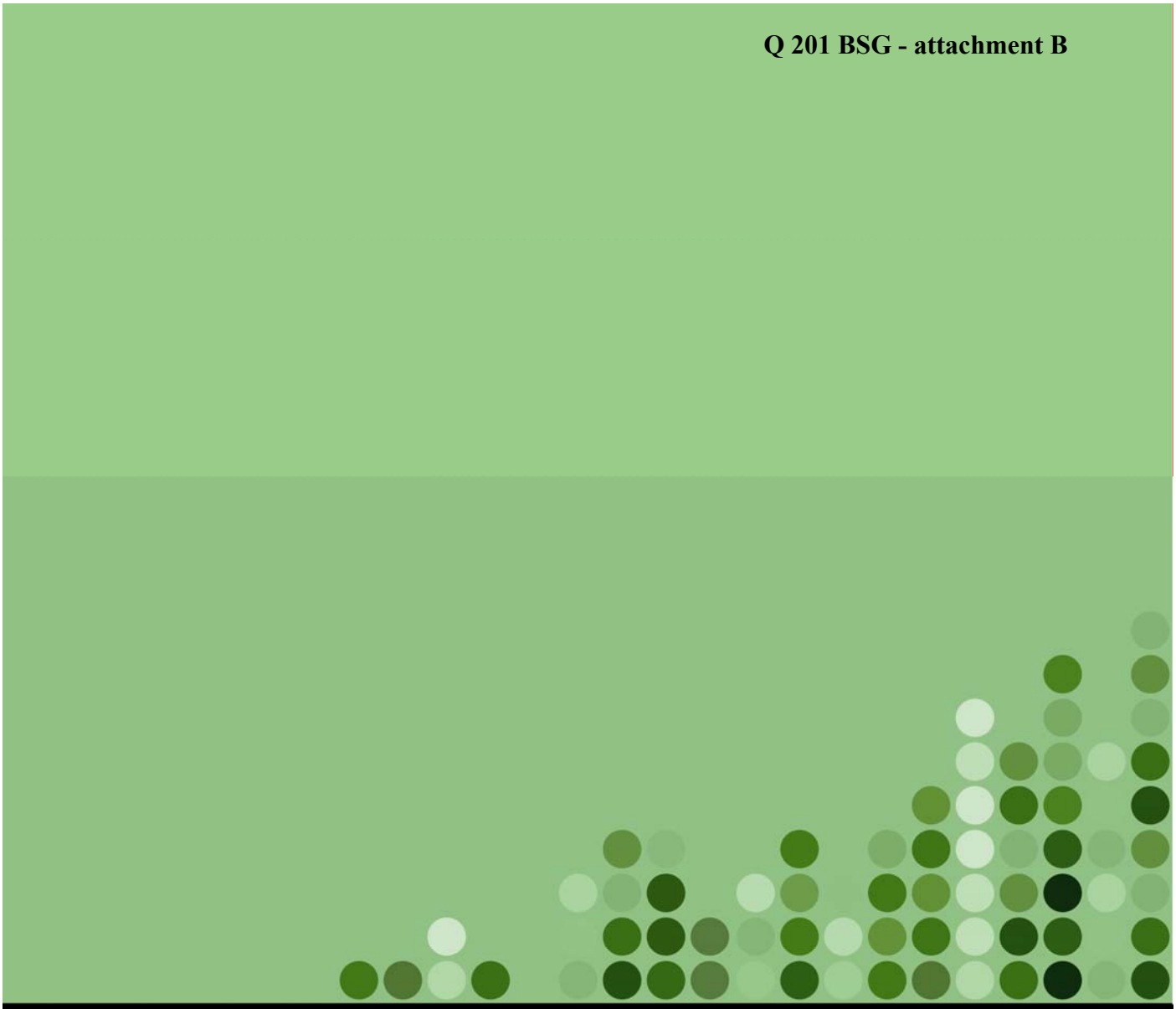
Department of **Employment, Economic Development and**



Proposed Activities for *Apis cerana* in North Queensland

January 2011 and beyond

Toward Q Tomorrow's Queensland

Queensland Government

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1. Introduction

The Consultative Committee on Emergency Plant Pests (CCEPP) has twice (29 October 2010 and 25 January 2011) been unable to reach consensus on the feasibility of eradication of Asian honeybee (AHB). On 31 January 2011, the Asian Honeybee National Management Group (NMG) decided that the current eradication program in the Cairns area was unlikely to succeed and that national cost share funding for the program would cease.

