshop who expressed their appreciation for the workshop and looked forward to collaborating into the future.
Another comment was made that this sort of communication in a comfortable setting was very valued and that in the experience of the participants, it is most unusual to get this information and the opportunity to discuss and explore options.

Next steps

To ensure that the project team could consider any additional questions that arose from the workshop or that resulted from conversations between participants and other stakeholders, questions and comments were invited by email from the group for an additional three weeks – until 17 June 2012. These additional comments have been recorded with the responses provide by the project in Appendix Four. Any comments received after 17 June 2012 will still be considered by the project team but have not be included in the addendum of this report.
The final Koala Action Plan will be posted on the project website. Dialogue about activities and opportunities will continue throughout the life of the project.

Appendix One

Workshop Feedback

A form was provided to capture participants' feedback about the workshop.

Feedback

Please take a few moments to provide feedback about the workshop

The Workshop	*Please tick one box below for each question*				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1. The agenda covered what I was interested in					
2. The workshop objectives were clear					
3. The objectives were achieved					
4. The presentation session was relevant and informative					
5. The presenters answered questions clearly					
6. My questions were answered adequately					
7. Everyone's questions were responded to					
8. The facilitator was effective					
9. The supporting documents were helpful					
10. I felt like I was listened to					
11. The workshop outcomes will be useful					
12. The workshop was good use of my time					
13. I am interested in future involvement in the project					

The Venue

1. The venue was appropriate					
2. The facilities and catering were suitable					

Other comments

Name (optional) …… Thank you

The following table provides an overview of the responses provided on the Feedback Forms at the completion of the workshop. Forms were completed by 14 of the 19 participants.

The workshop	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The agenda covered what I was interested in	8	5	1		
The workshop objectives were clear	5	9			
The objectives were achieved	2	8	4		
The presentation session was relevant and informative	6	8			
The presenters answered questions clearly	9	4	1		
My questions were answered adequately	5	6	3		
Everyone's questions were responded to	6	6	2		
The facilitator was effective	8	6			
The supporting documents were helpful	5	8	1		
I felt like I was listened to	6	7	1		
The workshop outcomes will be useful	4	10			
The workshop was good use of my time	7	7			
I am interested in future involvement in the project	9	5			

Additional comments and feedback about the venue and catering have not been included in this report. However, they have been taken on board by the project team and will be considered in the course of the project and for any future engagement sessions.

Appendix Two

Introductory text provided with draft Koala Action Plan

Moreton Bay Rail Link

Introducing the Koala Action Plan

May 2012

The Queensland Department of Transport and Main Roads has prepared a draft Koala Action Plan for the Moreton Bay Rail Link project.

A team of environmental experts has been brought together to develop the Koala Action Plan in conjunction with the department. These professionals are recognised for their expertise in koala ecology, conservation and environmental management. Wayne Moffitt, Dr David Sharpe and Dr Bill Ellis, a nationally known koala researcher and Director of the Koala Ecology Centre at the University of Queensland have overseen development of this plan.

This plan identifies all of the likely effects of the project on the local koala population. To manage these effects, proven and recognised actions have been investigated and are proposed as management measures. Such measures include actions to successfully avoid, minimise, mitigate and/or compensate for effects on the local koala population.

During development of the plan, this team identified habitat loss, barrier effects and stress as important effects of the project that will require management. As a result, extensive efforts to reduce the clearing area of the project have been proposed, as well as structures to retain the connectivity of core habitat and movement corridors.

This plan will ultimately result in a net benefit for local koala viability through offset habitat acquisition, protection and planting of koala habitat trees (at a ratio of 5:1), increasing habitat connectivity and providing koala exclusion fencing.

Dr Jon Hanger has been engaged to provide additional advice on tree clearing procedures and the safety of fauna during work operations. These procedures require the directional and sequential felling of koala trees – an approach which is considered best practice by industry standards. This aims to ensure that the welfare of every koala is carefully considered during all project activities.

Dr Hanger has also outlined a program for koala tagging, tracking and monitoring, and is collaborating with Professor Peter Timms of the Institute of Health and Biomedical Innovation at the Queensland University of Technology on ways to minimise disease within the local koala population. This program also includes the trial of a promising vaccine for Chlamydia, a debilitating disease in koalas.

