Proposed *Biosecurity* Regulation 2016

Regulatory Impact Statement
Proposed *Biosecurity Regulation 2016*
November 2016

Submissions accepted until Sunday 29 January 2017

Forward all submissions to:

Email: submissions.biosecuritylegislation@dpi.nsw.gov.au
Mail: Biosecurity Regulation Submissions
Locked Bag 21
ORANGE NSW 2800

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Summary

Biosecurity is the protection of the economy, environment and community from the negative impact of pests, diseases, weeds and contaminants. Biosecurity protects our state's $12 billion primary industries sector and underpins the health and wellbeing of the community and environment. It keeps animals, plants, waterways, state forests, parks and infrastructure free from serious pests and disease.

The *Biosecurity Act 2015* ("the Act") was passed by the NSW Parliament in September 2015 and once commenced, will replace 10 whole existing Acts and parts of four other Acts. The Acts to be replaced contain provisions that are outdated, largely prescriptive and do not provide sufficient flexibility in preventing and managing biosecurity risks.

The Act will provide a flexible and responsive statutory framework for the prevention, elimination and minimisation of biosecurity risks. It is an enabling piece of legislation that includes numerous tools and powers that can be used regardless of what the biosecurity risk is or where the risk is occurring.

In support of the vision of the *Biosecurity Strategy 2013 – 2021* that biosecurity is a responsibility to be shared between government, industry and the community, the Act establishes a number of biosecurity duties that a person may have. The Act supports a national approach to biosecurity and provides consistency with legislation in other jurisdictions, thus enabling more effective management, enforcement and compliance activities. Further, it gives effect to a number of intergovernmental biosecurity arrangements to which NSW is a signatory.

Before the Act can commence, supporting subordinate legislation must be developed to align the management of biosecurity risks with the tools and powers in the Act.

The NSW Biosecurity Advisory Committee has been established to provide advice in relation to the implementation of the Act, including the development of the subordinate legislation and advice on consultation and engagement.

The *Biosecurity Regulation 2016* ("the proposed Regulation") like the development of the Act, will cover the full biosecurity spectrum, thus reducing the need for multiple regulations. It seeks to ensure the objects of the Act are achieved by specifying actions to be taken to prevent, eliminate or minimise biosecurity risks posed by biosecurity matter, carriers of biosecurity matter or dealings with biosecurity matter.

Preliminary consultation on the proposed management approach for weeds, non-indigenous animals, contaminants and a number of key pests and diseases affecting aquatic and terrestrial animals and plants has been ongoing since late 2015. Draft regulatory proposals have been made available for key stakeholders and the NSW public, and feedback obtained from consultation has informed the content of the proposed Regulation.

The object of the proposed Regulation is to make provision with respect to the following:

a) specifying that testing for a biosecurity matter or releasing or publishing the results of a test is a dealing with the matter
b) the mandatory measures that persons are to take with respect to biosecurity matter or carriers

c) the establishment of biosecurity zones
d) the giving of notification
e) the granting of biosecurity registration
f) the accreditation of biosecurity certifiers
g) the appointment of biosecurity auditors
h) the approval of accreditation authorities
i) the granting of permits
j) creating an offence of removing (or interfering with) labels and identifiers required under the Act
k) the setting of fees that are payable for services under the Act
l) the offences for which penalty notices may be issued.

The costs and benefits that result from the impacts of the proposed Regulation have been assessed and compared against a base case of maintaining existing levels of biosecurity regulation. Three options will be assessed against the base case which are:

- Option 1: No regulation is made to support the Act
- Option 2: Self-regulation (no NSW Government intervention, i.e., no Act, no Regulation)
- Option 3: Make the proposed Regulation under the Act.

An assessment has been undertaken to identify and compare the costs and benefits of the impacts on businesses, government, the environment and community under the three options relative to the base case. It also considers the likelihood of pests, diseases, weeds and contaminants entering NSW and spreading, and the potential damage they could cause to the economy, environment and community. The preferred option is the one that generates the largest net benefit (i.e., benefits minus costs) relative to the base case.

Under the option of no regulation to support the Act, the assessment conducted demonstrates that there would be an increased likelihood of damage to the economy, environment and community. Based on the expected costs of an outbreak of pests and diseases in the first year, the minimum cost to NSW agriculture is estimated at $719 million in the first year based on 2015-16 dollars. Under the option of self-regulation, the estimated minimum cost would increase to $964 million in the first year based on 2015-16 dollars.

Making the proposed Regulation under the Act is the preferred option, as it generates the greatest net benefit to businesses, government, the environment and community. The proposed Regulation maintains and improves the protections of existing levels of biosecurity regulation resulting in no significant increase in the likelihood of damage to the economy, environment or community. It also provides reduced administration and compliance costs to businesses and government through the streamlining of provisions and processes and supporting best practice biosecurity management. The proposed Regulation delivers on the objects of the Act and more broadly for biosecurity in NSW.

Impacts on the environment, community and other businesses such as agri-businesses and tourism have been qualitatively assessed and support the conclusion that the proposed Regulation is the preferred option to protect the economy, environment and community from the negative impact of pests, diseases, weeds and contaminants.

It is anticipated that the Act and the Regulation will be ready to commence in the first half of 2017. However this will depend on the complexity of issues raised on the

proposed Regulation during public consultation and on other aspects of this reform project. These include the development of contemporary, responsive and consistent supportive policies and procedures, delegations, systems, training programs and education and advisory materials.

1.0 The Regulatory Impact Statement (RIS)

1.1 Purpose of the RIS

Section 5 of the *Subordinate Legislation Act 1989* provides that before a principal statutory rule is made, a Regulatory Impact Statement (RIS) must be prepared in connection with the substantive matters to be dealt with by the statutory rule.

This RIS has been prepared as part of the making of the proposed Regulation. It sets out an analysis of the financial, economic, social, and environmental impacts of the proposed Regulation. It identifies and assesses direct and indirect costs and benefits to ensure that the proposed Regulation is necessary, appropriate and proportionate to risk. It demonstrates, when compared to alternative options, that it provides the greatest net benefit or the least net cost to the community, and that any regulatory burden or impact on government, industry or the community is justified.

The RIS is required to address the seven better regulation principles which are accessible at: http://www.dpc.nsw.gov.au/programs_and_services/better_regulation

1.2 Exhibition of the RIS

Public exhibition of the proposed Regulation and RIS provides stakeholders, including government, industry and the wider community, with an opportunity to have their say during the regulatory development process.

The proposed Regulation and RIS are accessible at:
www.industry.nsw.gov.au/aboutus/about/legislation-acts/review

Government guidelines require a minimum exhibition period of 28 days on proposed regulations. The proposed Regulation and RIS will be available for comment for a period of 77 days from Monday 14 November 2016 until Sunday 29 January 2017.

Notice of the public exhibition period will appear in the *NSW Government Gazette* and in the following newspapers:

- The Sydney Morning Herald
- The Daily Telegraph
- The Land
- The Koori News

Additional notices will appear in regional papers advertising the public exhibition period and community information sessions to be held at key regional locations.

An extensive list of over 700 stakeholders has been developed by the NSW Department of Primary Industries (NSW DPI) covering the following relevant broad sectors:

- Peak industry bodies and associations
- NSW landowners, land managers and livestock owners
- Research institutions
- Boards and committees
- Environmental groups

- Community organisations and special interest groups
- Aboriginal groups and communities
- Culturally and linguistically diverse communities.

In addition to the listed stakeholders above, there are ongoing consultations with our key government partners which include:

- Local Land Services
- NSW Local Government
- NSW Office of Environment and Heritage
- Commonwealth and state government agencies (including other jurisdictions agencies).

NSW DPI will directly advise these stakeholders that the proposed Regulation and RIS are available for public comment and encourage them to have their say on the proposed Regulation. NSW DPI will also be asking that these stakeholders communicate and distribute this information to their members and colleagues.

Community information sessions will be held during the public consultation period at a number of regional locations during November as detailed below:

Date	Location
Monday 14 November	Armidale Broken Hill
Wednesday 16 November	Tamworth Coffs Harbour
Thursday 17 November	Lismore Goulburn
Monday 21 November	Bega Orange
Thursday 24 November	Penrith
Monday 28 November	Griffith Dubbo
Wednesday 30 November	Albury Singleton

Venue locations and session time are accessible at:
http://www.dpi.nsw.gov.au/content/biosecurity/biosecurity

For further technical information or to obtain a copy of the proposed Regulation and/or RIS call 1800 808 095.

1.3 Submit your feedback

If you would like to have your say on the *Biosecurity Regulation* 2016 and/or the Regulatory Impact Statement 2016, please submit via the feedback survey link on

www.dpi.nsw.gov.au/biosecurityact

or email to submission.biosecuitylegislation@dpi.nsw.gov.au.

Postal feedback can be sent to:

Biosecurity Regulation Submission
NSW Department of Primary Industries
Locked Bag 21
ORANGE NSW 2800.

The closing date for submissions is Sunday 29 January 2017 at 11:59pm.

1.4 Use and confidentiality of submissions

NSW DPI will review all submissions received by the closing date and consider the issues raised. The proposed Regulation may be amended following consideration of any issues or comments made in the submissions.

The Minister for Primary Industries will be advised of all submissions and actions arising from them. A copy of all submissions will be provided to the Legislation Review Committee of the NSW Parliament with the final version of the Regulation. A report on the outcomes of consultation detailing the issues raised in submissions, and the Department's response, will be provided by NSW DPI.

NSW DPI generally places submissions, or summaries of submissions received, on its website. Please advise us if you do not want your submission published, or if you want part or all of it to be kept confidential, for example your name and/or personal contact details. NSW DPI will respect your request, unless required by law to disclose information, for example under the provisions of the NSW *Government Information (Public Access) Act 2009.*

2.0 Key terms and definitions

Term	Definition
Biosecurity Certificate	A certificate issued by a biosecurity certifier that certifies any of the following matters: • that an area or thing is free from stated biosecurity matter • that an area or thing contains a specified level of stated biosecurity matter • that something has been treated in a specified manner or • that something is in a specified condition. A biosecurity certifier may be an authorised officer or a person accredited as a biosecurity certifier under the Act.
Biosecurity Direction	A direction given by an authorised officer, which has legal force. It may be given to an individual or to a class of persons, and specifies what the person or class or persons are required to do to: • prevent, eliminate or minimise a particular biosecurity risk • prevent, manage or control a biosecurity impact that has occurred, is occurring or is likely to occur • to enforce, administer or execute the Act (including any instrument made under the Act).
Biosecurity Event	Something that has occurred, is occurring or is likely to occur and that has had, is having or is likely to have, a significant adverse effect on the economy, environment or community.
Biosecurity Impact	An adverse effect on the economy, environment or community that arises, or has the potential to arise, from biosecurity matter, a carrier or dealing with biosecurity matter or a carrier, being an adverse effect that is related to: • the introduction, presence, spread or increase of a disease, disease agent or pest • stock food or fertilisers • animals, plants or animal products becoming chemically affected • public nuisance caused by bees • risk to public safety caused by bees or non-indigenous animals, or • anything else prescribed by the regulations.
Biosecurity Manual	A document approved by the Secretary and published in the NSW Government Gazette, that contains risk minimisation measures or other conditions that must be met in order to deal with biosecurity matter or a carrier that would otherwise be prohibited in Part 2 or Part 3 of the proposed Regulation.

Biosecurity Matter	Biosecurity matter is: • any living thing, part of a living thing or product of a living thing (other than a human), or • a disease, prion or contaminant, or • a disease agent that can cause disease in a living thing (other than a human) or that can cause disease in a human via transmission from a non-human host (i.e., zoonosis).
Biosecurity Risk	The risk of a biosecurity impact occurring.
Biosecurity Undertaking	A formal agreement between an authorised officer and a person who has contravened, or is likely to contravene a requirement imposed by or under the Act to ensure that a biosecurity risk is mitigated or managed.
Biosecurity Zone	A zone established by regulation to prevent, eliminate, minimise or otherwise manage a biosecurity risk or biosecurity impact.
Carrier	Anything (whether alive, dead or inanimate, and including a human) that has, or is capable of having any biosecurity matter on it, attached to it or contained in it.
Control Order	An order made by the Minister that establishes one or more control zones to prevent, eliminate, minimise or otherwise manage a biosecurity risk or biosecurity impact.
Deal	Deal is used in the context of 'deal with biosecurity matter or a carrier' or 'engage in a dealing with biosecurity matter or a carrier'. Deal includes any of the following: keep, possess, care for, have custody of, control, produce, manufacture, supply, import, acquire, buy, sell, dispose of, move, release, use, treat, breed, propagate, grow, raise, feed, culture, experiment with, display, enter into an agreement that deals with, agree to deal with, and/or cause or permit a dealing.
Emergency Order	An order made by the Secretary to declare a biosecurity emergency and to impose emergency response measures to respond to the biosecurity emergency.
General Biosecurity Duty	The general biosecurity duty provides that any person who deals with biosecurity matter or a carrier, and who knows (or ought reasonably to know) of the biosecurity risk posed (or likely to be posed), has a biosecurity duty to ensure that the risk is prevented, eliminated or minimised - so far as is reasonably practicable.
Mandatory Measure	A requirement set out in regulation for a person who deals with biosecurity matter or carriers to take specified actions to prevent, eliminate or minimise a biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing.
NSW Biosecurity Advisory Committee	A committee consisting of senior, industry, environmental and departmental representatives, chaired by an independent person that provides advice to the Minister for Primary Industries and the Department of Primary Industries in relation to the development and implementation of the *Biosecurity Act 2015* and proposed *Biosecurity Regulation 2016*.
Prohibited Dealing	Dealings that are specified in Schedule 3 to the Act. These include dealing with certain non-indigenous animals.

Prohibited Matter	Biosecurity matter that is listed in Schedule 2 to the Act. This listed matter is biosecurity matter that could have significant adverse consequences to the economy, environment or community.
Prohibited Matter Event	A prohibited matter event means: • the presence of biosecurity matter in a part of the state in which it is prohibited matter, or • the introduction of biosecurity matter into a part of the State in which it is prohibited matter.
Reasonably Practicable	Reasonably practicable is used in relation to the prevention, elimination or minimisation of biosecurity risks. What is reasonably practicable means that action which is reasonably able to be done, taking into account and weighing-up all relevant matters including the nature of the biosecurity risk concerned, the availability and suitability of ways to manage the biosecurity risk concerned and the cost involved.
Registrable Dealing	Dealings that are specified in Schedule 4 to the Act. These include dealing with managed bees and certain non-indigenous animals.

3.0 The need for government action

Biosecurity is about risk management. The broad objective for biosecurity in NSW is to manage the negative impacts of pests, diseases, weeds and contaminants by:

- preventing their entry into NSW
- quickly finding, containing and eradicating new entries, and
- effectively minimising and managing the impact of those that cannot be eradicated.

Biosecurity in NSW is currently managed by a combination of tools and measures including legislation, surveillance, reporting and tracing systems and active community participation.

3.1 Identification of the problem and its significance

Biosecurity provides for the protection of agricultural industries, the environment and asset infrastructure. It facilitates the supply of fresh and safe food to the community and contributes to the enjoyment of natural resources and the outdoor way of life by the community. It provides protection from zoonotic diseases (that is, diseases that can spread from animals to people).

NSW's ability to trade animal and plant products internationally and with other Australian jurisdictions is underpinned by our world class quality assurance programs and effective surveillance and disease control. Agriculture provides $12 billion per year in gross value of production to the NSW economy (in 2104-15), 39,000 agricultural businesses in NSW, 42,000 farms in NSW, 66,000 people employed in the NSW agricultural industry and $8 billion per year value of NSW agricultural exports.

NSW's and Australia's strong biosecurity status and freedom from animal and plant pests and diseases is crucial for maintaining and developing both overseas and domestic markets. The financial consequences of temporary or prolonged market closures due to a pest or disease outbreak can be very significant.

Foot and mouth disease (FMD) is a highly contagious animal disease that would have severe consequences if it were to be introduced into Australia. The 2001 outbreak in the United Kingdom caused losses of more than 8 billion pounds (approximately $AUD 19 billion per year). In 2010 both Japan and the Republic of Korea experienced large FMD outbreaks which required extensive programs to control. The 2010–11 Korean outbreak is estimated to have cost the government some 3 trillion Won (about $US 2.7 billion per year). In 2013, the Australian Bureau of Agricultural and Resource Economics and Science (ABARES) released a report into the direct economic impact of two small FMD outbreaks at a state level. Assuming that export markets were to lift bans on Australian product quickly, modelling predicted maximum revenue losses of $6.2 billion over 10 years for a single state outbreak.