While waiting for the CCEPP to make their recommendation to the NMG, operational activities in Queensland were continued in the same spirit to those conducted in November and December 2010.

In accordance with the NMG decision and request, this proposal outlines activities to be undertaken and expected costs to be incurred under the cost sharing agreement:

- In the short term during the 1 January to 31 March 2011 period; and
- In the long term post 31 March 2011.

2. Overview

Though Queensland is of the opinion that there is no evidence to suggest that AHB is not eradicable, Queensland acknowledges the decision by NMG and will not be continuing with the eradication program in accord with the decision.

Queensland recognises that several pathways for spread of the AHB exist; being by either slow spread from the epicentre of the current outbreak in and around Cairns, in addition to the assisted movement pathway. The significant transport movements around North Queensland as the community recovers after Tropical Cyclone Yasi can be expected to fast track the spread of AHB to other parts of Queensland and Australia.

Queensland will commence transition to an industry and community management program. Until 31 March 2011, the focus will be on shifting from eradication to management. A key element of this activity will be the development of educational materials based on the 'living with AHB' message and stakeholder engagement to support the effective transition.

After March, the focus will be on transitioning management to industry and community with industry and community taking the lead on AHB management with support from Biosecurity Queensland.

2.1. Short term (1 January to 31 March 2011)

The priorities for the January to March period are:

- Transitioning from the eradication phase to the management phase;
    - Making sure people are aware of Asian honey bee and know what to do if they see a nest or swarm;
    - Working with the honey bee industry and other affected industries to help them be able to manage their business;
    - Identifying industry biosecurity precautions;
    - Providing tools (e.g. information sheets; further development of odour detection dog; validation of remote poisoning trials) to aid in the management of AHB;
- Undertaking surveillance to determine extent of spread; and
- Where practical, limiting the spread.

Key activities will include engagement and education, surveillance and validation of new technologies based on a 'living with AHB' message.

2.2. Long term (post 31 March 2011)

The transition to community and industry management of AHB takes into account expected socio-economic impacts of the bee in Australia which are informed from spread modelling and cost benefit analyses.

Key objectives for the long term include:

- Promoting a shared responsibility for the management of AHB
- Assisting stakeholders to understand the likely impacts
- Empowering stakeholders to take reasonable action to minimise the impacts
- Determining the likely distribution of the pest and impacts of AHB
- Supporting trade in affected industries

Underpinning the plan will be a communications and community engagement strategy that will:

- Ensure all state-wide key stakeholders are informed and educated about Asian honeybee and know where they can access up-to-date information that is relevant to them at all times
- Ensure directly-affected stakeholders are:
    - Informed and educated about Asian honeybee, the impact Asian honeybee is likely to have on them, their property and/or their businesses and any restrictions necessary for the effective community and industry management of Asian honeybee; and
    - Equipped to make decisions to effect measures to assist with the control of Asian honeybee on their own business;
- Encourage responsible, informed and accurate media coverage of Asian honeybee;
- Ensure Departmental staff (especially Customer Service Centre and public counter staff) are fully informed to handle public enquiries.

Industry will be consulted on the transition proposals to determine their views and the impacts of the suggested approach.