Local environment and conservation groups are being invited to comment on the draft Koala Action Plan, and the workshop, on Saturday 26 May 2012, will provide the opportunity to discuss the plan with the project team and the koala experts who have developed it.

Your feedback and comments will assist in finalising project actions that will reduce impacts on koalas and promote the species viability within the local area. The final plan will then be posted on the project website in mid-2012.

Strategy documents enclosed:
Moreton Bay Rail Link Project Koala Action Plan, May 2012
Kinsellas Road East Fauna Management and Tree Clearing Strategy, April 2012

Contact us

Phone: 1800 096 821*
Email: moretonbayrail@tmr.qld.gov.au
Website: www.moretonbayrail.qld.gov.au
Post: Moreton Bay Rail Link
Transport and Main Roads
Reply Paid 1549, Brisbane Qld 4001

* Free call from anywhere in Australia, call charges apply for calls from mobile phones and payphones.

Australian Government Nation Building Program
Moreton Bay Regional Council
Queensland Government

Appendix Three

Presentation slides

Moreton Bay Rail Link

Koala Action Plan Presentation
26 May 2012

Australian Government Nation Building Program

Moreton Bay Regional Council

Queensland Government

Purpose of workshop

- Share our plans
- Listen to comments
- Answer questions
- Find mutual opportunities
- Continue the conversation

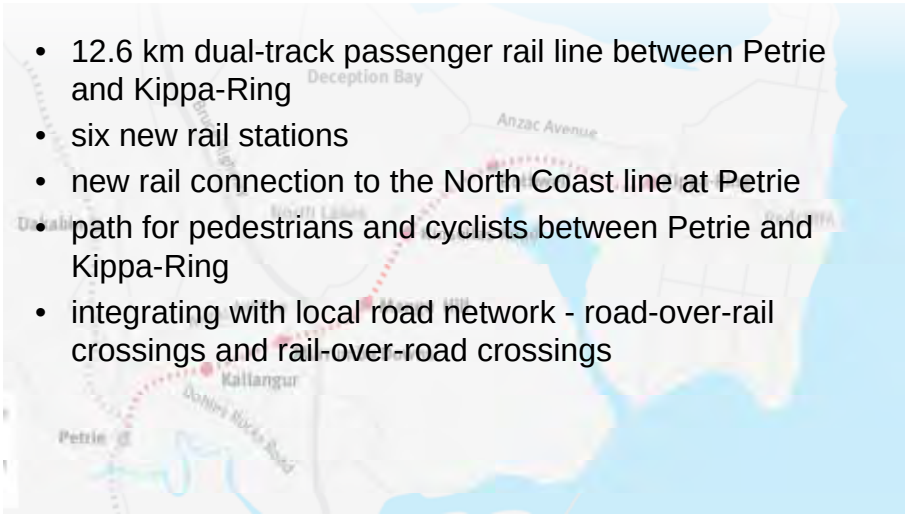
Focus of the day

- Koalas
- Tree clearing
- Animal welfare

The bigger picture

- KAP - one of many plans
- Some in place
- Others underway

Project scope



- 12.6 km dual-track passenger rail line between Petrie and Kippa-Ring
- six new rail stations
- new rail connection to the North Coast line at Petrie
- path for pedestrians and cyclists between Petrie and Kippa-Ring
- integrating with local road network - road-over-rail crossings and rail-over-road crossings

Not for today

- **Government legislation**
  - Dept Environment and Heritage Protection (Qld)
  - Dept of Sustainability, Environment, Water, Population and Communities (federal)
  - Moreton Bay Regional Council
- **Authorities**
  - Queensland Rail (operators)
- **Project scope**
  - Project alignment
  - Station locations
  - Stabling yard

Project update

Construction

- Kinsellas Road East bridge – June/July
- Dohles Rocks/Goodfellows Road bridges – Sept/Oct
- Rail construction tender out in next few months