Queensland and Mediterranean fruit fly are plant pests that can cause significant damage to fruit and vegetable industries. Programs are underway to minimise the impact of Queensland fruit fly which is currently found in most of NSW and to prevent the introduction of Mediterranean fruit fly into NSW. As a result of increasing fruit fly incursions, the Commonwealth Government adopted a National Fruit Fly Strategy which was evaluated by Australian Bureau of Agricultural and Resource Economics and

Sciences (ABARES) for the economic benefit associated with implementing this action plan. The results found that the adoption of a 20 year action plan would lead to a net present benefit value between $262 million and $343 million over 20 years to the Australian economy through improved market access, improved management practices, reduced production losses etc. With the NSW horticulture sector making up approximately 14 per cent of horticulture production by value, the impact of fruit fly comes at a significant cost to the industry.

The occurrence of an outbreak of a pest or disease doesn't just have a negative impact on a single industry or section of an industry. There will always be flow on effects to related industries such as processing, transport and tourism.

Australia experienced an outbreak of Equine Influenza in 2007 with the epicentre of this outbreak in NSW. Although Equine Influenza was successfully eradicated, an economic impact survey conducted by the Australian Horse Industry Council following the outbreak estimated the impact at $381 million dollars in total. The impact for NSW alone was estimated at $218 million or 57 per cent of the total financial losses. This survey estimate included not only the financial losses for the NSW horse associations ($167 million), but also NSW horse businesses ($33.9 million) and NSW households ($17.8 million). The survey also found there were significant impacts across a number of sectors including dressage, agistment, coaching and recreational activities. This demonstrates the significant flow on effects from pest and disease outbreaks to the wider community.

NSW has a natural environment containing unique and distinctive ecosystems and biodiversity that requires protection from pest animals and weeds. Pest animals displace native species through predation and competition. They destroy crops and native vegetation by trampling and grazing and are responsible for the degradation of public and private assets like nature reserves, waterways and gardens. Pest animals can even threaten public safety through incidents including the transmission of zoonotic diseases and collisions with vehicles.

More than 350 species, populations and communities are considered to be threatened by the impacts of pest animals and the cost of pest animals to the Australian economy is estimated at more than $1 billion per year, mostly through impacts to agriculture. Pest animals can make some agricultural enterprises unviable and threaten livelihoods.

There are over 1,650 introduced plant species that have become established in the wild, and at least 300 of these are considered significant weeds impacting the environment and agricultural production. Throughout agricultural areas, weeds can out-compete crops and pasture species, resulting in lower economic returns and the need for expensive and ongoing control measures. In 2014, it was estimated that the cost of weed impacts and weed management costs on the NSW agriculture sector was around $1.8 billion per year.

Biosecurity management of pest animals and weeds aims to minimise the financial losses to agriculture and other industries, the damage to areas of cultural significance and to conserve and protect our environment and biodiversity.

Diseases such as Avian Influenza (H5N1) in poultry, influenza A virus infection in pigs, BSE (Bovine Spongiform Encephalopathy) commonly known as 'mad cow disease', Nipah virus, SARS (Severe Acute Respiratory Syndrome), rabies, Hendra virus, anthrax, Menangle virus and Lyssaviruses can pass from animals to humans and can cause

illness and sometimes fatalities in humans. Inappropriate use of chemicals and antibiotics in animals and pests to treat pests and diseases can also adversely affect human health through contamination of animal products. Biosecurity management aims to reduce these risks.

3.2 The need for government intervention

3.2.1 The presence of market failure

NSW DPI currently administers a number of Acts and regulations to manage biosecurity risks to protect the economy, environment and community from the negative impacts of pests, diseases, weeds and contaminants. Activities such as the keeping of non-indigenous animals, movement of animals, plants, plant materials and soil, and beekeeping have the potential to cause a biosecurity risk that could negatively impact on the NSW economy.

If the existing Acts and regulations that are used to manage biosecurity risks were removed, it is likely the number of biosecurity controls implemented would decline and the risk of a biosecurity incident occurring would increase. For example, in the current management of parthenium weed, machinery and equipment, particularly grain and comb harvesters from Queensland are required to be cleaned free of plant material, dust and soil so as not to contaminate material of any future harvest. Without these provisions, people would only treat machinery and equipment if it was in their private interest. However, the transportation of machinery and equipment between properties presents the highest risk of infestation on roadsides, including public land, where there may be insufficient private incentive to implement clean machinery and equipment measures.

Similarly, without provisions that require a plant heath certification and assurance to import a consignment of plants or plant products into NSW, there would be an increased likelihood that diseases such as tomato yellow leaf curl virus (TYLCV) could enter NSW. The removal of these provisions may reduce exporter's incentives (private incentive) to complete certificates and as TYLCV symptoms are often difficult to recognise, NSW importers would be unaware if imported products were infected with the disease, increasing damage to the NSW tomato industry.

In these examples, a decision by a business or an individual about whether to implement biosecurity controls is determined by private incentives only, with no consideration of the impact on third parties such as other businesses, the environment or the community. Landowners have a private incentive to implement biosecurity controls if the private benefits of the controls (i.e., increasing yields or reducing production costs) outweigh the private costs (i.e., labour and material costs and the cost of reputational damage). Government regulation, through the administration of Acts and regulations ensures an adequate level of biosecurity control is implemented where landholder's private incentives may be insufficient.

Biosecurity controls generally have the characteristics of being for a public good, namely 'non-excludability.' Non-excludability refers to the fact a landowner cannot prevent or charge another landholder from benefiting from their implementation of biosecurity controls. A reduction in the density of a pest or disease on one property is likely to reduce the impact of those pests or diseases on neighbouring properties. Under this circumstance, there is a likelihood that if left unassisted, an industry may fail to provide

an adequate level of control to manage biosecurity risks. Government intervention ensures that a suitable level of control is implemented and risks are minimised.

In the absence of government regulation, biosecurity risks and the extent of negative externalities associated with an action or transaction will increase resulting in market failure because an insufficient level of biosecurity control would be implemented.

Under this situation, there is an alternate scenario whereby a more efficient allocation of biosecurity control would result in an increase in the overall benefits to the community. Government intervention in the form of administering Acts and regulations provides a shared incentive to mitigate biosecurity risks and a disincentive to engage in risky activities. However, government intervention is only appropriate if the benefits of intervention outweigh the costs.

3.2.2 Biological risk assessment process

People and organisations with biosecurity duties, including government, would be expected to assess biosecurity risks and to make decisions about what is a reasonably practicable way to address those risks.

A number of risk identification and assessment methods are used by NSW DPI to identify and understand a biosecurity risk, determine the level of biosecurity risk posed to the economy, environment and community, and the appropriate management response. Details of these assessment tools can be found in **Appendix A**.

If a biosecurity risk to the economy, environment and/or community is identified using one of the outlined identification and assessment methods, NSW DPI will use the Biosecurity Threat Decision Tree to determine if, and to what level government intervention is required to address the risk. If government intervention is necessary, the Biosecurity Threat Decision Tree identifies whether it should be funded by government or if costs should be recovered from an individual, a firm or an industry on a fee-for-service or levy basis. The Biosecurity Threat Decision Tree can be found in **Appendix B**.

While not specifically designed to assess biosecurity risks, the Biosecurity Threat Decision Tree identifies those areas of the biosecurity spectrum most in need of government intervention. This allows NSW DPI to appropriately target government resources and, where necessary, identify areas of government operations where cost-recovery mechanisms should be deployed.

3.2.3 Inter-governmental agreements

NSW is a signatory to the Inter-Governmental Agreement on Biosecurity (IGAB) which was developed to improve Australia's national biosecurity system. The IGAB identifies roles and responsibilities of governments and outlines the priority areas for collaboration to minimise the impact of pests and disease on the Australian economy, environment and community.

Under the IGAB, there are a number of deeds that outline actions and cost sharing arrangements between jurisdictions and industries that are signatories to those deeds, should an emergency of national importance arise.

Action is required by the NSW Government to implement nationally consistent and effective biosecurity legislation without imposing a higher regulatory burden than the biosecurity legislation of other states and territories and to support cost sharing arrangements.

3.2.4 The NSW Biosecurity Strategy 2013- 2021

In 2013, the *NSW Biosecurity Strategy 2013-2021* (the Strategy) was released. The Strategy outlines how all three levels of government, industry and the wider community can work together to better manage the risks of animal and plant pests and diseases and weeds and contaminants from entering, establishing and spreading in Australia.

The Strategy identifies four key goals and a number of outcomes and strategies that will be pursued through implementation. The goals of the Strategy are that:

1. Biosecurity is a shared responsibility.
2. Biosecurity contributes to sustainable economic growth.
3. Biosecurity protects the environment and the community.
4. Biosecurity is underpinned by a responsive and consistent legislative framework.

To achieve Goal 4 of the Strategy, that biosecurity is underpinned by a responsive and consistent legislative framework, the following outcomes were identified:

1. A consistent and contemporary legislative framework.
2. Reduced red tape and improved market access.
3. Greater self-management of biosecurity risks by industries, businesses and other stakeholders.

Action is required by the NSW Government to achieve the goals and outcomes identified in the Strategy.

4.0 Objective of government action

The new legislative framework will adopt a risk based approach for preventing and responding to pests, diseases, weeds and contaminants. Its purpose is to:

- provide a framework for timely and effective prevention, elimination and minimisation of risks across the biosecurity spectrum which have the potential to adversely impact the NSW economy, environment and community
- facilitate emergency responses and easy transition to longer term management of biosecurity risks
- support best practice biosecurity management
- promote shared responsibility for biosecurity management between government, industry and the community and to clearly define rights, responsibilities and obligations with respect to biosecurity
- promote a framework for risk based decision making
- encourage better self-management of biosecurity risks
- facilitate market access of NSW businesses by meeting international standards and not jeopardising overseas and domestic market access
- reduce red tape by providing support for industry co-regulation and quality assurance programs
- ensure transparent cost recovery mechanisms.

The new legislative framework will comply with and support national deeds and agreements to which NSW is a signatory and achieve compatibility with Commonwealth legislation and legislation in other jurisdictions. Harmonised legislation across Australia will result in better alignment of resources and activities to reduce negative biosecurity impacts on the Australian economy, environment and community.

The new legislative framework will also deliver on Goal 4 of the Strategy that biosecurity is underpinned by a responsive and consistent legislative framework. It will also lend support to the remaining goals of the Strategy that biosecurity is a shared responsibility; that biosecurity contributes to sustainable economic growth; and that biosecurity protects the environment and the community.

5.0 The legislative framework

5.1 Existing legislative framework

NSW currently has 14 Acts that deal with the management of biosecurity risks. They are the:

- *Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991*
- *Apiaries Act 1985*
- *Deer Act 2006*
- *Fertilisers Act 1995*
- *Fisheries Management Act 1994* (Part 6 Division 4 Diseased fish and marine vegetation, Part 7 Division 6 Noxious fish and noxious marine vegetation, Schedule 6B Diseases affecting fish and marine vegetation, Schedule 6C Noxious fish and noxious marine vegetation)
- *Local Land Services Act 2013* (Part 10 Pests)
- *Non-Indigenous Animals Act 1987*
- *Noxious Weeds Act 1993*
- *Plant Diseases Act 1924*
- *Stock (Chemical Residues) Act 1975*
- *Stock Diseases Act 1940*
- *Stock Foods Act 1940*
- *Stock Medicines Act 1989* (Part 3 Permits, other authorisations and sections relating to inspector powers)
- *Wild Dog Destruction Act 1921* (destruction requirements and compliance powers).

Regulations and other legal instruments such as orders and proclamations have been developed over time to support the operation of these Acts.

Many of the above Acts contain provisions that are outdated and overly prescriptive. With increasing biosecurity risk and new global biosecurity challenges, the existing legislative framework is proving difficult to adapt to contemporary biosecurity management requirements. In addition, with each of these Acts detailing how to assess, respond to and manage biosecurity risks in isolation, duplication and inconsistency between the Acts has arisen particularly in relation to emergency management, compliance provisions and enforcement powers.

The existing legislative framework fails to recognise and formally acknowledge the important role played by industry and the community in the management of biosecurity risks. It also does not recognise biosecurity risks to the environment. Furthermore, the existing legislative framework is highly reliant on government intervention and enforcement by inspectors and authorised officers and it favours almost complete government responsibility for emergency and ongoing control programs.

5.2 The *Biosecurity Act 2015*

5.2.1 Background

The Act was passed by the NSW Parliament in September 2015 but has not yet commenced. When the Act commences, it will repeal 10 Acts and parts of four other Acts as listed in Chapter 5.1, as well as the regulations and legislative instrument made under those Acts.

The exception to this is Part 10 of the *Local Land Services Act 2013* and the corresponding part of the *Local Land Services Regulation 2014* (Part 13) that are not proposed to be repealed upon commencement of the Act. Legislative instruments made under Part 10 of the *Local Land Services Act 2013* including pest control orders are not proposed to be repealed at this time whilst the government is considering the National Resource's Commission Report into Pest Animal Management. These pest control orders will therefore continue to remain in force until such later time when they expire or are repealed.

The Act provides a flexible and responsive statutory framework to prevent, eliminate, minimise and manage biosecurity risks for the benefit of the NSW economy, environment and community. It adopts a proportionate risk based approach for responding to pests, diseases, weeds and contaminants.

Specifically, the Act aims to introduce controls to manage:

- animal and plant pests and diseases, widespread pest animals, weeds and contaminants that are significant for primary production industries and the broader economy
- threats to terrestrial and aquatic environments arising from animal and plant pests and diseases and contaminants
- animal and plant pests and diseases, high risk establishment non-indigenous animals, weed species and contaminants that may have an adverse effect on community activities, the environment, infrastructure and public health and safety.

The Act contains a variety of tools and powers to respond to and manage biosecurity risks across all risk areas (animal and plant pests and diseases, pest animals, weeds and contaminants) and across all sectors such as the meat, dairy, aquaculture, cropping, horticulture, apiary industries and the environment.

The adoption of a consistent approach to the management of biosecurity will provide greater flexibility in the management of existing and emerging biosecurity risks. Further, the removal of inconsistencies and duplication between existing Acts should simplify existing procedures, reduce risk and red tape, and provide savings to government and industry.

Provisions under the Act will better recognise and support the role of industry and other stakeholders in managing biosecurity risks. It will provide industry with the opportunity to develop more innovative ways to operate, comply and continue to grow. The development of best practice guidelines and better auditing, surveillance and reporting of pest, disease, weed and contaminants incursions will enable better biosecurity outcomes for all of NSW.

5.2.2 Biosecurity duties

To provide a framework for shared biosecurity risk management between government, industry and the community, the Act imposes a number of biosecurity duties that a person has which include:

1. a general biosecurity duty
2. a duty in relation to a prohibited matter event
3. a duty in relation to the existence of a biosecurity event.

The general biosecurity duty

Government, industry and the wider community need to work together to minimise biosecurity risks in order to achieve good biosecurity outcomes for NSW.

The general biosecurity duty provides:

> *"Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised."*

In many cases, the general biosecurity duty will focus on desired outcomes rather than prescribe exactly what a person must do.

For example with respect to weeds, the general biosecurity duty would require a land manager to reduce the impact of weeds found of their property on neighbouring lands. In many cases a land manager will discharge their general biosecurity duty by simply stopping the spread of weeds from their land by creating a weed free buffer zone. In other cases, where a measurable degradation of land occurs as a result of poorly managed weeds, it may be expected that land managers suppress and destroy a particular weed species.

This approach recognises that in most circumstances, the person with the general biosecurity duty is best placed to decide what is reasonably practicable in the circumstances to prevent, eliminate or minimise the particular biosecurity risk and should have the flexibility to make this decision. Whilst this provides an opportunity for innovation in how to manage a biosecurity risk, advisory material, industry standards and codes of practice as well as fact sheets prepared by government may provide assistance on how a person may discharge their general biosecurity duty. In the case of weeds, regional weeds committees have been tasked with preparing regional weeds plans that identify priority species and appropriate management arrangements. It is anticipated that a similar structure will be rolled out for pest animals. Actions detailed in these plans will provide detail to assist people understand their general biosecurity duty and how it may be discharged.

Authorised officers will also be able to give guidance on appropriate ways to discharge a person's general biosecurity duty. In some cases authorised officers may also issue a biosecurity direction or enter into a biosecurity undertaking to ensure a person takes the appropriate action to discharge their general biosecurity duty.

Where specified action is required to be taken by a person to prevent, eliminate or minimise a specific biosecurity risk, a mandatory measure will be prescribed in the regulation. Mandatory measures may apply generally or only in specified circumstances such as only to certain classes of persons or in relation to certain activities. If mandatory measures apply to a particular dealing or activity, then the relevant person must comply with those measures like any other regulation.

Examples of mandatory measures that apply to all persons in NSW include that a person must not move, import or sell any plant listed in Schedule 3 to the proposed Regulation (Weeds of National Significance (WoNS)) and a person must not use any part of an abalone (such as abalone viscera) for the purposes of fishing bait or berley.

An example of a mandatory measure that applies only to certain classes of persons or in relation to certain activities include that a person must not import bees, apiary products, hives or other apiary equipment into NSW from Tasmania.

In most cases, if a person complies with the relevant mandatory measures, they will have discharged their general biosecurity duty. In other cases, the mandatory measures may state the minimum actions that are required for the general biosecurity duty to be discharged, and depending on the circumstances, additional measures may also be required.