The following table summarises the key activities:

Activity	**Short term to 31 March 2011**	**Long term post 31 March**
1. Movement controls	• Transition to rescinding the RA as soon as possible after 31 March 2011	• Industry and community management most likely • Government involvement for interstate movement may be required (dependent on response from other jurisdictions)
2. Education and engagement	• Continue general industry liaison and community engagement to maintain awareness of *A. cerana* and its management • Specific industry liaison and	• Fully implement communications and community engagement strategy • Implement self help information package

Activity	Short term to 31 March 2011	Long term post 31 March
	engagement with the transport industries in the Cairns area (especially post Cyclone Yasi) • Develop and implement a targeted information package to facilitate a self help approach for AHB by industry and the community post 31 March 2011 (living with AHB message) • Develop a dedicated web page to support the 'living with AHB' approach	• Develop fact sheets as required beyond those already identified • Provide technical advice to industry and community re: AHB management where further assistance is required

3. Surveillance	• Activities will aim to demonstrate any spread from the current RA. Where resources permit, the following may be undertaken:
	  • Sugar feeding traps to provide confidence that the pest is not spreading outside the RA and to provide confidence that areas where eradication activities have taken place have been successful
	  • Sweep netting – both targeted and floral targeted sweep netting to detect foraging bees outside the restricted area (RA)
	• Continue the National Sentinel Hive Program
		• No active surveillance
		• Public notifications will be handled in accordance with public notification policy
		• Continue the National Sentinel Hive Program

4. Validation of new tools to support ongoing management of AHB	• Use of the odour detection dog – a cost effective compliance and surveillance tool • Use of remote poisoning – a cost effective nest destruction tool	• If interstate movement restrictions are imposed, dog may be used to assist in Biosecurity Queensland inspection activities • Alternatively, dog may be transferred to industry for use

Activity	Short term to 31 March 2011	Long term post 31 March
		• Remote poisoning technologies may be transferred to industry/community after exploring regulatory requirements of poison use

5. Nest / swarm analysis	• Analysis will be undertaken of samples submitted from areas outside the known distribution area to aid prediction of radial spread from known areas of infestation. This will include:
	  ◦ Counting bees to estimate swarm/nest size
	  ◦ Identification of queen bees or cells
	  ◦ Ageing of nests
		• Analysis only to be undertaken on a case by case basis

6. Responding to public notifications	• Destruction of nests and swarms using chemical insecticides will be undertaken where practical and where resources allow • Working with industry to develop post March options to destroy nests and swarms	• Destruction of nests and swarms only when presented as nuisance complaints ◦ To be undertaken by personnel identified on the 'swarm list'
7. Development of a transitional plan	• Develop policy and processes to support transition to the next phase of the program • Integrate activities into Biosecurity Queensland surveillance plans for exotic bee disease, including mites	• Ensure future government activities are appropriately budgeted for and resourced appropriately

3. Description of operational activities

3.1. Movement controls

3.1.1. Managing the restricted area (RA)

With the transition from government to industry and community management of AHB, it is anticipated that there will no longer be a need for a RA. Should interstate movement controls be imposed, this decision may be reconsidered, but until notified otherwise, a process to rescind the restricted area will commence as soon as possible after 31 March 2011.

Post 31 March 2011, interstate movement controls may need to be managed or overseen by Biosecurity Queensland to assist with trade and minimising commercial impact on business. With time, interstate movement controls (if required) will be transitioned to industry with Biosecurity Queensland providing an industry monitoring program.

3.2. Industry and community education and engagement

Minimising the economic and social impact of AHB will be critical during the ongoing management of AHB by industry and community. To effect this, an education campaign will be developed, underpinned by a communications strategy consisting of development and delivery of information materials on 'living with AHB' and management activities that may be required by industry and community. These materials will be promulgated through the internet (government sites, social networking sites) seminars, meetings and informal correspondence between government, industry and community.

Key elements of the education/communications strategy and target audience include:

	Short term (principally development, liaison and early implementation)		**Long term** (principally implementation)	
Activity	**Industry**	**Community**[1]	**Industry**	**Community**
• Actively engage apiary industry in the transition	✓	×	N/A	N/A
• Communicating the decision made by the NMG (and the rationale)	✓	✓	N/A	N/A
• 'Living with AHB' messages	✓	✓	✓	✓
◦ Biosecurity for apiarists and apiaries	✓	✓	✓	✓
▪ Identification of AHB	✓	✓	✓	✓
▪ Minimising the economic and social impact	✓	✓	✓	✓
▪ Slowing the spread of AHB	✓	×	✓	×
▪ Increasing awareness of exotic mites	✓	×	✓	×
◦ Managing AHB nests/swarms	✓	✓	✓	✓
◦ Public notifications of AHB	✓	✓	✓	✓
• Identifying additional resources/tools required	✓	✓	✓	✓
• Human health implications and recommendations re: stings	✓	✓	✓	✓

The January to March period will principally be one of communications/tools development and engagement with industry with the bulk of education taking place in the latter part of March 2011 and ongoing.