Design

- Dohles Rocks/Goodfellows Road bridges
- Rail

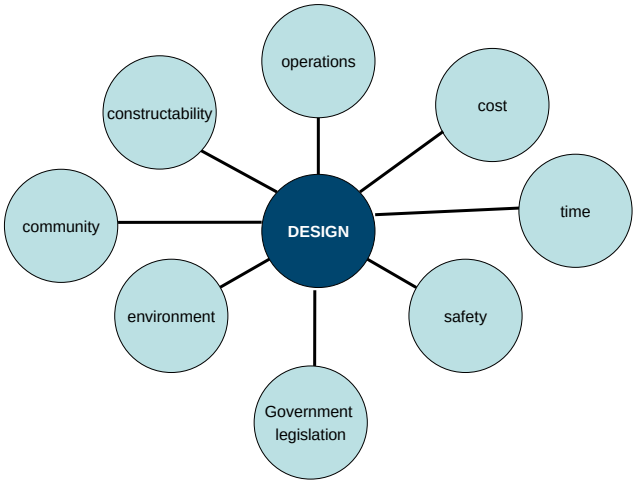
Plans

- Environment Management Plan (planning phase)

Some answers not available yet

Detailed design process is ongoing

Balancing act



Delivery

- Transport and Main Roads is delivering the project on behalf of the three funding partners
- The project will contract the construction sector to build the project
- Line to be operated by Queensland Rail
- Project team develops Environmental Management Plan (Planning) and obtains initial permits and approvals
- Successful construction consortium develops Environmental Management Plan (Construction) and gains all necessary approvals
- Regulator has monitoring/assessment role and project retains overall control and undertakes monitoring

Why prepare a Koala Action Plan

- Project alignment preserved since the 1970s.
- Significant urbanisation has occurred, contiguous koala habitat is now restricted to urban remnants and waterway corridors.
- Environmental Impact Assessment undertaken identified koalas and their habitat in the project area
- Community consultation undertaken - concerns over koala welfare received

Why prepare a Koala Action Plan

- Project within the South East Queensland Koala Protection Area under DEHP State Planning Regulatory Provisions
- Koala Action Plan developed to meet technical and statutory requirements
- Specifically, the Koala Action Plan will be used to inform the project EMP(P) and EMP(C)
- As a result the plan has developed in conjunction with koala experts and key stakeholders

Management objectives

- **Avoid the destruction or damage to koala habitats** other than is essential for the construction and operation of the rail line and associated infrastructure; and
- **Avoid or minimise the risk of harm to koalas** either directly or indirectly as a result of construction works and the operational use of the rail line;
- **Maintain habitat connectivity** by appropriate design of bridge structures or the inclusion of dedicated underpass structures;
- **Provide for the offsetting of unavoidable impacts** that collectively demonstrate a clear and unequivocal benefit for the conservation and/or welfare of koalas
- **Ensure compliance with relevant legislation**
- **Assure the community** that the project is committed to managing the project's impacts on koalas through early and appropriate action

Developing the plan

- Identify the likely affected population and their habitat.
- Assess direct, indirect and cumulative impacts.
- Specify measures to manage impacts
  - Avoid,
  - Minimise,
  - Mitigate,
  - Compensate.
- Dedicate performance criteria for these measures.
- Monitor the effectiveness of management.
- Assign corrective action if management has not been effective.

Investigation area

- Extends approximately one km either side of the alignment (further where intersecting with connecting habitat, e.g. Saltwater and Freshwater Creek).
- Contains the entire clearing footprint for the project (approx 130ha) and all koalas whose home range is likely to be affected by the project.
- A largely cleared and urbanised landscape characterised by fragmented habitat.
- Almost wholly within the Regional Plan Urban footprint

Investigation area

Current koala population

- Project alignment transects/borders the home ranges of 30-60 koalas.
- Higher densities of koalas at AMCOR and Chelsea Street Environmental Reserve.
- Habitat fragmented by urban sprawl – poor connectivity
- Currently under pressure from existing threatening processes (Dog attack Vehicle strike Disease)
- Primary movement corridors along existing creek lines identified at Yebri, Freshwater, Black Duck and Saltwater Creeks
- Statutory mapping under estimates value of koala habitat in some areas.