For example, to prevent footrot from occurring in NSW, the proposed Regulation contains a mandatory measure that sheep and goats must not be imported into NSW unless specified risk minimisation measures are taken as set out in the Biosecurity Manual. If footrot is diagnosed in a flock, then in addition to this mandatory measure, a biosecurity direction may be issued or a biosecurity undertaking may be accepted by an authorised officer to effectively quarantine the affected property and treat the outbreak.

The general biosecurity duty supports the principle of shared responsibility for biosecurity and acts as a ‘safety net’ which can be used for any biosecurity risk not specifically dealt with elsewhere in the legislation.

Duties in relation to prohibited matter events and biosecurity events

The Act provides that a person who becomes aware of, or suspects, that a prohibited matter event has occurred, is occurring, or is about to occur has a biosecurity duty to immediately notify the prohibited matter event in accordance with the requirements specified in the regulations.

The Act also provides that a person who becomes aware of, or suspects the existence of a biosecurity event has a biosecurity duty to immediately notify the biosecurity event in accordance with the requirements specified in the regulations.

A biosecurity duty to notify of a prohibited matter event or a biosecurity event only applies to the persons specified in the Act. This includes owners, occupiers, persons in charge and persons acting in a professional capacity.

5.2.3 Overview of management tools and powers

In addition to the biosecurity duties described above, there are nine key management tools available under the Act. These are:

1. Prohibited matter
2. Emergency response
3. Control orders
4. Biosecurity zones
5. Mandatory measures
6. Prohibited dealings
7. Registrable dealings
8. Certification
9. Auditing.

In addition, there are four compliance and operational management tools available under the Act that can be used in conjunction with the aforementioned management tools. These are:

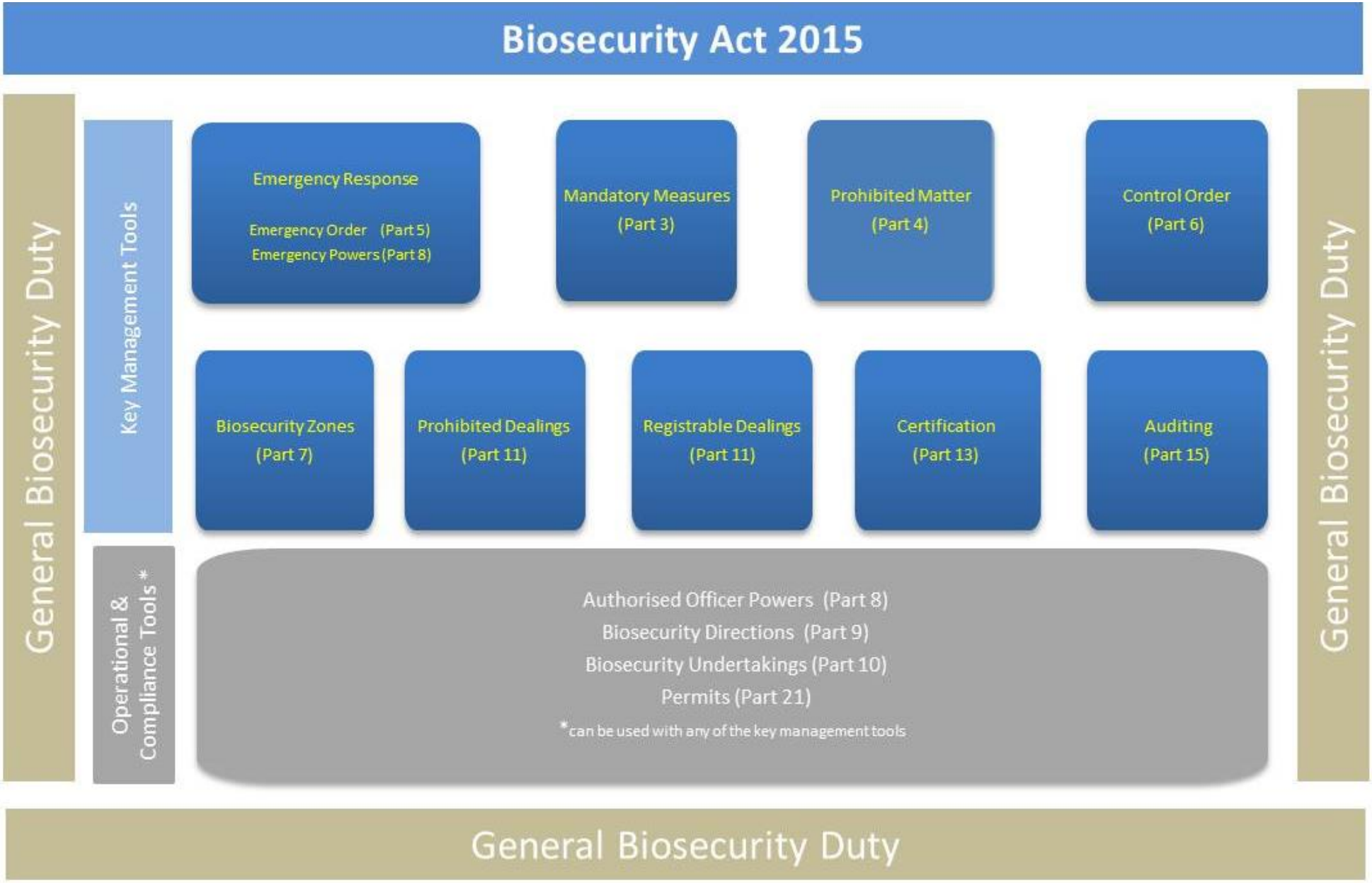
1. Authorised officer powers
2. Biosecurity directions
3. Biosecurity undertakings
4. Permits.

These management tools are defined in Chapter 2.0 however further relevant information about these tools is provided in Chapters 5.2.4 and 5.2.5 below.

It is noted the tool used or the combination of tools used to manage a biosecurity risk will be determined according to the biosecurity risk posed by the biosecurity matter or carrier, the desired management outcome and the cost of achieving that outcome.

Further, in the event of a pest or disease outbreak, the Act contains all of the necessary tools and powers to eradicate and/or contain the pest or disease, and to minimise the impact of those pests and diseases which cannot be eradicated. Similarly, in the event that a new non-indigenous animal, pest animal or invasive species is brought into or found in NSW, the Act contains all of the necessary tools and powers to eradicate or contain the animal or invasive species, and to minimise the impact of those animals or invasive species which cannot be eradicated or contained.

The diagram below provides an overview of the tools and powers contained in the Act.


Biosecurity Act 2015
General Biosecurity Duty
Key Management Tools
Emergency Response
Emergency Order (Part 5)
Emergency Powers (Part 8)
Mandatory Measures (Part 3)
Prohibited Matter (Part 4)
Control Order (Part 6)
Biosecurity Zones (Part 7)
Prohibited Dealings (Part 11)
Registrable Dealings (Part 11)
Certification (Part 13)
Auditing (Part 15)
Operational & Compliance Tools *
Authorised Officer Powers (Part 8)
Biosecurity Directions (Part 9)
Biosecurity Undertakings (Part 10)
Permits (Part 21)
*can be used with any of the key management tools
General Biosecurity Duty
General Biosecurity Duty

5.2.4 Key management tools

Prohibited matter

Prohibited matter is high risk matter we do not want in NSW and is not established in NSW, although we may occasionally have infestations that are quickly eradicated. Examples of prohibited matter include Foot and Mouth Disease, Highly Pathogenic Avian Influenza, Hendra Virus infection (other than in pteropid bats), Citrus Canker and Parthenium Weed.

Notification obligations apply with respect to prohibited matter. It is also an offence to deal with the presence or suspected presence of prohibited matter.

Emergency orders and powers

The Act contains rapid response powers enabling swift and decisive action to be taken in emergency situations. If such action is not taken, highly pathogenic and contagious matter such as highly pathogenic avian influenza, foot and mouth disease, *Phytophthora ramorum* (sudden oak death) and potato cyst nematode could quickly spread and cripple industries with devastating impacts on the economy and environment.

If an authorised officer reasonably suspects an emergency is occurring or is imminent, he or she will be able to activate some limited emergency powers until an emergency order is made by the Secretary or their delegate. An emergency order may prohibit, regulate or control the doing of anything, or require or authorise the doing of anything.

Control orders

Generally, a control order will be made by the Secretary or their delegate to prevent the introduction of, or to eradicate, particular biosecurity matter.

A control order can be made quickly so that a timely response can be mounted to a biosecurity risk or impact that does not require an emergency response, or while longer term management arrangements are being developed.

A control order can remain in place for up to 5 years. If it is clear longer term management is required, a biosecurity zone could be established.

Biosecurity zones

A biosecurity zone is made by regulation.

Generally, a biosecurity zone will be used to provide for the long term management of a particular biosecurity risk or biosecurity impact.

A biosecurity zone will generally apply to a specified part, or parts of NSW.

Mandatory measures

Mandatory measures are made by regulation.

The actions covered by a mandatory measure include refraining from doing a thing or adopting any procedures or programs.

Mandatory measures will generally apply across the whole of NSW.

Prohibited dealings

These are dealings with non-indigenous animals that are prohibited either absolutely or conditionally.

Registrable dealings

Registration will be required to engage in a registrable dealing under the Act. Currently the Act identifies dealing with bees and dealing with certain non-indigenous animals as registrable dealings.

Certification

Certification provides information that a product is free from certain pests and diseases or it has been treated in a manner in accordance with trade requirements. These provisions will also provide support and recognition of some industry based market assurance schemes.

Auditing

Provision is made for the appointment of biosecurity auditors. Auditing is an effective compliance tool that will be available to ensure good governance and compliance with conditions of accreditation, registration and individual permit holders.

5.2.5 Compliance and operational management tools

Authorised officer powers

Powers of authorised officers will be used to manage biosecurity risks and to investigate, monitor and enforce compliance with the Act. Powers of authorised officers include information gathering powers, investigation and risk management powers and entry to premises.

Biosecurity directions

Biosecurity directions will usually be given by an authorised officer in writing though in some cases may be given verbally. If given verbally, written confirmation of the verbal direction will be provided within 7 days unless the direction has already been complied with. Failure to comply with a biosecurity direction can attract prosecution and significant penalties.

Biosecurity undertaking

As an alternative to issuing a biosecurity direction, an authorised officer can accept an undertaking from a person to mitigate or manage a biosecurity risk. An authorised officer can only accept an undertaking from a person and cannot give an undertaking.

A biosecurity direction may be issued in the event that a biosecurity undertaking is contravened, likely to be contravened, or the biosecurity risk is considered significant.

Permits

Permits authorise activities that would otherwise be prohibited under the legislation. Permits can be issued to an individual or to a class of persons and are generally issued for operational flexibility, to enable business continuity or to allow research to be conducted on high risk biosecurity matter.

6.0 The proposed *Biosecurity Regulation 2016*

6.1 The proposed Regulation

The proposed Regulation has been drafted by Parliamentary Counsel's Office and has been informed by a program of consultation that has been undertaken over the last year.

The object of the proposed Regulation is to make provision with respect to the following:

a) specifying that testing for a biosecurity matter or releasing or publishing the results of a test is a dealing with the matter
b) the mandatory measures that persons are to take with respect to biosecurity matter or carriers
c) the establishment of biosecurity zones
d) the giving of notification
e) the granting of biosecurity registration
f) the accreditation of biosecurity certifiers
g) the appointment of biosecurity auditors
h) the approval of accreditation authorities
i) the granting of permits
j) creating an offence of removing (or interfering with) labels and identifiers required under the Act
k) the setting of fees that are payable for services under the Act
l) the offences for which penalty notices may be issued.

The proposed Regulation has been structured as follows:

Part 1 – Preliminary

Part 2 – Mandatory measures

Division 1 – Preliminary
Division 2 – Notification of pests and diseases
Division 3 – Testing for prohibited matter
Division 4 – Animal pests and diseases
Division 5 – Aquatic pests and diseases
Division 6 – Plant pests and diseases
Division 7 – Invasive species
Division 8 – Weeds
Division 9 – Animal food
Division 10 – Chemicals in food animals and animal products
Division 11 – Fertilisers, liming materials and trace element products

Part 3 – Biosecurity zones – aquatic pests and diseases

Division 1 – Preliminary
Division 2 - QX disease biosecurity zone
Division 3 – POMS biosecurity zone

Part 4 - Biosecurity Zones – plant pests and diseases

Division 1 - Preliminary
Division 2 - Citrus red mite biosecurity zone
Division 3 - Grapevine phylloxera biosecurity zone
Division 4 - Potato biosecurity zone
Division 5 - Rice biosecurity zone

Part 5 – Biosecurity Zones –weeds

Division 1 - Preliminary
Division 2 - Alligator weed biosecurity zone
Division 3 - Bitou bush biosecurity zone
Division 4 – Water hyacinth biosecurity zone

Part 6 – Notification

Part 7 - Biosecurity registration

Division 1 – General provisions regarding biosecurity registration
Division 2 – Conditions of registration - bees
Division 3 – Conditions of registration - non-indigenous animals

Part 8 – Accreditation of biosecurity certifiers

Part 9 – Appointment of biosecurity auditors

Part 10 – Approval of accreditation authorities

Part 11 – Permits

Part 12 – Miscellaneous

Schedule 1 – Pests and diseases required to be notified
Schedule 2 – Mediterranean fruit fly host plants
Schedule 3 – Weeds
Schedule 4 – Ingredients in stock food – maximum amounts
Schedule 5 – Fees
Schedule 6 – Penalty notice offences

6.2 Matters not contained in the proposed Regulation

There are a number of matters not contained in the proposed Regulation for the purpose of this RIS.

The National Livestock and Identification System (NLIS)

The NLIS is Australia's permanent whole-of-life identification system which aims to ensure individual cattle, sheep, pigs and goats can be traced from property of birth to slaughter for biosecurity, food safety, product integrity and market access purposes. The operation of the NLIS is the responsibility of Meat and Livestock Australia Ltd.

The *Stock Diseases Regulation 2009* currently contains provisions that relate to stock identification and traceability and provides the legislative underpinning for the NLIS. Upon commencement of the Act, the *Stock Diseases Regulation 2009* will be repealed and the necessary legislative underpinning for the NLIS will be included in a regulation made under the Act.

The NLIS provisions are not contained in the proposed Regulation as they are exempt under the *Subordinate Legislation Act 1989* from the requirement to prepare a RIS. However, details of the proposed NLIS framework that will be contained in regulation at a later date is accessible at: www.dpi.nsw.gov.au/biosecurityact.

Amendments to Schedules in the Act

The Act provides that Schedule 2 to the Act (prohibited matter), Schedule 3 to the Act (prohibited dealings) and Schedule 4 to the Act (registrable dealings) can be amended by regulation.

Proposed amendments to the Schedules to the Act are not contained in the proposed Regulation as they are exempt under the *Subordinate Legislation Act 1989* from the requirement to prepare a RIS. However, details of the proposed amendments are accessible at: www.dpi.nsw.gov.au/biosecurityact.

Pest animals

Provisions relating to pest animals are not contained in the proposed Regulation. This is because the NSW Government is considering its response to the Natural Resource Commission's report – *Shared Problem, Shared Solutions*, *Pest Animal Management Review*. Regional pest animal management arrangements will need to be developed in consultation with stakeholders under the new legislation following this response.

Part 10 of the *Local Land Services Act 2013* will not be repealed upon commencement of the Act and the existing pest control orders for declared pests will remain in force after the Act commences until a date not later than January 2019, being the date upon which the existing pest control orders expire. Pest control orders currently apply to feral dromedary camels, wild dogs, wild rabbits, European red foxes, feral pigs and locusts (Australian Plague, Spur-Throated and Migratory).

6.3 The Biosecurity Manual

Part 2 of the proposed Regulation contains mandatory measures that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Parts 3, 4 and 5 of the proposed Regulation establish biosecurity zones that contain measures to prevent, eliminate, minimise or otherwise manage a biosecurity risk or biosecurity impact.

A dealing with biosecurity matter or a carrier which is prohibited by Part 2, 3, 4 or 5 of the proposed Regulation, may however be permitted if specified risk minimisation measures are taken or other conditions are met as set out in the Biosecurity Manual.

The Biosecurity Manual is a legal document that will support the proposed Regulation and provide operational flexibility for managing biosecurity risks.

The Biosecurity Manual is on exhibition, along with a copy of the proposed Regulation and RIS so that government, industry and the community are fully aware of the interplay between the proposed Regulation and the Biosecurity Manual, in so far as what a person will be required to do to enable them to deal with biosecurity matter or a carrier that would otherwise be prohibited. The Biosecurity Manual is accessible at: www.dpi.nsw.gov.au/biosecurityact.

The Biosecurity Manual does not form part of the proposed Regulation. However, comment on the Biosecurity Manual may be provided to enable stakeholders to give full consideration of the provisions contained in the proposed Regulation.