[1] Excludes apiary industry (commercial and non-commercial)

Semi-annual review of activities and required resources will be conducted in the first year with annual review thereafter to ensure required activities are identified and resourced appropriately.

3.3. Surveillance activities

Though very effective, active surveillance activities can be resource intensive, and as such, are not the mainstay of AHB activities to 31 March 2011. Where resources permit, active surveillance may be undertaken close to or on the perimeter of, and outside the RA to maximise confidence in determining the bee's geographical distribution and characteristics (e.g. age of nest, presence of queens, etc.).

Operational flexibility in short term surveillance activities (sweep netting, sugar feeding traps in priority areas) will be required to ensure field activities undertaken are conducted in accordance with environmental conditions (e.g. inclement weather may prevent sweep netting) and available resources. Short term surveillance activities may include:

- Placement of sugar feeding traps at intervals:
  - South of the RA along known transport corridors;
  - On, or close to, the northern, western and southern perimeter of the RA;
  - On the perimeter of appropriate rainforest areas; and
- Undertaking targeted (floral) sweep netting to assist in determining the geographical distribution of the pest. This is only likely to occur for significant detections outside or close to the RA perimeter.

Active surveillance activities (sweep netting, trapping, bee eater pellet collection/analysis) will not be continued in the long term and public notifications will be handled in accordance with the public notification policy.

Biosecurity Queensland will continue to manage a hive in the Cairns port area as part of the National Sentinel Hive Surveillance Program. This hive provides added assurance of early detection of exotic mites. To date, all exotic mite test results have been negative.

3.4. Validation of new tools to support ongoing management of AHB

3.4.1. Odour detection dog

Odour detection dogs are a proven method of insect detection in current use with the Biosecurity Queensland Control Centre. An odour detector dog is currently being trained to detect bees that may be hidden in various cavities where good visual observations cannot be made.

While the initial imprinting and training has occurred, validating the method is currently in progress and early indications are that the method holds promise as a new and innovative means of detecting the bee. Validation is planned to be completed by 31 March 2011.

In the longer term, an option exists for the dog to be an effective and efficient surveillance and compliance tool for Biosecurity Queensland personnel. Should the dog not be required by Biosecurity Queensland, this technology could be transferred to industry and community to assist with industry/community based compliance, monitoring or detection activities.

3.4.2. Remote poisoning

The principle of remote poisoning is to have foraging bees trained to feed from syrup feeding stations and then replace the existing feeding stations with dishes containing the same syrup but with the added poison (fipronil). The application rate is set low to ensure that the foraging bees are not poisoned quickly, but able to carry the product back to the nest where the entire colony is poisoned.

When operational, feeding stations will be established in the target area and monitored by trained departmental officers. The poison will only be added after assessing that there are no non-target insects or vertebrates feeding at the feeding station.

To monitor the progress of the poison uptake by bees and to further reduce the risk of non-target poisoning, officers directly observe each feeding station during the time of application of the product.

Two suitable nests have been identified for trialling this eradication technique. Managing the risk of potential negative effects of working with a known infestation (instead of destroying it) in a limited controlled environment is difficult and requires a high degree of expertise and assessment.

Work is currently underway to evaluate the usefulness of this technique, and if appropriate, its use may be employed in future destruction activities where beelining has failed to physically locate a nest or where access to the nest is impractical.

Biosecurity Queensland may use this tool in the short term management of nests that cannot be located. In the longer term, the technology may be transferred to industry/community after exploring regulatory requirements of poison use.