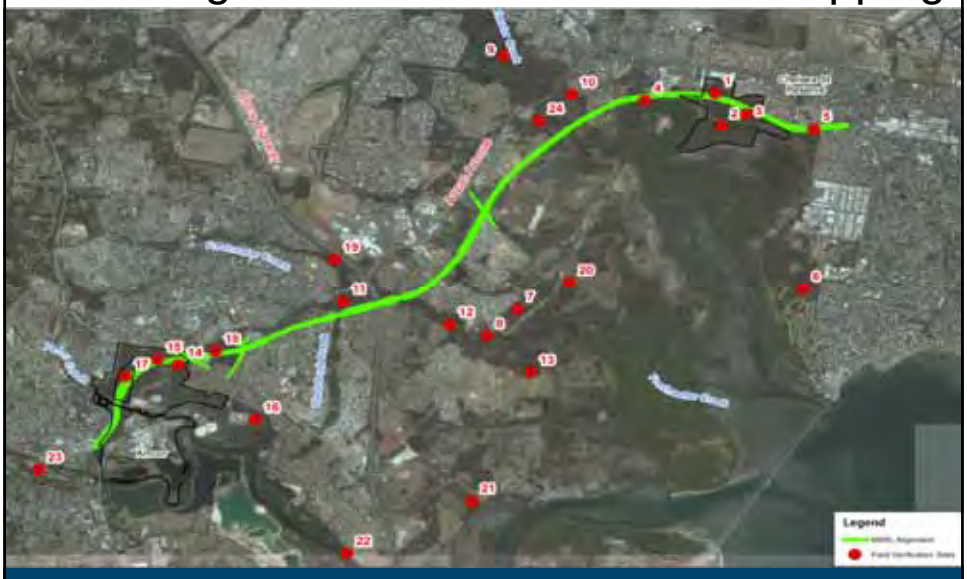
Moreton Bay Rail Link

DEHP koala habitat mapping

19

Moreton Bay Rail Link

Validating the Koala Habitat Value Mapping



20

Suggested amendments to mapping

Impacts of the project

- Total project footprint of 130ha
- Koala habitat loss approx 50ha of bushland and rehabilitation habitat (equates to 22,993 koala habitat trees)
- Habitat fragmentation
- Habitat degradation (e.g. edge effects / weeds)
- Injury during clearing
- Collisions with trains or vehicles
- Electrocution on overhead lines
- Disease (does not introduce disease but may increase expression)

Management – project measures

Implemented during Design and Construction phases

- **Minimising project footprint** area through design refinement and compressed construction techniques
- **Fauna management and tree clearing strategies** including advanced tree clearing techniques
- **Offsetting** through the planting of food and shelter trees
- **Integration of Fauna Underpasses** of suitable design and location
- **Use of temporary and permanent exclusion fencing**

Management – project measures

- **Anti climb measures on catenary masts** for overhead wires (rail corridor)
- **Disease management** including a vaccine trial
- **Limitation of vehicle speeds** within site
- **Workforce education**
- **Public education**

Management – project measures

Minimising clearing footprint

- During design by building rail on structure and avoiding heavily vegetated areas where possible
- During construction through management and process:
  - Minimising access tracks and construction set down areas
  - No go zones
  - Exclusion fencing
  - Surveyed and marked clearing areas

No go zones and exclusion fencing

Management – project measures

Fauna management and tree clearing strategies for road and rail

- Aim is to achieve industry best practice *(Hanger and Nottidge (2009)*
- To date, site specific plans prepared for Kinsellas Road East
- Process involves:
  - Defining vegetative characteristics
  - Assessing fauna likely to be present
  - Controlled felling of habitat trees with purpose built machinery
  - Use of trained and appropriately qualified Fauna Spotter Catchers
  - Staged and directional clearing
  - Stop work criteria
  - Third party auditing

Kinsellas Road East - Sequential clearing north to south at 45 degrees to the road allows animals to move into neighbouring bushland

Management - project measures

- **Maintaining existing habitat connectivity** along creek lines and waterways by building on structure where possible i.e. Yebri Creek, Black Duck Creek, Freshwater creek, Saltwater Creek
- Provide fauna underpasses at strategic locations i.e. Chelsea Street Reserve