6.4 Consultation during development of the proposed Regulation

NSW DPI has sought input from a large range of stakeholders including individuals, farmers, peak industry and environmental bodies, government agencies and field experts on the proposed approach to managing certain biosecurity risks. This input has used to inform the content of the proposed Regulation.

The consultation to date has included:

- release of 37 discussion information papers, on the proposed management approach for particular biosecurity risks with over 280 submissions received
- over 700 stakeholders mailed or emailed copies of 37 discussion papers
- dedicated website page www.dpi.nsw.gov.au/content/biosecurity/biosecurity-act-2015 with copies of all discussion papers and feedback on consultation
- 15 posts on the NSW DPI Biosecurity Facebook page reaching over 8,400 people
- animation on the *Biosecurity Act 2015* published on the NSW DPI website, weeds extranet and NSW DPI Biosecurity Facebook page
- 9 videos produced, and placed on the DPI website and the Biosecurity Facebook page. These videos talk about personal experiences with biosecurity from individuals, indigenous groups, government and industry, including messages from Scott Hansen, Director General DPI and Bruce Christie, Deputy Director General DPI Biosecurity & Food Safety
- 44 presentations introducing the *Biosecurity Act 2015* to stakeholders, industry bodies and advisory groups
- 35 meetings with Local Land Services groups including regional weeds committees, and community advisory groups including natural resources, local government, industry and Aboriginal advisory groups.

The NSW Biosecurity Advisory Committee has provided expert advice on stakeholder engagement and consultation and provided independent advice and review of the proposed regulatory approach for the future management of biosecurity in NSW.

7.0 Economic methodology

The economic assessment for this RIS comprises two components, these being, an assessment of:

1. impacts by subject matter which is conducted for all options relative to the base case - see Chapters 8 – 20

2. costs and benefits for each option relative to the base case which is provided in Chapter 21.

In accordance with the requirements of the *Subordinate Legislation Act 1989* and the Guide to Better Regulation, these assessments:

- consider a range of viable options (including a non-regulatory option)
- identify and assess the impacts of government action for each option relative to a base case
- consider the costs and benefits of each option relative to the base case
- identify a preferred option that provides the greatest benefit to stakeholders and the community.

7.1 Identification of options

The base case of this RIS is to maintain existing levels of biosecurity regulation. Three options will be assessed against the base case which are:

- Option 1: No regulation is made to support the Act
- Option 2: Self-regulation (no NSW Government intervention, i.e., no Act, no Regulation)
- Option 3: Make the proposed Regulation under the Act.

7.1.1 Option 1: No regulation is made to support the Act

Under Option 1, existing levels of regulation that deal with the management of biosecurity risks would lapse on the date the Act commences and no new regulation would be made in its place.

As detailed in Chapter 5.2, the Act contains a number of duties that a person may have including the general biosecurity duty. It also contains a number of key management tools and operational or compliance management tools. Together, these provide a solid framework for the prevention, elimination and minimisation of biosecurity risks.

However, without a regulation to support the operation of the Act:

- the requirement for a person to take specified actions to prevent, eliminate or minimise a biosecurity risk (comply with a mandatory measure) would not exist which may jeopardise trade
- there would be no set requirement for how a person is to notify of a prohibited matter event or a biosecurity event
- biosecurity zones could not be established for the purpose of preventing, eliminating, minimising or managing a biosecurity risk or impact
- conditions of registration could not be imposed, except by the Secretary of the Department

- there would be less transparency in the additional matters that a decision-maker may consider when deciding whether to grant, renew, suspend or cancel biosecurity registration, accreditation of a biosecurity certifier, appointment of a biosecurity auditor, approval of an accreditation authority or a permit
- there would be no prescribed fees for goods and services under the Act
- there would be no offences for which penalty notices may be issued
- amendment could not be made to the Schedules to the Act unless a Bill containing the proposed amendments was introduced into and passed by Parliament. The Schedules to the Act contain the list of prohibited matter (Schedule 2), prohibited dealings (Schedule 3) and registrable dealings (Schedule 4).

7.1.2 Option 2: Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention with regard to biosecurity within NSW. As such, the NSW Government would relinquish its official role in developing and administering biosecurity legislation and providing goods and services to manage risks to the economy, environment or community arising from the negative impacts of pests, diseases, weeds and contaminants. Actions to manage biosecurity risks under this option would fall to risk creators, such as industry groups or land owners or managers, and is referred to as self-regulation (NSW Government 2009).

Self-regulation would involve industry making use of codes of practice or voluntary rules to manage and minimise the impacts of biosecurity risks. An effective industry-led code of practice would require a whole industry to commit to jointly implement coordinated actions that result in the early identification and successful mitigation of risks. A single industry code would be preferred as the biosecurity risks are most likely to have flow-on effects to a range of industries, the environment and community, and controls would need to be coordinated with other Australian jurisdictions. However, a single industry code of practice may be difficult to coordinate and implement, as there are many different industries in NSW with competing goals, drivers, preferences and trade requirements. Adoption of a Code would be voluntary and enforcement may be problematic given that there would be no penalties for non-compliance.

In Chapter 3.2.1 it is argued that in the absence of government intervention, market failure will result in an insufficient level of biosecurity controls being implemented. As such, the implementation of an industry-led code of practice is likely to be problematic. This is largely as a result of the public good characteristics of biosecurity (non-excludability), which means a landowner cannot prevent spill-overs to neighbours from their biosecurity controls. Government regulation for a high risk situation provides responsibility for individual action to implement a suitable level of control for ongoing market access.

An effective industry-led code of practice could potentially provide minimum controls to manage biosecurity risk. However, arguments are presented in Chapter 3.2.1 that support some government intervention to ensure that sufficient levels of services are provided, including compliance and enforcement activities and the administration of legislation to respond to risk and market access.

A code of practice could include a range of principles to manage biosecurity in NSW, such as:

- agreement on and implementation of best practice biosecurity management and eradication measures
- coordinated responses to potential biosecurity threats, as required
- implementation of agreed NSW border controls to manage the movement of biosecurity threats from, within and into the state.

These principles should reinforce the cost effective management of biosecurity risks. That is, the implementation of controls needs to minimise the potential impacts of biosecurity risks and provide benefits that outweigh the costs of implementing controls.

An effective industry-led voluntary management of biosecurity risks and services may provide a sufficient level of benefit to industry. However, a voluntary approach is unlikely to provide sufficient biosecurity services to maintain public resources such as keeping waterways free of aquatic pests and managing weeds in public areas. As the provision of voluntary biosecurity services are administered by landholder's, it is likely their private incentives would be insufficient for the provision of biosecurity services to benefit the broader environment and the public community resources.

Risk creators, who are persons that are likely to transfer the pest or disease and/or increase the likelihood of a pest or disease outbreak occurring, would need to be included in a voluntary code of practice for it to have any chance of success. If they are not included there is a greater likelihood of negative economic, environmental and community consequences and the risk creator would not contribute to the costs of controls.

Because biosecurity affects the environment and the community more broadly, an education strategy for the community would play an important role in the implementation of the self-regulation option. Community education would increase awareness of what biosecurity is, risks to look out for and actions that can be taken to share in the responsibility for biosecurity. The education strategy should encourage actions that manage biosecurity risks and minimise the potential impacts on the economy, environment and community. The government may be involved in providing information and advice on this strategy (NSW Government 2009).

The education strategy would use a range of media to disseminate information to stakeholders and the broader community such as mail outs, website information, seminars, letterbox drops, targeted media releases and television and radio campaigns. To be successful, the education campaign would need to be intense, ongoing and would require stakeholder and community organisation and co-operation.

It should be noted that under this option, Commonwealth Government biosecurity legislation would be maintained. As noted in Chapter 3.2.3, NSW is a signatory to a national framework for the management of biosecurity risks and the Commonwealth Government recently enacted their *Biosecurity Act 2015* which provides a legislative framework to manage the biosecurity risks associated with goods, people and conveyances entering Australia.

7.1.3 Option 3: Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. The proposed Regulation seeks to ensure that the objects of the Act are achieved by specifying the actions to be taken to prevent, eliminate or minimise biosecurity risks. The proposed Regulation, when compared to existing regulatory arrangements, contains provisions that represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

The contents of the proposed Regulation and a comparison of its provisions against existing regulatory arrangements are detailed in each subject matter chapter (see Chapters 8 – 20). A review and risk assessment of existing regulatory arrangements has been undertaken by NSW DPI to determine the preferred management approach.

The proposed Regulation reduces risk, red tape and administrative and compliance burden and costs to government and industry by consolidating existing regulations and legislative instruments made under the 14 existing Acts into one single regulation. This will result in a regulation that:

- reduces duplication and inconsistency
- contains only those provisions that are necessary and that where included, are appropriate and proportionate to risk
- simplifies and streamlines provisions
- repeals redundant clauses.

7.2 Machinery clauses

The proposed Regulation will make a number of provisions of a machinery nature. Generally speaking, machinery clauses are those which could broadly be described as relating to ‘process’ rather than substantive policy matters.

Machinery clauses in the proposed Regulation include:

- Clause 1- Name of the Regulation
- Clause 2 - Commencement date of the Regulation
- Clause 3 – Interpretation of certain terms used throughout the proposed Regulation
- Clause 76, 91, 97, 102 and 106 – Deemed refusal of application
- Clause 77, 92, 98, 103 and 107 – Application for variation of biosecurity registration, accreditation, appointment or permit
- Clause 109 – Delegation by Chief Veterinary Officer.

Matters of a machinery nature do not require a RIS. This RIS does not consider these provisions in detail however comment on the above provisions may be included in submissions and will be considered. As stated in Chapter 6.3, the Biosecurity Manual does not form part of the proposed Regulation and does not require a RIS.

7.3 Identifying impacts

An assessment of the positive and negative impacts for each of the three options has been undertaken relative to the base case in each subject matter chapter of the RIS (see Chapters 8-20). The direct and indirect impacts of each option have also been considered and are described in their respective chapters. Direct impacts are those immediate impacts on stakeholders. Indirect impacts are those that affect a third party, other than those directly impact.

A summary of the types of impacts that have been considered, in accordance with the Guide to Better Regulation and the seven principles of better regulation (NSW Government 2009) are provided in **Table 1**.

It is noted that the costs and benefits relating to resources allocation and competition impacts have not been assessed as these factors are not impacted by changes to the biosecurity legislative framework.

Table 1: Examples of impacts

ECONOMIC IMPACTS	GOVERNMENT IMPACTS
• material effects on cash flow, profitability or prices • initial and ongoing costs of complying with regulatory requirements (i.e., including fees or government charges) • changes to business practices (e.g., production practices or increased input costs) • large changes to definitions, including rules, thresholds and tests • likely to affect the ongoing profitability and competitiveness of business • impacts resource allocation, savings and investment • innovation is stifled.	• red tape reduction • change in government administration of regulatory instruments • substantially increases resources required (e.g., compliance activities or collection and recording of information) • reduces productivity through time consuming, duplicative or unnecessary processes and systems • significantly reduces operational capacity and efficiency • increases or reduces the financial burden on government (compliance costs).
SOCAIL AND ENVIRONMENTAL IMPACTS	**COMPETITION IMPACTS**
• displaces the community, or part of a community • significantly impacts employment or skills development • restricts basic community services, and/or access to these services • substantial or irreversible environmental damage • high level of concern from the community as a group.	• prevents entry or seriously restricts the conduct of business • creates a monopoly on a product or service • reduces the ability of, or incentives for, business to compete • reduces consumer choice or access to goods and services (e.g., increases prices) • impacts on employment and the mobility of labour. • loss of market access.

Source: NSW Government 2009 and Queensland Government 2016

8.0 Animal pests and diseases

8.1 Existing legislative framework

There are three existing Acts and Regulations that regulate the management of animal pests and diseases and carriers of animal pests and diseases in NSW.

The *Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991* provides for the detection, containment and eradication of certain diseases affecting animals and certain animal pests. *The Animal Diseases and Animal Pests (Emergency Outbreaks) Regulation 2012* exempts certain persons (for example, those that assist in the diagnosis of disease in humans or animals or those involved in veterinary, medical or scientific research) from offences relating to the possession of animal disease agents.

The *Apiaries Act 1985* regulates the keeping of honey bees in NSW by requiring and providing for the registration of beekeepers and preventing the introduction of, and providing for the control and eradication of, certain diseases which afflict bees and apiaries in NSW. The *Apiaries Regulation 2013* sets out conditions of registration and provides additional grounds upon which applications for registration can be refused, suspended or cancelled.

The *Stock Diseases Act 1923* provides for the control of diseases of stock including requirements for notification, quarantine and destruction. Furthermore, it sets out powers of inspectors and creates offences. The S*tock Diseases Regulation 2009* provides for the treatment of stock against a range of different diseases, vaccinations, requirements for the identification and tracing of stock and the movement of things out of quarantine areas and across quarantine lines.

A number of legislative instruments including proclamations and orders have been made under the above Acts to specify how particular animal pests and diseases are to be managed. These instruments for example, specify restrictions on the importation or introduction of animals into NSW on account of various pests and diseases.

8.2 Proposed management

The Act will wholly repeal the *Animal Diseases and Animal Pests (Emergency Outbreaks) Act* 1991, the *Apiaries Act 1985* and the *Stock Diseases Act 1923*. The Act will also wholly repeal the *Animal Diseases and Animal Pests (Emergency Outbreaks) Regulation 2012,* the *Apiaries Regulation 2013,* the *Stock Diseases Regulation 2009* and all legislative instruments made under these Acts.

It is proposed that animal pests and diseases, and carriers of animal pests and diseases will be managed using the following key management powers and tools under the Act:

1. Prohibited matter
2. Emergency powers and emergency orders
3. Mandatory measures
4. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2. No control orders or biosecurity zones are currently proposed in the management of animal pests and diseases or their carriers. However, control orders or biosecurity zones may be made in the future should the need arise.

The proposed Regulation contains a number of mandatory measures and these are set out in Chapter 8.3 below.

8.3 The proposed Regulation

8.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 2 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation and the risk minimisation measures and conditions contained in the Biosecurity Manual have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

It is noted most existing regulatory arrangements cannot be transitioned exactly as is because all new management arrangements will need to be made under the heads of power contained in the Act. There may also be instances where for example, national definitions or national lists need to be adopted for consistency with other states or jurisdictions or where the scientific or common name of a pest or disease has been amended. Despite this, the proposed management approach has been determined as a transition of existing regulatory arrangements where there has been no noticeable change or impact on stakeholders.

Table 2: Overview of management arrangements to minimise the risks associated with animal pests and diseases, carriers or dealings

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Braula fly - carriers	**Mandatory Measure (clause 9)** A person must not import bees, apiary products, hives or apiary equipment into NSW from Tasmania unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Cattle tick – carriers	**Mandatory Measure (clause 10)** A person must not import cattle, camelids or equines, deer, goats or sheep into NSW from Queensland, the Northern Territory or Western Australia unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓	✓ Restrictions regarding the importation of fodder from Queensland, the Northern Territory and Western Australia have been removed as well as the restriction on vaccinating stock with the tick fever vaccine.		
Footrot carriers – sheep and goats	**Mandatory Measure (clause 11)** A person must not vaccinate or attempt to vaccinate a sheep or goat against footrot unless approved to do so by the Chief Veterinary Officer. **Mandatory Measure (clause 11)** A person must not import a sheep or a goat into NSW unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓	✓ Additional requirement that a person who brings a sheep or a goat into NSW must lodge a copy of the completed and signed animal health statement with Local Land Services within 2 working days of the arrival of the sheep or goats at their		

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
			destination.		
Newcastle disease – carriers	**Mandatory Measure (clause 12)** The owner of a commercial flock of domestic chickens must ensure that the chickens are vaccinated in accordance with the national Newcastle diseases vaccination program – Standard operating procedures published by Animal Health Australia.	✓			
Porcine brucellosis - carriers	**Mandatory Measure (clause 13)** A person must not import a pig into NSW from Queensland or any part of Western Australia or the Northern Territory that lies north of the Tropic of Capricorn unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.		✓ Additional requirement that a person who brings a pig into NSW from a porcine brucellosis high risk area must lodge a copy of the completed and signed declaration by the owner or manager of the property of origin with Local Land Services within 2 working days of the arrival of the pigs at their destination.		
Rabies – vaccinating	**Mandatory Measure (clause 14)** A person must not vaccinate or attempt to vaccinate an animal against rabies unless approved to do so by the Chief Veterinary Officer.	✓			
Prohibited pig feed	**Mandatory Measure (clauses 33)** A person must not feed stock food to a pig if the stock food contains a mammal product unless the feeding of the mammal product is otherwise authorised by the clause.		✓ Adoption of nationally agreed definition of prohibited pig feed as agreed to by the national Animal Health Committee. The new definition streamlines existing swill feeding legislation by being more specific about what constitutes feeding prohibited pig		