3.5. Nest / swarm analysis

Bee identification has previously been undertaken to ensure prompt detection and future eradication activities. With the transition to industry and community management, only those samples submitted from outside the RA in the period to 31 March 2011 will be analysed by:

- Counting bees to estimate swarm/nest size;
- Identifying queen bees or cells;
- Ageing the nest; and
- Examining the samples for exotic mites.

This will aid prediction of radial spread from known areas of infestation.

Beyond March 2011, analysis will only be undertaken on a case by case basis, primarily in regard to suspicion of exotic pests (Varroa mite, tropilaelaps mite and tracheal mite).

3.6. Responding to public notifications

Public notifications from the community have been an integral component of the eradication campaign to date. With the transition to industry and community management, Biosecurity Queensland will continue to respond to public notifications will continue in the short term (to 31 March 2011).

After 31 March 2011, Biosecurity Queensland will refer some public notifications to industry for management in accordance with the following table

Activity	Manage by industry	Manage by Biosecurity Queensland
Public nuisance complaints of swarms/nest		
• Initial assessment	×	✓
• Eradication	✓	×
Threat to biosecurity of established commercial European honeybee apiary	✓	×
Suspicion of exotic pest (Varroa, tropilaelaps, tracheal mite)		

• Notification • Action	✓ ×	✓ ✓
Human health threat (stings etc.)	✓	×
Promote self help education package in response to notifications	✓	✓

3.7. Summary of operational activities to 31 March 2011

The following table summarises the key operational changes to be implemented to 31 March 2011.

Genre of activity	Activity	Prior to 1 January 2011	Proposal – to 31 March 2011
Movement controls	Maintain the RA	✓	Transition towards rescinding the RA
	Enforcing movement restrictions	✓	Transition towards rescinding all enforcement of movement controls
Industry and community education and engagement	Industry liaison/engagement	✓	Education and engagement program
	Community engagement	✓	Education and engagement program
Surveillance	Targeted sweeping inside the RA	✓	×
	Grid sweeping outside the RA	Limited	×
	Targeted floral sweeping outside the RA/RA perimeter	Limited	Limited
	Grid sweeping the perimeter of the RA	Limited	×
	Property inspections inside the RA	✓	×
	Sugar feeding traps	✓	✓
	Log traps	✓	×
	Bait hives	✓	×
	Odour detection dog	✓	✓
	Bee eater pellet collection	✓	×

Genre of activity	Activity	Prior to 1 January 2011	Proposal – to 31 March 2011
	Sentinel hive program	✓	✓
Validation of tools	Odour detection dog	✓	✓
	Remote poisoning	✓	✓
Nest / swarm analysis	Monitoring bees and comb for exotic mites	✓	Only from samples outside the RA
	Characterise nests/swarms	✓	Only from samples outside the RA
Public notifications	Respond to public calls	✓	Limited

3.8. Activity costs to 31 March 2011

The following table outlines the estimated costs of the activities described above (1 February to 31 March 2011) and represents operational focal areas for effectively transitioning the AHB response to industry and community management post 31 March 2011.

Expense type	Work unit	FTEs	Amount ($)
Labour costs	Operations – Management and administration	1.5	42,686
	Operations – coordinator, field staff, compliance, and planning	7.5	26,792
	Operations - Odour detection dog	1.2	12,124
	Community and industry engagement	0.5	15,989
Subtotal labour costs			***97,591***
Non-labour costs	Telephone, fax, mobiles		1,125
	Network access		1,494
	Travel		3,800
	Freight, postage		500
	Office costs		500
	Vehicle hire		10,000
	Kenneling and vet fees		2,000
	Vehicles, Q Fleet (dog)		3,800
	Hive removal contractor		1,500
	Personal protective equipment		300
	Field equipment (nets, tarps, containers etc.)		500
Subtotal non-labour costs		***10.7***	***25,519***
Expended to 31 January 2011			1,683,686
Employee expenses 1 February to 31 March 2011			97,591
Supplies and services 1 February to 31 March 2011			25,519
Total costs			**1,806,796**

4. Previous funding contributions

The following table outlines funding contributions since 2009 in the management of AHB.