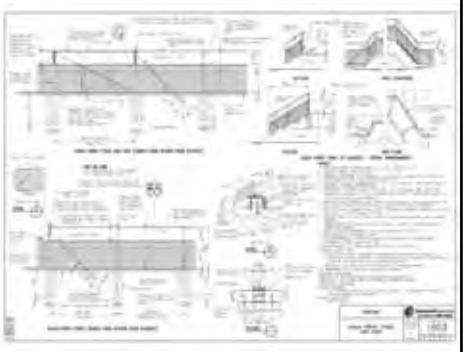
Management - project measures

- **Fauna underpasses** - Culverts required to maintain north-south connectivity at strategic locations along the rail alignment as part of detailed design.

- Culvert design to ensure/consider:
  - Dry floor and free draining
  - Furniture
  - Refuge poles
  - No external lighting
  - Vegetation cover/planting
  - Consider predator (wild dog issues)

Management - project measures

- **Exclusion fencing** for the road and rail corridor.
- Temporary and permanent during construction and operation.
- Fencing to include anti climb features such as colour bond sheeting.



Management – project measures

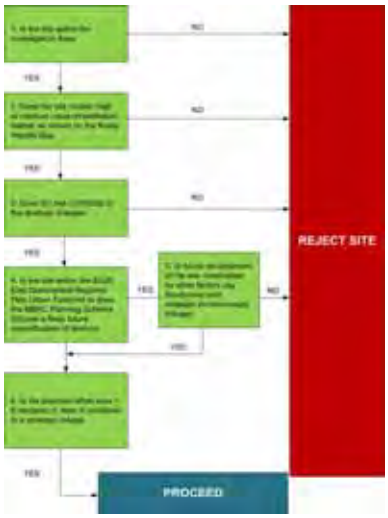
Koala habitat offsets

- Project has identified 140ha of land as ecologically suitable to meet offset requirements
- Currently in negotiations with landholders to secure sites
- Early planting of KHTs to occur pre rail construction
- Planting of 5 KHTs for every non-juvenile KHT removed
- Focus on planting offsets to benefit local population
- Maintaining local and then regional links i.e. Lake Kurwongbah

Management – project measures

Focus has been on:

- Areas within or adjoining areas of state significance as identified by the Biodiversity Planning Assessment mapping;
- Areas contributing to connectivity between the Investigation Area and more intact habitats to the west (via the Pine River Corridor);
- Outside of Regional Plan urban footprint where conflicting land use precludes the logical establishment of offsets;
- Sites owned by project partners and Larger private landholdings of significant strategic importance or containing advanced regrowth.



Status of offset strategy as at 19 April 2012

Offset Required		Offset Ratio		NJKHT Offset
22,993	x	5	=	114,965
NJKHT Offset		**Trees / ha**		**Hectares**
114,965	÷	825	=	139
Tenure		**Area (ha)**		**No. Trees Est.***
Project partners		**99.08**	**=**	**81741**
Private parcels		39.92	=	33224

Non project offsets

- Retrofitting/establishment of underpasses within existing infrastructure (e.g. Freshwater Creek at the Bruce highway and Pine Rivers Bridge crossing at the Bruce Highway)
- Feral dog control in conjunction with Council

Koala disease management program

Why?

- Disease causes significant pain, reproductive loss and diminishes population viability (mainly chlamydiosis)
- Prevalence of detectable disease across SEQ – around 41% (30-80%)
- Reproductive rates average 50%
- Management of disease likely to significantly improve local population viability

Koala disease management program

- Capture, veterinary health management and monitoring (by telemetry)
- Trial of new *Chlamydia* vaccine using placebo and vaccine groups, which koalas are randomly assigned to
- Periodic health checks over course of monitoring period
- Protection of koalas during vegetation clearing
- Monitoring will continue during construction

Chlamydia vaccine trial

- Three successful vaccine trials already done
  - Lone Pine Koala Sanctuary X 2
  - Australian Wildlife Hospital X 1
- Good **immune responses** shown
- Vaccine shown to be **safe** in healthy as well as diseased koalas
- Opportunity to test under field conditions
- Will be positive for local population