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
			feed to pigs. The new definition of prohibited pig feed only includes material of mammalian origin whereas the current definition includes bird carcasses.		
Feeding restricted animal material to ruminants	**Mandatory Measure (clause 34)** A person must not feed stock food to a ruminant if the stock food contains a vertebrate product unless the feeding of the vertebrate product to the ruminant is otherwise authorised by the clause.	✓			
Labelling requirements in respect of restricted animal material	**Mandatory Measure (clause 35)** A person must not supply stock food to another person unless the packaging or container holding the stock food prominently displays, a statement in the manner prescribed stating: a) in the case of stock food that contains restricted animal material – a warning statement that the stock food contains restricted animal material and must not be fed to cattle, sheep, goats, deer or other ruminants, b) in the case of stock food that does not contain restricted animal material – a statement that the stock food does not contain restricted animal material.	✓			
Notification of animal pests and diseases – duty to notify	**Mandatory Measure (clause 7)** A person who in the course of engaging in a dealing with biosecurity matter or a carrier becomes aware of, or suspects, the presence of any pest or disease listed in Schedule 1 to the Regulation must notify the presence of the pest	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	or disease in accordance with Part 6 of the Regulation within 1 working day after the person first suspects or becomes aware of the presence (see **Table 3** below for a list of the animal pests and diseases to which this provision applies).				
Notification of animal pests and diseases – information required to be notified	**Regulatory provision (clauses 71)** Notification of a prohibited matter event, a biosecurity event or a matter that is required to be notified under the Regulation must include: a) the person's full name and contact phone number, b) details of the notifiable matter, c) the location of the matter (including the property identification code if applicable), d) details of the significant biosecurity impact in the case of a biosecurity event, and e) any other information reasonably requested by the person or body to whom notification is required to be given.	✓			
Notification of animal pests and diseases – manner in which notification is to be given	**Regulatory provision (clause 72)** Notification is to be given: a) in the case of a prohibited matter event or a biosecurity event, by immediately verbally notifying an authorised officer or in any other manner approved by the Secretary and published on the website of the Department b) in the case of a matter required to be notified under the Regulation, in a manner approved by the Secretary.	✓			
Testing for prohibited	**Mandatory Measure (clause 8)** A person must not test or attempt to test for a			✓ Provisions relating to	

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
matter - how tests must be conducted	prohibited matter unless: a) the test is carried out in, or is carried out elsewhere and is confirmed in, a laboratory that is accredited by the National Association of Testing Authorities, Australia for such testing, or b) the test is carried out at a laboratory by a person for diagnostic purposes and the Secretary has approved the laboratory, the person and the diagnostic technique to be used, or c) the test is carried out at a place other than a laboratory by a person for diagnostic purposes and the Secretary has approved the person and the diagnostic technique to be used, or d) the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training.			diagnostic testing and how tests are to be conducted have been broadened so that they apply not only to avian influenza and bovine spongiform encephalopathy but to all pests or diseases of animals listed as prohibited matter in Schedule 2 to the Act. Further detail regarding this provision is provided at 8.3.3 below.	

8.3.2 Mandatory measure – Notification

Clause 7 of the proposed Regulation contains a mandatory measure that imposes a requirement for a person to notify of the presence or suspected presence of certain animal pests and diseases within 1 working day after the person first suspects or becomes aware. **Table 3** sets out the pests and diseases to which this notification requirement applies.

Table 3: Notifiable animal pests and diseases

Scientific name	Common name
Aethina tumida	Small hive beetle
Anaplasma marginale	Anaplasmosis
Ascophaera apis	Chalkbrood
	Avian influenza
Babesia bigemina	Babesiosis
Babesia bovis	Babesiosis
Brucella suis	Brucellosis
Cysticercus bovis	Bovine cysticercosis
Cysticercus cellulosae	Porcine cysticercosis
	Chlamydiosis in poultry and other birds
	Duck virus enteritis/Duck plague
	Duck virus hepatitis
	Egg drop syndrome (EDS 76)
	Enzootic bovine leucosis
	Equine herpesvirus 1 (abortigenic strain)
	Equine infectious anaemia
	Equine viral arteritis
	Footrot in sheep and goats
	Infectious laryngotracheitis
	Influenza pandemic A(H1N1)pdm09
	Leishmaniosis
Melissococcus plutonius	European foulbrood
Mycobacterium avium	Avian tuberculosis
Nosema apis and *Nosema ceranae*	Nosemosis
Paenibacillus larvae	American foulbrood
	Paratuberculosis (Johne's Disease)
	Pigeon paramyxovirus
	Porcine myocarditis (Bungowannah virus infection)
Rhipicephalus (Boophilus) australis	Cattle tick
Rhipicephalus (Boophilus) microplus	Cattle tick
Salmonella enteritidis	Salmonella Enteritidis infection in poultry
Salmonella pullorum	Pullorum disease
	Trichomoniasis
	West Nile Virus infection – clinical

All of the animal pests and diseases in **Table 3** could have an adverse impact on the economy, environment and/or community. The majority of these pests and diseases appear on the National List of Notifiable Animal Diseases as they are recognised as having a significant impact at the state level. Others are notifiable to satisfy export requirements. In this respect, existing regulatory arrangements are being transitioned without amendment, subject to some scientific and common name changes that have occurred at the national level.

It is noted in addition to the requirement to notify the presence or suspected presence of those pests and diseases listed in **Table 3**, there is also a requirement to notify the presence or suspected presence of those animal pests and diseases which are listed as prohibited matter in Schedule 2 to the Act. Examples of pests and diseases listed as prohibited matter include anthrax, Hendra virus infection (other than in pteropid bats) and Australian bat lyssavirus, as well as serious exotic pests and diseases such as rabies, bovine spongiform encephalopathy and foot and mouth disease.

8.3.3 Mandatory measure - Testing for animal pests and diseases

The *Stock Diseases Regulation 2009* currently contains provisions that relate to the testing of avian influenza and bovine spongiform encephalopathy. The proposed Regulation broadens existing testing provisions and applies a standard testing provision to all pests and diseases of animals listed as prohibited matter in Schedule 2 to the Act.

The proposed Regulation provides that testing is carried out in a laboratory accredited by the National Association of Testing Authorities (NATA) Australia for such testing (e.g., the use of a pen-side tests), or that the testing is carried out at a laboratory or other place by a person for diagnostic purposes and the Secretary has approved the laboratory, the person, or if the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training. This provision applies regardless of whether initial testing produces a positive, inconclusive or negative test result because the pests and diseases to which this provision applies can have serious impacts on economic production, market access and/or human health. It is important that surveillance and management of these pests and diseases is underpinned by accurate diagnostic testing.

The *Stock Diseases Regulation 2009* contains provisions that relate to the release of test results for avian influenza and bovine spongiform encephalopathy. Controls relating to the release of test results will be broadened to include all prohibited matter listed in Schedule 2 of the Act and will be imposed as a condition by the Secretary in relation to the carrying out of a test. This is because there is the potential for the inappropriate release of test results for these serious pests and diseases to cause public alarm and to disrupt export markets for animals and animal products.

8.4 The general biosecurity duty

Dealing with an animal pest or disease or a carrier of an animal pest and disease that presents a biosecurity risk will also be subject to the general biosecurity duty.

The pests and diseases listed in **Table 3** above will be managed using the general biosecurity duty – with the additional notification requirement prescribed as a mandatory measure. Other pests and diseases such as sheep lice and ovine brucellosis will be managed solely by the general biosecurity duty.

The general biosecurity duty requires that a person takes measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- preventing or restricting the movement of stock that show signs of a disease to minimise the risk of spread of the disease to other stock on the property or to stock on neighboring properties
- implementation of an on-farm biosecurity plan which for example, regulates the entry of vehicles, people and equipment onto the farm or into specific areas within the farm or prescribes hygiene practices to be followed
- offering for sale only animals that are believed to be healthy and free of pests and diseases and potential buyers requesting documents that the animal is disease free prior to sale
- making due enquiries when purchasing animal feed, including requesting a fodder vendor declaration form or commodity vendor declaration form, to avoid the risk of introducing weeds and pests such as cattle tick or exposing stock to chemical contaminants.

There is one provision in the *Stock Diseases Regulation 2009* relating to anthrax vaccination which has not been carried forward in the proposed Regulation. The current provision provides that stock must not be moved within 42 days after the stock have been vaccinated against anthrax except under a permit. This provision was put in place to manage the risk that vaccinated animals could enter the food chain while still under the withholding period of the vaccine.

When livestock are sold for slaughter, it is standard industry practice that the vendor supplies a completed and signed National Vendor Declaration (NVD) disclosing all relevant information about the stock's treatment history. A person's general biosecurity duty would require completion of the NVD and is considered sufficient to address the risk of stock vaccinated for anthrax from entering the human food chain.

8.5 Identification of impacts

The proposed Regulation contains a number of mandatory measures and regulatory provisions to manage the risks associated with animal pests and diseases and carriers of animal pests and diseases. These represent a transition of existing regulatory arrangements as is, or with minor or major amendment.

8.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to animal pests and diseases would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation:

- prescribed control measures relating to matters such as treatment, movement and vaccination of stock would not exist
- persons would not be required to notify of the presence or the suspected presence of certain animal pests and diseases
- there would be no labelling or content restrictions for stock feed that may be fed to livestock

- testing for and vaccination against animal pests and diseases could be conducted in any manner by any person.

The removal of existing levels of regulation would increase biosecurity risks for the NSW economy, environment and community. In particular:

- The immediate cost of doing business in NSW would reduce. However in the long-run, having no regulation would increase the likelihood of animal pests and diseases entering into and spreading across NSW. This would result in decreased access to both domestic and international export markets for agricultural industries, increased costs of pest and disease management for many businesses, and adverse animal welfare outcomes.

- The feeding of prohibited pig feed to pigs would not be restricted which could have significant human health implications for both consumers within NSW and abroad. The feeding of swill feed to pigs has caused Foot and Mouth Disease (FMD) outbreaks overseas (NSW DPI 2015a) and if FMD were to enter NSW the likelihood of it spreading under Option 1 would increase. An FMD outbreak would have severe impacts on NSW's livestock industries, with the cost of a single-state FMD outbreak estimated at approximately $6 billion per year for livestock producers (ABARES 2013).

- Emergency animal disease outbreaks can also have devastating social effects on affected communities. For example, the FMD outbreak in the United Kingdom in 2001 caused enormous emotional hardship in affected rural communities and many farming families became socially isolated as they were concerned about spreading infection to their neighbours (Mort 2004).

- The removal of a ban on feeding Restricted Animal Material to ruminants would increase the risk of transmissible spongiform encephalopathy (TSE) emerging in NSW and may undermine confidence in the NSW livestock industry (AHA 2016). In addition, the removal of labelling provisions increases the likelihood that stock foods containing restricted animal material are fed to cattle, sheep, goats, deer or other ruminants.

In the event of either a bovine spongiform encephalopathy (BSE) or FMD outbreak, all of a country's livestock would be subject to trade bans, with all NSW exports of FMD and BSE susceptible products banned, at least initially. As a result, excess product would be diverted to the domestic market where it would sell for a much lower price. Domestic consumers could increase their consumption of these products in response to cheaper commodities however this is unlikely in the case of BSE as consumers would be concerned about potentially eating infected meat.

Existing levels of regulation provide environmental protections as they require the notification and control of pests and diseases which can affect wildlife. For example, avian influenza and cattle tick can affect wild birds and mammals respectively. The prevention of bee diseases such as braula fly helps beekeepers maintain healthy bee colonies which in turn provide pollination services that benefit industry and the environment.

Under this option, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty and duties in relation to prohibited matter events and biosecurity events. While administration and compliance

costs to government would be less under Option 1 relative to the base case, government would not be able to efficiently and effectively manage biosecurity risks and recover costs for providing services.

8.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, livestock producers would have increased flexibility to move animals into and within NSW than in the base case, but at the cost of increasing the likelihood of animal pests and diseases entering NSW and spreading.

The increased presence of animal pests and diseases would result in long-term impacts for producers such as increased mortality, reduced sale weights and quality of livestock, lost income, animal welfare issues and increased control costs for affected farms. The impacts under Option 2 relative to the base case would be greater than those under Option 1, particularly because provisions for the notification and control of pests and diseases listed as prohibited matter such as FMD and BSE would not exist.

In the event of a serious animal disease outbreak, many producers would be forced to supply their product to the domestic market instead or hold onto stock, causing an oversupply and a significant fall in prices. These events would cause significant revenue losses for livestock producers from reduced prices to increased pressure on farm inputs and could undermine the industry's financial viability (ABARES 2013). The serious social impact of an emergency animal disease outbreak on rural communities has been discussed under Option 1.

Option 2 would require increased industry collaboration to develop voluntary measures or codes of conduct for a number of different animal pests and diseases. This collaboration would increase costs to industry relative to the base case as the government usually has no role under this form of regulation although in some cases it may provide information or advice. Industry self-regulation would also result in higher risks of animal pests and diseases entering NSW and spreading than in the base case as there would be no legal mechanisms to ensure compliance or penalties for non-compliance.

While the removal of legislation would reduce the government's compliance and administration costs in the short term, there is potential for costs to increase if affected parties sought financial assistance from government to prevent business closures and loss of employment as a result of a serious pest or disease incursion.

Impacts on the environment are more severe than described in Option 1. This is because there would be no requirement to notify of the presence or suspected presence of pests or diseases such as rabies, *Mycobacterium bovis* (bovine tuberculosis) or screw worm fly and no control measures would be in place to protect wildlife from such diseases.

Human health could also be affected as there would be no provision for the notification or control of diseases listed as prohibited matter which occur sporadically in NSW such as Hendra virus infection and anthrax. Both of these can cause serious disease and potential fatalities in humans, with Hendra having a particularly high case fatality rate (WHO 2016).

8.5.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. There would be no additional impacts relative to the base case for proposed management arrangements that represent a transition of existing regulatory arrangements. However, for proposed management arrangements that represent a transition of existing arrangements with minor or major amendments, there would be potential impacts.

The proposed change in the management approach and potential impacts are set out in **Table 4** below. Overall, changes in these provisions may increase costs to industry and government but would likely result in a reduction in biosecurity risk.

Table 4: Identification of impacts for animal pest and disease provisions that represent minor or major amendments compared to existing provisions

Biosecurity risk	Amendments (from Table 2)	Assessment of impact
Cattle tick – carriers	Removal of restrictions on the importation of fodder from Queensland, the Northern Territory and Western Australia and removal of restrictions on vaccinating stock with the tick fever vaccine.	There would be no increase in biosecurity risk from removing these controls. Where government provided services to monitor these measures there will be a reduction in administration costs.
Footrot carriers – sheep and goats	Additional requirement that a person who brings sheep or goats into NSW must lodge a copy of the completed and signed animal health statement with Local Land Services (LLS) within 2 working days of the arrival of the sheep or goats at their destination.	There would be a marginal increase in administration costs for producers moving sheep or goats into NSW and government's administration costs. It reduces biosecurity risk by allowing LLS to monitor the introduction of sheep and goats into the district, risk assess the likelihood of introducing footrot and target surveillance activities towards high risk flocks.
Porcine brucellosis - carriers	Additional requirement that a person who brings a pig into NSW from a porcine brucellosis high risk area must lodge a copy of the completed and signed declaration by the owner or manager of the property of origin with LLS within 2 working days.	There would be a marginal increase in administration costs for producers moving pigs into NSW and government's administration costs. It reduces biosecurity risk by allowing LLS to monitor the introduction of pigs into the district and risk assess the likelihood of the introduction of *B suis.*
Prohibited pig feed	Adoption of nationally agreed definition of prohibited pig feed broadens what constitutes feeding prohibited pig feed to pigs and amends the definition of prohibited pig feed so that it	Streamlining the circumstances in which this provision applies will not increase biosecurity risks. Amendment of NSW's definition will result in harmonisation of swill feeding

Biosecurity risk	Amendments (from Table 2)	Assessment of impact
	only includes material of mammalian origin.	legislation across all jurisdictions.
Testing for animal pests and diseases	Broadening provisions relating to diagnostic testing and how tests are to be conducted so it applies not only to avian influenza and BSE, but to all pests or diseases of animals listed as prohibited matter in Schedule 2 to the Act.	Changes in these provisions reduce biosecurity risks, apply consistent rules for the testing of animal pests and diseases, and implement an equitable approach for monitoring this risk. Accurate diagnostic testing strengthens NSW's animal pest and disease surveillance and disease management capability. Changes in these provisions protect market access and the community from inappropriate release of test results for prohibited matter.

9.0 Aquatic pests and diseases

9.1 Existing legislative framework

There are two existing Acts and Regulations that regulate the management of aquatic pests and diseases and carriers of aquatic pests and diseases in NSW.

The Fisheries Management Act 1994 (FM Act) contains regulatory controls and powers with respect to aquatic pests and diseases. Part 6 Division 4 of the FM Act contains provisions with respect to diseased fish and marine vegetation and Schedule 6B of the Act contains a list of diseases affecting fish and marine vegetation to which the provisions in Part 6 Division 4 of the FM Act applies.