Jurisdiction	2009-10 Contribution ($)	2010-11 Contribution ($)	Total Invoiced in October 2010 ($)	GST ($)	Total original Invoice incl. GST ($)
Australian Government	612,500	613,000	1,225,500	122,550.00	1,348,050.00
New South Wales	198,450	198,612	397,062	39,706.20	436,768.20
Victoria	151,900	152,024	303,924	30,392.40	334,316.40
Western Australia	62,475	62,526	125,001	12,500.10	137,501.10
South Australia	45,325	45,362	90,687	9,068.70	99,755.70
Tasmania	14,700	14,712	29,412	2,941.20	32,353.20
Northern Territory	6,125	6,130	12,255	1,225.50	13,480.50
Australian Capital Territory	9,800	9,808	19,608	1,960.80	21,568.80
Queensland	123,725	123,826	247,551		247,551.00
Total Government Share	1,225,000	1,226,000	2,451,000	245,100.00	2,696,100.00
Aust. Honey Bee Industry		100,000	100,000	10,000.00	110,000.00
Total	**1,225,000**	**1,326,000**	**2,551,000**	255,100.00	**2,806,100.00**

5. Future funding options

A range of options exist for funding the eradication effort from 1 January to 31 March 2011. In the following model, similar proportions for cost sharing between cost sharing parties and Queensland have been assigned in keeping with cost sharing arrangements/proportions described under the Emergency Plant Pest Response Deed (EPPRD) categories.

Factors have been considered in scoring the various options; the highest score represents the best option with regard to the factors.

Option	Funding period			Factors						Score
	1 January to 31 March 2011		Post 31 March arrangement							
	Cost shared proportion of total (%)	Queensland proportion of total (%)		Economically positive in long term (1 = low, 5 = high)[2]	Politically positive (1 = negative, 5 = positive)[3]	Community perception of need and value (1 = low, 5 = high)[4]	Environmental impact (1 = high; 5 = low)[5]	Social impact (1 = low; 5 = high)[6]	Supportive of transition to industry and community (1 = low; 5 = high)	
1	100	0	Queensland and industry carry further costs with no cost sharing	5	5	5	5	5	5	30
2	80	20	Queensland and industry carry a proportion of further costs seeking additional funding through cost sharing arrangements	4	4	4	4	4	4	24
3	50	50	Queensland and industry carry a proportion of further costs seeking additional	4	3	3	3	3	3	19

[2] Requests for funding will require further consideration, response and management, thereby incurring costs.

[3] Funding continued in keeping with previous arrangements demonstrates good faith in Queensland's management. It can be seen as endorsing the principles of transitioning AHB management to community and industry.

[4] Community and industry will have concerns over lack of support. The decision could be damaging to government reputation and image.

[5] Community and industry will have concerns over government commitment to minimising environmental impacts. Support for funding would be seen as supporting minimising short to medium term environmental impacts.

[6] Social acceptance of the decision and the belief in 'doing the right thing'.

			funding through cost sharing arrangements							
4	20	80	Queensland and industry carry a proportion of further costs seeking additional funding through cost sharing arrangements	4	2	2	2	2	2	14
5	0	100	Queensland and industry carry a proportion of further costs seeking additional funding through cost sharing arrangements	3	1	1	1	2	2	10

The estimated costs from 1 January to 31 March 2011 are $123,110 and Queensland considers that option 1 represents the best value for cost shared partners with regard to managing:

- Longer term finances;
- Political impacts;
- Environmental concerns;
- Negative perception of community and industry; and
- Damage to reputation and image.

This contribution will serve to minimise short to medium term impacts of AHB and it will favourably position Queensland for the transition to industry and community management after 31 March 2011 through the implementation of the planned activities to 31 March 2011.

6. Milestones and associated workforce implications

As part of planned activities, progress reports will be provided on activities to 31 March 2011 by way of situation reports and other interim analysis (when conducted). Progress reports from Biosecurity Queensland will discontinue on 31 March 2011.

To effect the plan, temporary and casual staff will need to be retained for the period and fair notice provisions require that operational decisions to confirm cessation of employment need to communicated to temporary staff with 3 weeks notice.