Chlamydia vaccine trial

- Aim for 30 koalas in the trial
  - 15 to get the vaccine & 15 no vaccine controls
- Capture : full health evaluation
- Vaccinations on days 0, 30 and 60
- Re-capture after 6 months, 12 months, longer
- At each time point, full health assessment, swabs and blood samples to evaluate success of vaccine

Moreton Bay Rail Link

Koala Action Plan Presentation
26 May 2012

Australian Government Nation Building Program

Moreton Bay Regional Council

Queensland Government

What's next

- Interim report of workshop
- Extension of dialogue/input closes 10 June
- All comments/questions and project responses circulated to all attendees
- Final report of workshop incl further queries posted to attendees
- Publish final Koala Action Plan online
- Ongoing updates when new plans are available
- *Continue the conversation*

Keeping in touch

For more information contact
Moreton Bay Rail Project Team

1 800 096 821

moretonbayrail@tmr.qld.gov.au

www.moretonbayrail.qld.gov.au

Appendix Four

Post workshop comments and questions

Ian Smith, Pine Rivers Catchment Association	
Comments, information During the workshop, Ian provided a copy of a letter he had written to Moreton Bay Regional Council, dated September 2009 regarding the council's Moreton Bay Koala Conservation Partnership Project. In it, Ian outlined major priority areas and suggested changes to local scale habitat nodes and corridor mapping. He wished to provide it to the project team as input.	**Project response** *The information was passed on to the project team and consultants.*
Vanda Grabowski, Koala Action Pine Rivers **At the conclusion of the workshop, Vanda provided the team with a series of comments and dot points for further clarification.**	
Questions Questionable survey results - from hands-on rescue experiences I have had as well as other rescuers, we know there are many more animals on the site than was detailed in your initial environmental/fauna report. The concern was to ensure that ongoing surveys would be conducted to confirm the number and species type present. Further surveys may in fact highlight that the monitoring and amelioration component may be larger than that first estimated.	**Project responses** *Current survey results are based on the latest Council, DEHP and field-based data. As part of Jon Hanger's work, field survey will be done to get a further understanding of population numbers and density. The project team has noted all fauna present on site at the time of survey. It is recognised that the rescuers spend more time on the ground and that animals are dynamic and will move from site to site. A strategy to manage all fauna (should it be encountered on site) is outlined in the fauna management and tree clearing strategies and pre clearing surveys will be undertaken in the days leading up to clearing commencing.*
No injuries/deaths - there is a need to focus on ensuring there are absolutely no injuries or deaths. Anything less than that is unacceptable. If everyone is on the same page then this should not be a problem.	*The project has a zero harm policy for koalas and is working with the contractors, through implementation of the fauna management and tree clearing strategies, to ensure no koalas are harmed during construction.*
There is no how to the measures - much has been said about monitoring and the checks and balances that are being put in place. Little detail as to exactly what components you will be measuring, how you will be monitoring and the types of checks and balances you are putting in place to mitigate the negative impacts both before, during and after the construction stage.	*See Section Four and Five of the Koala Action Plan. As outlined at the workshop, the project is currently in the planning phase. Over the next 12 months as it moves into detailed design the project will be working closely with the contractor to clearly define processes and responsibilities for implementation.* *The project will be able to provide more details to environment groups then.* *ACTION:* *Project to provide opportunity for participants to gain further insights into relevant elements of the Environmental Management Plan (Construction) when details are developed by contractor.*
Monitoring effectiveness no details - I think I alluded to this in the above section. What monitoring procedures are being put into place, how often will they be done, who will be doing it and what processes have been put in place if things don't work according to plan.	*See Section Five of the Koala Action Plan*