Part 7 Division 6 of the FM Act contains provisions with respect to noxious fish and noxious marine vegetation including the making of an order that declares an area or boat to be a quarantine area and the prohibition of the sale, possession or release of noxious fish or noxious marine vegetation. Schedule 6C of the FM Act contains a list of noxious fish and noxious marine vegetation to which the provisions in Part 7 Division 6 of the FM Act applies.

Part 13A of the *Fisheries Management (General) Regulation 2010* contains provisions relating to diseased noxious fish and marine vegetation and includes the requirement to notify declared diseases, noxious fish and marine vegetation.

Quarantine orders are currently in place to manage QX Disease and Pacific Oyster Mortality Syndrome (POMS) by regulating oyster and oyster equipment movements in disease affected areas.

The *Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991* is also used in the regulation of aquatic diseases to prohibit or impose conditions on the entry or importation into NSW of matter, equipment or transportation reasonably suspected of being infected with an emergency animal disease.

Importation Orders have been made under the *Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991* in relation to the importation of abalone for the management of abalone viral ganglioneuritis (AVG) and the importation of Pacific Oysters for the management of POMS, which are both declared diseases under Schedule 6C of the FM Act.

9.2 Proposed management

The Act will repeal Part 6 Division 4 and Part 7 Division 6 of the FM Act as well as Schedules 6B and 6C of the FM Act. The Act will also repeal Part 13A of the *Fisheries Management (General) Regulation 2010* and all legislative instruments made under this Act.

The Act will wholly repeal the *Animal Diseases and Animal Pests (Emergency Outbreaks) Act* 1991, the *Animal Diseases and Animal Pests (Emergency Outbreaks) Regulation 2012* and all legislative instruments made under this Act.

It is proposed that aquatic pests and diseases of carriers of aquatic pests and diseases will be managed using the following key management powers and tools under the Act:

1. Prohibited matter
2. Emergency powers and emergency orders
3. Control orders
4. Mandatory measures
5. Biosecurity zones
6. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

Two control orders are currently proposed to replace the current importation orders made under the *Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991* to manage AVG and POMS. It is proposed that both control orders will reflect the content of existing importation orders.

The proposed Regulation contains a number of mandatory measures and two biosecurity zones and these are set out in Chapter 9.3 below.

9.3 The proposed Regulation

9.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 5 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation and the risk minimisation measures and conditions contained in the Biosecurity Manual have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

It is noted most existing regulatory arrangements cannot be transitioned exactly as is because all new management arrangements will need to be made under the heads of power contained in the Act. There may also be instances where for example, national definitions or national lists need to be adopted for consistency with other states or jurisdictions or where the scientific or common name of a pest or disease has been amended. Despite this, the proposed management approach has been determined as a transition of existing regulatory arrangements where there has been no noticeable change or impact on stakeholders.

Table 5: Overview of management arrangements to minimise the risks associated with aquatic pests and diseases, carriers or dealings

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Prohibition on certain dealings	**Mandatory Measure (clause 15)** A person must not engage in any of the following dealings with an aquatic pest or disease listed in Part 2 of Schedule 1 to the Regulation, have possession or control of the pest or disease, buy, sell or dispose of the pest or disease, move the pest or disease or release the pest or disease from captivity (see **Table 6** below for a list of the pests and diseases to which this provision applies).	✓			
Abalone viral ganglioneuritis (AVG)	**Mandatory Measure (clause 16)** A person must not use any part of an abalone (such as abalone viscera) for the purposes of fishing bait or berley.	✓			
Notification of aquatic pests and diseases – duty to notify	**Mandatory Measure (clause 7)** A person who in the course of engaging in a dealing with biosecurity matter or a carrier becomes aware of, or suspects, the presence of any pest or disease listed in Schedule 1 to the Regulation must notify the presence of the pest or disease in accordance with Part 6 of the Regulation within 1 working day after the person first suspects or becomes aware of the presence (see **Table 7** below for a list of the aquatic pests and diseases to which this provision applies).	✓			
Notification of aquatic pests and diseases – information required to be notified	**Regulatory provision (clause 71)** Notification of a prohibited matter event, a biosecurity event or a matter that is required to be notified under the Regulation must include: a) the person's full name and contact phone number	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	b) details of the notifiable matter c) the location of the matter (including the property identification code if applicable), d) details of the significant biosecurity impact in the case of a biosecurity event, and e) any other information reasonably requested by the person or body to whom notification is required to be given.				
Notification of aquatic pests and diseases – manner in which notification is to be given	**Regulatory provision (clause 72)** Notification is to be given: a) in the case of a prohibited matter event or a biosecurity event, by immediately verbally notifying an authorised officer or in any other manner approved by the Secretary and published on the website of the Department b) in the case of a matter required to be notified under the Regulation, in a manner approved by the Secretary.	✓			
Testing for prohibited matter – how tests must be conducted	**Mandatory Measure (clauses 8)** A person must not test or attempt to test for a prohibited matter unless: a) the test is carried out in, or is carried out elsewhere and is confirmed in, a veterinary laboratory that is accredited by the National Association of Testing Authorities, Australia for such testing, or b) the test is carried out at a laboratory by a person for diagnostic purposes and the Secretary has approved the laboratory, the person and the diagnostic technique to be used, or c) the test is carried out at a place other than a	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	laboratory by a person for diagnostic purposes and the Secretary has approved the person and the diagnostic technique to be used, or d) the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training.				
***Marteilia sydneyi* (QX Disease)**	**Biosecurity Zone (clause 43, 44 and 45)** See 9.3.4 below.	✓			
Pacific Oyster Mortality Syndrome (POMS)	**Biosecurity Zone (clauses 46, 47 and 48)** See 9.3.5 below.	✓			

9.3.2 Mandatory measure – Prohibition on certain dealings

Clause 15 of the proposed Regulation provides that certain aquatic pests or diseases cannot be possessed, controlled, bought, sold, disposed, moved or released from captivity. The pests and diseases to which this provision applies are set out in **Table 6** below:

Table 6: Aquatic pests and diseases for which certain dealings are prohibited

Scientific name	Common name
Acanthogobius flavimanus	Yellowfin Goby
Aeromonas salmonicida- atypical strains	Goldfish ulcer disease
Amniataba percoides	Banded Grunter
Batrachochytrium dendrobatidis	Chytridiomycosis in amphibians
Betanodavirus	Viral encephalopathy and retinopathy, VER
Carcinus maenas	European Green Crab
Caulerpa taxifolia	Caulerpa
	Epizootic haematopoietic necrosis of fish (EHN virus)
	Epizootic ulcerative syndrome of fish (infection with *Aphanomyces invadans*)
	Gill-associated virus disease (GAV)
Maoricolpus roseus	New Zealand Screw Shell
Misgurnus anguillicaudatus	Weatherloach, Oriental Weatherloach
Oreochromis mossambicus	Tilapia, Mozambique Mouthbrooder
Perca fluviatilis	Redfin Perch
Perkinsus olseni	Perkinsosis
Phalloceros caudimaculatus	Speckled Mosquitofish, Dusky Millions Fish
Sabella spallanzanii	European Fan Worm
	Thelohaniosis of crustaceans
Tridentiger trigonocephalus	Trident Goby, Chameleon Goby, Striped Goby, Japanese Goby

9.3.3 Mandatory measure – Notification

Clause 7 of the proposed Regulation contains a mandatory measure that imposes a requirement for a person to notify of the presence or suspected presence of certain aquatic pests and diseases within 1 working day after the person first suspects or becomes aware. **Table 7** sets out the pests and diseases to which this notification requirement applies.

Table 7: Notifiable aquatic pests and diseases

Scientific name	Common name
Acanthogobius flavimanus	Yellowfin Goby
*Aeromonas salmonicida (*atypical strains)	Goldfish ulcer disease
Amniataba percoides	Banded Grunter

Scientific name	Common name
Batrachochytrium dendrobatidis	Chytridiomycosis in amphibians
Betanodavirus	Viral encephalopathy and retinopathy, VER
Bonamia spp. (all species except *Bonamia ostreae & B. exitiosa)*	Bonamia
Carcinus maenas	European Green Crab
Caulerpa taxifolia	Caulerpa
	Epizootic haematopoietic necrosis of fish (EHN virus)
	Epizootic ulcerative syndrome of fish (infection with *Aphanomyces invadans*)
	Gill-associated virus disease (GAV)
Maoricolpus roseus	New Zealand Screw Shell
Marteilia sydneyi	QX disease
Misgurnus anguillicaudatus	Weatherloac, Oriental Weatherloach
Oreochromis mossambicus	Tilapia, Mozambique Mouthbrooder
	Ostreid herpesvirus - µ variant – OsHV-1 µvar (OSHVI) that causes Pacific Oyster Mortality
Perca fluviatilis	Redfin Perch
Perkinsus olseni	Perkinsosis
Phalloceros caudimaculatus	Speckled Mosquitofish, Dusky Millions Fish
Sabella spallanzanii	European Fan Worm
	Thelohaniosis of crustaceans
Tridentiger trigonocephalus	Trident Goby, Chameleon Goby, Striped Goby, Japanese Goby
	Winter mortality (of Sydney Rock Oysters)

All of the aquatic pests and diseases in **Table 7** could have an adverse impact on commercial fisheries, the aquaculture/oyster industry, native fish populations and the aquatic environment more generally. The majority of these pests and diseases also appear on Australia's National List of Reportable Diseases of Aquatic Animals. In this respect, existing regulatory arrangements are being transitioned without amendment, subject to some scientific and common name changes that have occurred at the national level.

It is noted in addition to the requirement to notify the presence or suspected presence of those pests and diseases listed in **Table 7**, there is also a requirement to notify the presence or suspected presence of those pests and diseases of aquatic animals which are listed as prohibited matter in Schedule 2 to the Act.

9.3.4 Biosecurity Zone – Marteilia sydneyi (QX Disease)

The QX disease biosecurity zone has been established to manage the biosecurity risk of *Marteilia sydneyi* (QX Disease) and will cover all waters of NSW, establishing high, medium and low QX risk areas. Oyster movements will be regulated within the QX disease biosecurity zone such that oysters may only be moved to an area with the same or higher risk level as the source.

Additionally, the QX disease biosecurity zone will require oyster cultivation equipment and/or infrastructure (e.g., oyster sticks, trays, baskets) used within high risk and

medium risk areas within the QX disease biosecurity zone not to be relocated to another area unless risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual (i.e., they have been dried for at least 30 days).

The provisions of the QX disease biosecurity zone reflect existing risk ranking and movement arrangements.

It is noted that pursuant to clause 7 and Schedule 1 to the proposed Regulation that a person has the duty to notify of the presence or suspected presence of QX Disease.

9.3.5 Biosecurity Zone – Pacific Oyster Mortality Syndrome (POMS)

The POMS biosecurity zone has been established to manage the biosecurity risk of Ostreid herpesvirus – u variant-OsHV-1 uvar (OSHV1) that causes POMS and will cover the Georges River and Botany Bay, the Hawkesbury River and Brisbane Water. Oyster movements will be regulated such that oysters may only be moved within the POMS biosecurity zone or from waters with the same risk level as the source. Oysters within the POMS biosecurity zone cannot be moved outside of the POMS biosecurity zone.

Additionally, the POMS biosecurity zone will require that oyster cultivation equipment (e.g., oyster sticks, trays, baskets) used within the POMS biosecurity zone, cannot be moved outside the POMS biosecurity zone unless risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual (i.e., they have been cleaned and decontaminated).

The provisions of the POMS biosecurity zone reflect existing risk based movement arrangements.

It is noted that pursuant to clause 7 and Schedule 1 to the proposed Regulation that a person has a duty to notify of the presence or suspected presence of POMS.

9.4 The general biosecurity duty

Dealing with an aquatic pest or disease or a carrier of an aquatic pest and disease that presents a biosecurity risk will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- inspecting anchors, ropes and chains before leaving a waterway, and washing boats and gear down in wash down bays (where provided) or an area away from water bodies and stormwater drains
- not releasing or disposing of aquarium fish and plants into the wild
- ensuring ponds are designed appropriately and/or have screens so fish cannot escape during rain and flooding events
- members of the community taking photos and reporting suspect sightings of aquatic pests or suspected aquatic diseases
- not translocating existing or established pest populations or disease to unaffected areas.

There are a number of aquatic pests that are currently listed in Schedule 6C of the FM Act that are not carried forward in the proposed Regulation.

Eastern Gambusia is currently listed as a Class 1 noxious fish outside the Greater Sydney Region which by virtue of its classification prohibits it from being possessed or sold. Eastern Gambusia in the Greater Sydney Region and Carp are both currently listed as Class 3 noxious fish which by virtue of their classification requires notification.

It is proposed to manage these species under the general biosecurity duty as the requirement to notify and, prohibitions regarding possession and sale are not efficient controls for managing these species which are now widespread.

Pacific Oysters are currently listed as a Class 2 noxious fish in all estuarine and ocean waters except Port Stephens. This means they can be possessed in fully enclosed aquaria, but not sold. The cultivation and sale of Pacific Oysters currently occurs under authority of a permit and this will continue under the FM Act.

It is proposed to manage Pacific Oysters under the general biosecurity duty as they are widespread and possession and sale are covered by a permit arrangement. The management of POMS is proposed to be through a biosecurity zone which will regulate oyster and equipment movements within NSW and a control order which will manage the importation of hatchery bred Triploid Pacific Oyster spat from Tasmania to NSW POMS affected estuaries only.

9.5 Identification of impacts

The proposed Regulation contains a number of mandatory measures, regulatory provisions and biosecurity zones to manage the risks associated with aquatic pests and diseases and carriers of aquatic pests and diseases. These represent a transition of existing regulatory arrangements as is or with minor amendment.

9.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to aquatic pests and diseases and their carriers would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation:

- restrictions on the sale, possession or movement of aquatic pests and diseased fish or marine vegetation would not exist
- persons would not be required to notify of the presence or suspected presence of certain aquatic pests or diseases
- a formalised procedure for testing would not exist.

The removal of existing levels of regulation would increase the likelihood of aquatic pests and diseases entering into and spreading through NSW fisheries and the marine environment. This could result in a reduction in the domestic production of fish and oysters. A reduction in domestic supply would increase the price of domestic commodities and the cost of products to consumers. In response, some consumers would pay the higher price (reducing their consumer surplus) but others may consume an imported product or switch to a substitute such as beef or pork. As such, there would

be an increased likelihood that the viability of commercial fisheries and aquaculture would decline which would cause reduced employment in the industry.

Under Option 1, there would be fewer management controls available to mitigate the risk posed by aquatic pests and diseases. Abalone viral ganglioneuritis (AVG) currently does not occur in NSW estuaries, but is known to populate Tasmanian and Victorian estuaries. An incursion of AVG into NSW has the potential to significantly decimate NSW abalone stocks, with the potential to deplete stocks so that industry recovery is impossible or severely impaired. Under Option 1, the prohibition of using part of an abalone as fishing bait or berley, the purpose of which is to reduce the likelihood of AVG, would not exist. In the event of an AVG outbreak, the NSW abalone fishery would lose the majority of its gross value of production estimated at $3.57 million per year revenue (Total Allowable Catch Committee Report for 2016).

The NSW Pacific Oyster industry was valued at approximately $4 million per year for the 2014-15 fiscal period (2014-15 NSW DPI Aquaculture Production Report). POMS causes acute mortality in Pacific Oysters (estimated to be 60 to 100 percent in juveniles) such as in the outbreak that occurred in two NSW estuaries in 2013 (NSW DPI 2016a). Without maintaining existing levels of regulation, it is likely the risk of POMS occurring would be higher and in the event of an outbreak, it could spread to other estuaries and create wider impacts. The spread of POMS to multiple estuaries would increase production and revenue losses for oyster producers, threaten the financial viability of many businesses and undermine the industry's reputation.

Similarly, without maintaining existing levels of regulation, it is likely that the entire Sydney Rock Oyster industry would be vulnerable to the effects from QX disease. The NSW Sydney Rock Oyster industry was valued at approximately $34.8 million per year for the 2014-15 fiscal period (2014-15 NSW DPI Aquaculture Production Report).

Option 1 has the potential to result in severe biological and ecological modifications resulting from the introduction or further spread of aquatic pests and diseases due to a lack of effective regulation. Aquatic pests and diseases have the potential to outcompete or displace native species, or modify the current balance of native biodiversity. These environmental impacts may have far reaching consequences, not just to the environment, but to the communities, industries and economies (such as tourism and recreational fisheries) that rely on a functioning and healthy aquatic environment.

The value of tourism to NSW has been valued at $37.1 billion per year (Destination NSW) during the 2014-15 fiscal period. The recreational fishing industry generates approx. $3.4 billion per year of economic activity into the NSW economy each year and generates approximately 14,000 fulltime jobs http://www.dpi.nsw.gov.au/fishing/recreational).

Under this option, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty and duties in relation to prohibited matter events and biosecurity events. While administration and compliance costs to government would be less under Option 1 relative to the base case, government would not be able to efficiently and effectively manage biosecurity risks and recover costs for providing services.

9.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there would be greater flexibility for the operation of the commercial fishing and aquaculture industries than in the base case but at the cost of increasing the likelihood of aquatic pests and disease entering, establishing and spreading into NSW. Impacts on the economy, environment and community would be similar to those described in Option 1 but as protections prescribed in the Act such as the notification of the presence or suspected presence of prohibited matter would also be removed, the magnitude of these impacts would likely be increased.

Option 2 would require increased industry collaboration to develop voluntary measures or codes of conduct to manage aquatic pests and diseases. This collaboration would increase costs to industry relative to the base case, as government usually has no role under this form of regulation although in some cases it may provide information or advice. Industry self-regulation would also result in higher risks of aquatic pests and diseases entering NSW and spreading than in the base case as there would be no legal mechanisms to ensure compliance or penalties for non-compliance.

While the removal of legislation would reduce the government's compliance and administration costs in the short-term, there is potential for costs to increase if affected parties sought financial assistance from government to prevent business closures and loss of employment as a result of a serious pest or disease incursion.

9.5.2 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. There would be no additional impacts relative to the base case for the proposed management arrangements that represent a transition of existing regulatory arrangements. However, for proposed management arrangements that represent a transition of existing arrangements with minor amendments there would be potential impacts.

Option 3 would result in the formalisation of existing arrangements and transparent mechanism in protocol for diagnostic testing of aquatic pests and diseases and the release of test results. This change would create administrative efficiencies as these conditions would not need to be included on individual permits.

While there are some aquatic pests and diseases that will be managed under the general biosecurity duty, it is unlikely that there would be any additional impact relative to the base case due to the existing widespread locations of these species.

10.0 Plant pests and diseases

10.1 Existing legislative framework

There is one existing Act and Regulation that regulates the management of plant pests and diseases and carriers of plant pests and diseases in NSW.

The *Plant Diseases Act 1924* aims to prevent the introduction into NSW of pests and diseases affecting plants or fruit, provides for the eradication or prevention of spread of such pests and diseases and makes certain provisions with regard to cotton plants and the sale and grading of fruit and vegetables. The *Plant Diseases Regulation 2008* sets out penalty notice offences under the *Plant Diseases Act 1924*.

A number of legislative instruments including proclamations, notifications and orders have been made under the *Plant Diseases Act 1924* to specify how particular plant pests and diseases are to be managed. These legislative instruments for example, regulate the importation or introduction of host plant material, used agricultural equipment or carriers into NSW.

10.2 Proposed management

The Act will wholly repeal the *Plant Diseases Act 1924*, the *Plant Diseases Regulation 2008* and all legislative instruments made under this Act.

It is proposed that plant pests and diseases of carriers of plant pests and diseases will be managed using the following key management powers and tools under the Act:

1. Prohibited matter
2. Emergency powers and emergency orders
3. Control orders
4. Mandatory measures
5. Biosecurity zones
6. General biosecurity duty
7. Certification
8. Auditing.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

Two control orders are currently proposed to manage; Queensland fruit fly; and banana bunchy top virus. It is proposed the control order relating to the management of Queensland fruit fly will reflect the content of the existing order that regulates the importation, introduction or bringing of host fruit into specified areas of NSW. However the content of the control order relating to the management of banana bunchy top virus will vary from the content of the existing order such that efforts will be focussed on eradication in areas where banana bunchy top virus is known to exist and not on the application of widespread control measures in all banana growing areas in NSW.

The proposed Regulation contains a number of mandatory measures and four biosecurity zones and these are set out in Chapter 10.3 below.

10.3 The proposed Regulation

10.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 8 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation and the risk minimisation measures and conditions contained in the Biosecurity Manual have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

It is noted most existing regulatory arrangements cannot be transitioned exactly as is because all new management arrangements will need to be made under the heads of power contained in the Act. There may also be instances where for example, national definitions or national lists need to be adopted for consistency with other states or jurisdictions or where the scientific or common name of a pest or disease has been amended. Despite this, the proposed management approach has been determined as a transition of existing regulatory arrangements where there has been no noticeable change or impact on stakeholders.

Table 8: Overview of management arrangements to minimise the risks associated with plant pests and diseases, carriers or dealings

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Bananas – Banana freckle and Panama disease tropical race 4 - carriers	**Mandatory Measure (clause 18)** A person must not import into NSW any banana plant belonging to the family Musacease, any equipment that has been used in the production of a banana plant, any soil in which a banana plant has been grown or any covering that has contained or been in contact with a banana plant or used banana production equipment, unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Cucumber green mottle mosaic virus - carriers	**Mandatory Measure (clause 19)** A person must not import into NSW anything infected with cucumber green mottle mosaic virus, any Cucurbitaceae plant (other than a Cucurbitaceae fruit), any equipment that has been used in the production of a Cucurbitaceae plant, any covering that has contained or been in contact with a Cucurbitaceae plant (other than a covering that has contained or been in contact with Cucurbitaceae fruit only), or any soil in which a Cucurbitacea plant has been grown, unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Green snail and carriers	**Mandatory Measure (clause 20)** A person must not import into NSW a green snail, a green snail host, any soil from land within 25 kilometres of land on which the person knows or	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	ought reasonably to know that a green snail has been detected or has been suspected of having been detected, or any covering that has contained or been in contact with a green snail host or green snail host soil unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.				
Lupin anthracnose - carriers	**Mandatory Measure (clause 21)** A person must not import into NSW any lupin plant, any equipment that has been used in the production of a lupin plant, or any covering that has contained or been in contact with a lupin plant or used lupin production equipment, unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Mediterranean fruit fly - carriers	**Mandatory Measure (clause 22)** A person must not import into NSW any Mediterranean fruit fly host fruit, any soil in which a Mediterranean fruit fly host plant has been grown, or any covering that has contained or been in contact with a Mediterranean fruit fly host fruit or Mediterranean fruit fly host soil, unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Orange stem pitting strains of Citrus tristeza virus - carriers	**Mandatory Measure (clause 23)** A person must not import a citrus plant into NSW unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	Mandatory Measure (clause 23) A person must not offer a citrus plant for sale unless it is labelled, or otherwise identified, in a manner approved by the Secretary.	✓			
Pyriform scale and carriers	**Mandatory Measure (clause 24)** A person must not import into NSW *Protopulvinaria pyriformis* (Pyriform scale) or a pyriform scale host plant unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Spiraling whitefly - carriers	**Mandatory Measure (clause 25)** A person must not import into NSW a plant (including any part of a plant other than a flower, fruit or seed) unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Tomato yellow leaf curl virus (TYLCV) - carriers	**Mandatory Measure (clause 26)** A person must not import into NSW any of the following plants (including any part of any such plant other than a seed, fruit or flower) - tomato, bean, lisianthus, lobed croton, *Capsicum* spp., *Euphorbia* spp. or *Physalis* spp. unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Notification of plant pests and diseases – duty to notify	**Mandatory Measure (clause 7)** A person who in the course of engaging in a dealing with biosecurity matter or a carrier becomes aware of, or suspects, the presence of any pest or disease listed in Schedule 1 to the Regulation must notify the presence of the pest or disease in accordance with Part 6 of the Regulation	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	within 1 working day after the person first suspects or becomes aware of the presence (see **Table 9** below for a list of the plant pests and diseases to which this provision applies).				
Notification of plant pests and diseases – information required to be notified	**Regulatory provision (clause 71)** Notification of a prohibited matter event, a biosecurity event or a matter that is required to be notified under the Regulation must include: a) the person's full name and contact phone number b) details of the notifiable matter c)the location of the matter (including the property identification code if applicable) d) details of the significant biosecurity impact in the case of a biosecurity events, and e) any other information reasonably requested by the person or body to whom notification is required to be given.	✓			
Notification of plant pests and diseases – manner in which notification is to be given	**Regulatory provision (clause 72)** Notification is to be given: a) in the case of a prohibited matter event or a biosecurity event, by immediately verbally notifying an authorised officer or in any other manner approved by the Secretary and published on the website of the Department b) in the case of a matter required to be notified under the Regulation, in a manner approved by the Secretary.	✓			
Testing for prohibited matter - how tests must be	**Mandatory Measure (clause 8)** A person must not test or attempt to test for a prohibited matter unless: a) the test is carried out in, or is carried out		✓ Provisions relating to diagnostic testing and how tests are to be conducted have		

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
conducted	elsewhere and is confirmed in, a laboratory that is accredited by the National Association of Testing Authorities, Australia for such testing, or b) the test is carried out at a laboratory by a person for diagnostic purposes and the Secretary has approved the laboratory, the person and the diagnostic technique to be used, or c) the test is carried out at a place other than a laboratory by a person for diagnostic purposes and the Secretary has approved the person and the diagnostic technique to be used, or d) the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training.		been streamlined so that consistent provisions apply to all prohibited matter in Schedule 2 to the Act. Further detail regarding this provision is provided at 10.3.3 below.		
Citrus Red Mite	**Biosecurity Zone (clauses 51 and 52)** See 10.3.4 below.		✓ All host plants will be required to be treated before leaving the zone. Currently five plants can be moved without treatment.		
Grapevine phylloxera	**Biosecurity Zone (clauses 53, 54 and 55)** See 10.3.5 below.	✓			
Potato	**Biosecurity Zone (clauses 56, 57 and 58)** See 10.3.6 below.	✓			
Rice	**Biosecurity Zone (clauses 59, 60 and 61)** See 10.3.7 below.	✓			

10.3.2 Mandatory measure – Notification

Clause 7 of the proposed Regulation contains a mandatory measure that imposes a requirement for a person to notify of the presence or suspected presence of certain plant pests and diseases within 1 working day after the person first suspects or becomes aware. **Table 9** sets out the biosecurity matter or carriers to which this notification requirement applies.

Table 9: Notifiable plant pests and diseases

Scientific name	Common name
Cantareus apertus	Green snail
	Citrus tristeza virus (but limited to orange stem pitting strains only)
	Cucumber green mottle mosaic virus (CGMMV)
Marchalina hellenica	Giant pine scale
	Melon necrotic spot carmovirus (Melon necrotic spot virus)
	Potato sprindle tuber viroid (PSTVd)
Protopulvinaria pyriformis	Pyriform scale
	Tomato yellow leaf curl virus (TYLCV)

The plant pests and diseases in **Table 9** have the potential to adversely impact market access and are notifiable to satisfy export requirements.

It is noted in addition to the requirement to notify the presence or suspected presence of those pests and diseases listed in **Table 9**, there is also a requirement to notify the presence or suspected presence of those pests and diseases of plants which are listed as Prohibited Matter in Schedule 2 to the Act.

10.3.3 Mandatory measure – Testing for plant pests and diseases

The proposed Regulation formalises testing arrangements, establishing a standard provision for all pests and diseases of plants listed as prohibited matter in Schedule 2 of the Act.

The proposed Regulation provides that testing is carried out in a laboratory accredited by the National Association of Testing Authorities (NATA) Australia for such testing (e.g., the use of a pen-side tests), or that the testing is carried out at a laboratory or other place by a person for diagnostic purposes and the Secretary has approved the laboratory, the person, or if the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training. This provision applies regardless of whether initial testing produces a positive, inconclusive or negative test result because the pests and diseases to which this provision applies can have serious impacts on market access. It is important that surveillance and management of these pests and diseases is underpinned by accurate diagnostic testing.

The proposed Regulation will also by a condition imposed by the Secretary, require the approval by the Secretary to release or otherwise publish positive or inconclusive results of all plant pests and diseases listed in Schedule 2 of the Act (prohibited matter). This is because there is potential for the inappropriate release of test results for these serious pests and diseases to cause public alarm and or disrupt export markets.

10.3.4 Biosecurity Zone –Citrus red mite

The citrus red mite biosecurity zone has been established to manage the biosecurity risk of the pest *Panonychus citri* (citrus red mite) and will cover all land within the counties of Cumberland and Northumberland. It seeks to regulate the movement of any plant of the genus *Citrus, Fortunella* or *Poncirus* or any part (other than a fruit) of any such plant out of the biosecurity zone.

The Biosecurity Manual contains the risk minimisation measures that must be taken and other conditions that must be met before movement can occur out of the citrus red mite biosecurity zone.

A person also has the duty to notify of the presence or suspected presence of the pest *Panonychus citri* (citrus red mite) on any land outside the citrus red mite biosecurity zone.

The provisions of the citrus red mite biosecurity zone reflect existing movement arrangements with the exception that now all host plants must be treated before leaving the zone. Currently, five plants can be moved without treatment.

10.3.5 Biosecurity Zone – Grapevine phylloxera

The grapevine phylloxera biosecurity zone has been established to manage the risk of the pest *Daktulosphaira vitifoliae* (grapevine phylloxera) and encompasses all land within NSW. It seeks to regulate the movement of grapevine phylloxera carriers coming into NSW as well as the movement of carriers out of and between the areas where grapevine phylloxera is known to be present in NSW. That area of NSW where grapevine phylloxera is known to be present is referred to as phylloxera infested areas and these are set out in Part 2 of Schedule 2 to the Act.

The Biosecurity Manual contains the risk minimisation measures that must be taken and other conditions that must be met before a carrier of phylloxera can enter the grapevine phylloxera biosecurity zone.

The restrictions and conditions of movement as set out in the grapevine phylloxera biosecurity zone reflect existing movement arrangements.

10.3.6 Biosecurity Zone – Potato

The potato biosecurity zone has been established to manage the biosecurity risk of a number of pests and diseases affecting potatoes and encompasses all land within NSW.

The potato biosecurity zone seeks to regulate the movement of potato plants, any commercially produced plant, tubers, bulbs, roots, corms or rhizomes, any soil in which a potato plant has been grown, any equipment that has been used in the production of a potato plant or any covering that has contained or been in contact with a potato plant into NSW. Further, it seeks to regulate the movement of these potato biosecurity matters

from land that may have *Globodera* spp. (potato cyst nematode) into NSW which does not have *Globodera* spp. (potato cyst nematode).

The Biosecurity Manual contains the risk minimisation measures that must be taken and other conditions that must be met before matter can enter the potato biosecurity zone.

The potato biosecurity zone reflects the existing NSW Seed Potato Protected Areas and movement conditions.

10.3.7 Biosecurity Zone –Rice

The rice biosecurity zone has been established to manage the biosecurity risk of a number of pests and diseases affecting rice and encompasses all land within a number of local government areas in NSW.

The rice biosecurity zone seeks to regulate the movement of rice plants, any equipment that has been used in the production of a rice plant, any covering that has contained or been in contact with a rice plant or a snail of the genus *Pila* or *Pomacea* into the rice biosecurity zone.

The Biosecurity Manual contains the risk minimisation measures that must be taken and other conditions that must be met before a restricted rice plant or carrier can enter the rice biosecurity zone.

The rice biosecurity zone reflects the existing Rice Biosecurity Zone and importation conditions.

10.4 The general biosecurity duty

Dealing with a pest or disease of plants or a carrier of a pest and disease of plants that presents a biosecurity risk will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person takes measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- cleaning equipment or vehicles used to store or transport propagation material or fruit on arrival and exit from a property
- adoption of good on farm biosecurity practices including ‘come clean go clean’ and signs at the gate asking visitors to call first or sign in at the office or as outlined in industry codes of practice or manuals
- purchasing plants from a reputable nursery
- not selling plants known to be infected with a disease.

An order under section 5A of the *Plant Diseases Act 1924* currently regulates the movement of bananas in and out of the banana protected area and within that area on account of Panama disease (endemic strains). However, as some strains of Panama disease are endemic in NSW, these additional controls do not provide assistance in controlling the disease and the general biosecurity duty is considered adequate for future management. Measures a person could take to discharge their general biosecurity duty with regards to Panama disease (endemic strains) are detailed above.

10.5 Identification of impacts

The proposed Regulation contains a number of mandatory measures, regulatory provisions and biosecurity zones to manage the risks associated with plant pests and diseases and carriers of plant pests and diseases. These represent a transition of existing regulatory arrangements as is or with minor amendments.

10.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to plant pests and diseases would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation:

- prescribed control measures relating to matters such as importation and movement would not exist (e.g., the movement of equipment)
- there would be no labelling requirements for certain plant material.

The removal of existing levels of regulation would benefit agricultural business in the short term as there would be improved flexibility to move plants and plant material, equipment, packaging and or soil. However, there would also be an increased risk that the movement and importation of these items would increase the spread of plant pests and diseases across NSW. The potential impacts on landholders include:

- an increased likelihood of crop losses from pest and disease outbreaks
- increased costs for controls or eradication measures (such as insecticides)
- bans from select interstate and export markets, which could have generated higher revenue due to the price premiums in these markets.

Existing legislative instruments require plant health certificates to accompany import consignments of plants or plant products into NSW. Without these provisions, there would be an increased likelihood of plant pests and disease entering NSW as there would be less private incentive to obtain a certificate.

Mediterranean fruit fly is an example of a pest for which regulations exist to prevent its entry into NSW. If the Mediterranean fruit fly were to enter NSW, it would likely harm both fruit and vegetable growers by reducing crop yields, damaging fruit quality, increasing management and control costs and result in the loss of access to export markets as many countries regulate for this pest (NSW DPI 2016c).