Mapping not accurate for koala habitat - the DERM mapping of regrowth and koala habitat has never been accurate. Breaking it down into primary species and secondary koala species as well as the need for both Melaleuca quinquinervia and other species such as Casuarina and lophostemon. There is a need to guarantee that the koala habitat breakdown is accurate and if it is only based on DERM material it won't be.	*It is recognised that the DERM mapping is not accurate in some places and as such field survey to validate the mapping has been undertaken - see Section Two of the Koala Action Plan*
Lots of position wording little available on action i.e. implementation – lack of how to - much is said about what things will be done by way of implementation but no detail on how it will be done, the action part of the implementation process has no detail.	*As outlined at the workshop, the project is currently in the planning phase. Over the next 12 months as it moves into detailed design the project will be working closely with the contractor to clearly define processes and responsibilities for implementation. The project will be able to provide more details to environment groups then.* *ACTION:* *Project to provide opportunity for participants to gain further insights into relevant elements of the Environmental Management Plan (Construction) when details are developed by contractor.*
Where/how on minimising clearing - exactly where (in what locations) will you minimise on clearing and how will you accomplish that. Will you clear around sections leaving mature species for example.	*Possible locations outlined in the koala action plan i.e. bridge structures and culvert locations. Further detail on location as part of detailed design phase. Detailed clearing plans will be developed for each area cleared with boundaries defined and surveyed and no go zones implemented to protect vegetation outside the clearing footprint. These plans are site specific and will developed in conjunction with contractors for the road and rail.*
Assessment of fauna not accurate - some of this was discussed at the meeting. For example we have seen kangaroos and possums on site but you have not detailed that in the draft report. Rescuers experiences don't jell with the information reported.	*The project team has noted all fauna present on site at the time of survey. It is recognised the rescuers spend more time on the ground and that animals are dynamic and will move from site to site. A strategy to manage all fauna (should it be encountered on site) is outlined in the fauna management and tree clearing strategies and pre clearing surveys will be undertaken in the days leading up to clearing commencing.*
Independent third party audit?? - any audit of the work undertaken and whether it fulfils the specified criteria in any aspect should be done independently of QLD Rail. No disrespect intended and this is an exaggeration to make a point but for example would you put a misogynist in charge of an audit on the implementation of women's rights.	*This will be an independent third party audit.* *ACTION:* *Advise who is carrying out audit of fauna spotting and implementation of clearing plan when this has been determined.*
Offsets – where quick replacement in current climate conditions is not guaranteed - in the offset planting component climate conditions and soil nutrient quality have not been factored in. For example in good rainfall and in good thick soils on the floodplain blue gums will grow. If its too wet they die. They won't grow well on the side of a mountain with a stony substrate. Certain species grow well in their own specific niche. In optimal climatic conditions the offset planting will grow well. If the climatic conditions go back to a drought then everything will take longer. That's why we must focus on retaining mature koala food trees wherever possible and access appropriate offset location where positive growth outcomes are more likely to occur.	*Site geology and topography has been considered in the selection of offset sites, as have current climatic conditions. It must be noted that whilst climate and its impact on the growth of offset planting can be considered, it is outside of the project's control.*

Funding for offsets must not override money for other areas - DERM's focus is clearly on offset planting, lots of money for trees, mulching, water, ongoing weed maintenance etc. As long as the money for this is not at the cost of funding for other important aspects such as relocation surveying and/or facilitating other measures such as ensuring 100 metre wide wildlife corridors are developed. Offsets are important but not to the exclusion of funding for other equally important components of the management plan.	*The project has a legislative requirement to provide offset planting and a budget has been allocated to provide these offsets. The project also has money for other initiatives to benefit the local koala population as outlined in the Koala Action Plan, including the Disease Management Program.*
Louise Brennan, Wildlife Queensland **On 30 May, Louise emailed a question to the team about biodiversity of the offsets.**	
Question Our Society representative, Carole Green acknowledges the effort of all concerned in the presentation of the Moreton Bay Rail Link – Koala Action Plan, presented on May 26th 2012. It would be hoped that the biodiversity of chosen offsets be at least equal to or double that of the existing environment. Kind regards,	**Project response** *Thank you for your kind words of support for our environment workshop that was held on 26 May - the project team really appreciates the valuable contribution from all of the attendees on the day.* *I have spoken to our environment team with regard to your feedback, and I can confirm that the offsets planted by the project will be 'like for like' with the regional ecosystems that are cleared. The project will plant offsets at 5:1 as per the SEQ koala conservation State Planning Regulatory Provisions.* *Thank you again for your feedback and support.*