Most of the plant pest and disease provisions protect agricultural production, though an increase in the spread of plant pests and diseases may also impact NSW's biodiversity. For example, the green snail which is currently present in Western Australia can damage native plants (Biosecurity SA 2012).

Under this option, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty and duties in relation to prohibited matter events and biosecurity events. While administration and compliance costs to government would be less under Option 1 relative to the base case, government would not be able to efficiently and effectively manage biosecurity risks and recover costs for providing services.

10.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there would be greater flexibility in the movement of plant and plant materials both within and into NSW as per Option 1. Similarly, Option 2 would result in an increased risk of pests and diseases entering and spreading across NSW. This would cause reduced crop yields, potential bans from select export markets and increased costs of controlling and eradicating pests and diseases.

Option 2 would require increased industry collaboration to develop voluntary measures or codes of conduct and compliance measures for a number of different plant pests and diseases. This collaboration would increase costs to industry relative to the base case as government usually has no role under this form of regulation although in some cases it may provide information or advice. Industry self-regulation would also result in higher risks of plant pests and diseases spreading than in the base case, as there would be no legal mechanisms to ensure compliance or penalties for non-compliance.

There would also be greater complexity in creating and implementing self-regulation in this area due to the broad impacts plant pests and diseases could have on the environment, the community and on a diverse range of industries including agriculture, forestry and manufacturing.

While the removal of regulations would reduce the government's compliance and administration costs in the short term, there is potential for costs to increase if affected parties sought financial assistance from government to prevent business closures and lost employment as a result of a pest or disease incursion.

Impacts on the environment under Option 2 are the same as those identified in Option 1.

10.5.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. There would be no additional impacts relative to the base case for proposed management arrangements that represent a transition of existing regulatory arrangements. However, for proposed management arrangements that represent a transition of existing arrangements with a minor amendment, there would be potential impacts.

Option 3 would result in a more formal and transparent mechanism for diagnostic testing of plant pests and diseases and the release of test results. Further, it streamlines diagnostic testing provisions for all prohibited matter listed in Schedule 2 to the Act and increases protections to the economy, environment and community.

The citrus red mite biosecurity zone requires all host plants to be treated before leaving the biosecurity zone. The inclusion of this provision would marginally increase the administration costs for producers and compliance costs for government as currently five host plants are exempt from the treatment requirement. This new requirement however is considered commensurate to the level of risk posed and as most movements are currently for more than five host plants, this change will have minimal impact.

11.0 Invasive species - animals and insects

11.1 Existing legislative framework

There are two existing Acts and Regulations that regulate the management of invasive animal and insect species in NSW.

Part 10 of the *Local Land Services Act 2013* (LLS Act) relates to pests and provides for the making of pest control orders (PCOs) to eradicate, control or provide notification of a pest. Further, it provides for a number of offences in relation to pests such as keeping pests in captivity, administering prohibited substances to pests, conveying live pests, allowing pests to pass though gates or fences and damage, destruction and removal of eradication devices.

Part 9 of the *Local Land Services Regulation 2014* (LLS Regulation) relates to pests and requires the Minister to consult the NSW Pest Animal Council before making certain pest control orders.

Eight PCOs are currently in force under the LLS Act that outline the obligations of landholders in the control of wild dogs, wild rabbits, feral pigs, feral dromedary camels, European red foxes, Migratory Locusts, Spur-Throated Locusts and Australian Plague Locusts. These PCOs impose obligations on occupiers of land to undertake activities and work collaboratively with LLS staff to achieve effective and efficient control of pest animals. An additional PCO is currently in force which prohibits the administration of fibroma virus vaccine or myxoma virus to rabbits unless such administration is approved by the Minister.

Legislative instruments made under the *Plant Diseases Act 1924* currently regulate European house borer and tramp ant species.

11.2 Proposed management

11.2.1 Invasive animal species (pest animals)

It was intended that upon commencement of the Act, Part 10 of the LLS Act and Part 9 of the LLS Regulation would be repealed. However the repeal of these parts of the LLS, Act and Regulation will now occur at a later date. This is because the Natural Resources Commission's report on pest animal management is currently being considered.

It would be premature for the proposed Regulation to contain provisions relating to the management of pest animals until full consideration has been given to the report's findings and recommendations.

Therefore, the nine existing PCOs will remain in force until such later time when a determination is made as to the most effective management tools contained in the Act to manage pest animals and they are repealed. The general biosecurity duty will apply to all pest animals including those that will continue to be managed under existing PCOs - see Chapter 11.4 below.

11.2.2 Invasive insect species

The Act will wholly repeal the *Plant Diseases Act 1924*, the *Plant Diseases Regulation 2008* and all legislative instruments made under that Act.

It is proposed that invasive insect species will be managed using the following key management powers and tools under the Act:

1. Prohibited matter
2. Emergency powers and emergency orders
3. Mandatory measures
4. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2. No control orders or biosecurity zones are currently proposed in the management of invasive insect species or their carriers. However, control orders or biosecurity zones may be made in the future should the need arise.

The proposed Regulation contains a number of mandatory measures and these are set out in Chapter 11.3 below.

11.3 The proposed Regulation

11.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 10 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation and the risk minimisation measures contained in the Biosecurity Manual have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

It is noted most existing regulatory arrangements cannot be transitioned exactly as is because all new management arrangements will need to be made under the heads of power contained in the Act. There may also be instances where for example, the scientific or common name of a pest or disease has been amended. Despite this, the proposed management approach has been determined as a transition of existing regulatory arrangements where there has been no noticeable change or impact on stakeholders.

Table 10: Overview of management arrangements to minimise the risks associated with invasive insect species, carriers and dealings

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
European house borer and carriers	**Mandatory Measure (clause 27)** A person must not import into NSW *Hylotrupes bajulus* or any wood product from a tree of the genus *Pinus, Abies, Picea, Aracuaria* or *Pseudotsuga*, other than the following: a) any wood product made only of heartwood b) any wood product made of reconstituted pinewood c) wooden household articles and furniture imported by or on behalf of a person for the personal use of the person or a member of the person's household d) any wood product less than 4 millimetres thick unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.	✓			
Tramp ants - carriers	**Mandatory Measure (clause 28)** A person must not import into NSW the following things if that thing comes from land within 5 kilometres of land on which the person knows or ought reasonably to know that a tramp ant has been detected or has been suspected of having been detected: a) organic plant mulch (which includes, bark, wood chips, hay, straw and sugar can bagasse) b) plants in containers c) agricultural or earth moving machinery d) soil (which includes anything with soil on it			✓ The existing provisions that relate to red imported fire ant have been expanded to apply to additional species of tramp ants.	

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	such as turf) unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.				
Notification of invasive insect species – duty to notify	**Mandatory Measure (clause 7)** A person who in the course of engaging in a dealing with biosecurity matter or a carrier becomes aware of, or suspects, the presence of any pest or disease listed in Schedule 1 to the Regulation must notify the presence of the pest or disease in accordance with Part 6 of the Regulation within 1 working day after the person first suspects or becomes aware of the presence (see **Table 11** below for a list of the invasive insect species to which this provision applies).	✓			
Notification of invasive insect species – information required to be notified	**Regulatory provision (clause 71)** Notification of a prohibited matter event, a biosecurity event or a matter that is required to be notified under the Regulation must include: a) the person's full name and contact phone number b) details of the notifiable matter c) the location of the matter (including the property identification code if applicable) d) details of the significant biosecurity impact in the case of a biosecurity events, and e) any other information reasonably requested by the person or body to whom notification is required to be given.	✓			
Notification of invasive insect species –	**Regulatory provision (clause 72)** Notification is to be given: a) in the case of a prohibited matter event or a	✓			

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
manner in which notification is to be given	biosecurity event, by immediately verbally notifying an authorised officer or by any other manner approved by the Secretary and published on the website of the Department b) in the case of a matter required to be notified under the Regulation, in a manner approved by the Secretary.				
Testing for prohibited matter - how tests must be conducted	**Mandatory Measure (clause 8)** A person must not test or attempt to test for a prohibited matter unless: a) the test is carried out in, or is carried out elsewhere and is confirmed in, a laboratory that is accredited by the National Association of Testing Authorities, Australia for such testing, or b) the test is carried out at a laboratory by a person for diagnostic purposes and the Secretary has approved the laboratory, the person and the diagnostic technique to be used, or c) the test is carried out at a place other than a laboratory by a person for diagnostic purposes and the Secretary has approved the person and the diagnostic technique to be used, or d) the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training.		✓ Provisions relating to diagnostic testing and how tests are to be conducted have been streamlined so that consistent provisions apply to all prohibited matter in Schedule 2 to the Act. Further detail regarding this provision is provided at 11.3.3 below.		

11.3.2 Mandatory measure – notification

The proposed Regulation contains a mandatory measure that imposes a requirement for a person to notify of the presence or suspected presence of certain species within 1 working day after the person first suspects or becomes aware. **Table 11** sets out the invasive insect species to which this notification requirement applies.

Table 11: Notifiable invasive insect species

Scientific name	Common name
Hylotrupes bajulus	European house borer

The notification of European house borer is consistent with existing arrangements.

It is noted in addition to the requirement to notify the presence or suspected presence of the invasive insect species listed in **Table 11**, there is also a requirement to notify the presence or suspected presence of any invertebrate pests which are listed as prohibited matter in Schedule 2 to the Act.

11.3.3 Mandatory measure – testing for invasive pests and diseases

The proposed Regulation formalises testing arrangements, establishing a standard provision to all prohibited matter listed in Schedule 2 of the Act.

The proposed Regulation provides that testing is carried out in a laboratory accredited by the National Association of Testing Authorities (NATA) Australia for such testing (e.g., the use of a pen-side tests), or that the testing is carried out at a laboratory or other place by a person for diagnostic purposes and the Secretary has approved the laboratory, the person, or if the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training. This provision applies regardless of whether initial testing produces a positive, inconclusive or negative test result because the pests and diseases to which this provision applies can have serious impacts on the economy and the environment. It is important that surveillance and management of these pests and diseases is underpinned by accurate diagnostic testing.

The proposed Regulation will also by a condition imposed by the Secretary, require the approval by the Secretary to release or otherwise publish positive or inconclusive results of all invasive species listed in Schedule 2 of the Act (prohibited matter). This is because there is potential for the inappropriate release of test results for these invasive species to disrupt export markets as a result of the pests and diseases that they may carry and/or affect social amenity.

11.4 The general biosecurity duty

Dealing with an invasive animal that presents a biosecurity risk will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. With regards to invasive insect species, examples of measures could include:

- checking footwear, luggage and household items after travelling to ensure insects have not become attached
- conducting due diligence before purchasing matter such as fodder and mulch which may carry invasive species
- using approved methods and agreed Standard Operating Procedures to eliminate pests in the event that they enter NSW
- reporting the presence of identified priority species.

With regards to the management of widespread pest animals, all occupiers of land in NSW will be subject to the general biosecurity duty. This means that any person that deals with a pest animal and knows or ought to know of the risks posed by pest animals (such as the general public, landholders, professional pest controllers and hunters) will be required to take measures to prevent, eliminate or minimise the biosecurity risks of the pest animal.

In most cases, the landowner or occupier will discharge their general biosecurity duty, as far as is reasonably practicable, by controlling pest animals on their land and preventing movement of the pest onto neighbouring land. In other cases, it may be expected that landowners will take actions to continuously supress and destroy a particular pest animal. Implementation of any NSW Government endorsed pest animal management strategy and best practice guidelines will be strongly encouraged to support coordinated pest animal control activities.

In the case of animals the subject of existing PCOs, compliance with these PCOs will be sufficient for a person to discharge their general biosecurity duty. Best practice guidelines and fact sheets will be available to help land owners understand their obligations under the existing PCOs and the general biosecurity duty.

11.5 Identification of impacts

The proposed Regulation contains a number of mandatory measures and regulatory provisions to manage the risks associated with invasive insect species and carriers of invasive insect species. These represent a transition of existing regulatory arrangements as is or with major amendment.

11.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to invasive insect species would lapse upon commencement of the Act. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulatory control measures relating to the importation of invasive insect species and potential carriers would not exist.

The removal of these provisions would increase the likelihood of invasive insect species entering NSW and causing severe impacts for industry, the environment and community. The general biosecurity duty would mitigate some of these risks, given it would be applicable under Option 1, but would still cause a higher level of risk than under the base case.

The impact of removing provisions can be seen in the example of the European house borer (EHB). EHB is a destructive beetle pest that destroys untreated soft wood timber

of pines, fir and spruces and may be found on dead tree limbs timber piles, untreated roof frames, pine pallets and untreated household furniture (NSW DPI 2016b). EHB is not currently found in NSW and removing prohibitions related to the entry of untreated pinewood could increase the likelihood of EHB entering NSW as undetected larvae (NSW DPI 2016b).

The introduction of EHB into NSW would increase costs to the community as EHB can cause major structural damage to buildings that contain untreated pinewood frames. In the short-term, forest product industries may benefit from the removal of provisions because they would not incur costs for the mandatory treatment of products. However, the spread of EHB could reduce the supply of softwood increasing the costs of inputs and impacting the $791 million per year on softwood log industry in NSW, as of 2014-15 (ABARES 2016).

Tramp ants pose major biosecurity risks for NSW. Where tramp ants have become established in other areas, the impacts include reduced species diversity, modified habitat structures and altered ecosystem processes. Tramp ants can replace small native predators and reduce the populations of insect-feeding animals (i.e., birds, reptiles and frogs), as the ants reduce the amount of available food and may sting and eat animals. They also damage ecosystems by eating fruit and seeds, tunnelling into stems and removing bark from seedlings, and may increase weed invasion. For example, yellow crazy ant populations on Christmas Island have displaced or killed 15 – 20 million land crabs which has affected seedling recruitment, the spread of weeds and leaf litter breakdown in the forest (DSEWPC 2012).

Tramp ants can also negatively impact agricultural businesses, households and human health. Agricultural impacts include damage to crops, equipment, and increases in crop pests and diseases. Ants may sting people, stock and pets and induce anaphylactic shock in some people. Tramp ants infest furniture, food and electrical equipment, such as chewing on wiring. They can make parks and gardens unusable and unsafe for the general public (DSEWPC 2012).

Red imported fire ant is currently contained within South East Queensland. Between 2001 and 2012 the Australian, state and territory governments collectively spent $411 million (in 2012 dollars) in controls and up to $21 million per year in 2012-13 in surveillance and treatment costs. They cause damage to agricultural production, households, golf courses, schools, electrical and communication equipment, forgone outdoor opportunities for households and tourists and wildlife. The costs to infrastructure for the impacts of red imported fire ant in the United State has been estimated in several economic studies to vary from $96 million per year (in 2015-16 dollars) in Hawaii to $1.27 billion per year in California (in 2015-16 dollars) (Hafi 2014).

The African big-headed ant or coastal brown ant (*Pheidole megacephala*) and the Argentine ant (*Linepithema humile*) are examples of tramp ant species which are now established in NSW. Regulatory provisions are currently in place to prevent any further entry of these invasive ant species into NSW and the removal of such measures would be counterproductive.

11.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there would be an increase in the detrimental impacts of these species on the economy, environment and community, similar to those identified in Option 1 above.

Option 2 would require increased industry collaboration to develop voluntary measures or codes of conduct for a number of different invasive insects and their carriers. This collaboration would increase costs to industry relative to the base case, as government usually has no role under this form of regulation although in some cases it may provide information and advice. Industry self-regulation would also result in higher risks of pests and diseases entering NSW and spreading than in the base case as there would be no legal mechanisms to ensure compliance or penalties for non-compliance.

There would also be greater complexity in creating and implementing self-regulation due to the broad impacts invasive species have on the environment, the community and on the diverse range of industries including agriculture, forestry and manufacturing.

While the removal of regulations would reduce the government's compliance and administration costs in the short-term, there is potential for costs to increase if affected parties sought financial assistance from government to prevent business closures and lost employment. Costs to government would also significantly increase due to impacts on the environment and community.

11.5.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. There would be no additional impacts relative to the base case for proposed management arrangements that represent a transition of existing regulatory arrangements. However, for proposed management arrangements that represent a transition of existing arrangements with minor or major amendments, there would be potential impacts.

The proposed Regulation streamlines diagnostic testing provisions for all prohibited matter listed in Schedule 2 to the Act and provides increased protections to the economy, environment and community.

The proposed Regulation would expand restrictions that currently exist for red imported fire ants to additional species of tramp ants. It is expected that the inclusion of additional species would have no significant additional costs to businesses or government as surveillance and monitoring of tramp ants is already being undertaken where appropriate. The amendment is also considered commensurate to the level of risk posed.

12.0 Invasive plant species – weeds

12.1 Existing legislative framework

There is one existing Act and Regulation that regulates the management of weeds in NSW.

The *Noxious Weeds Act 1993* provides for the identification, classification and control of noxious weeds. Specifically, it provides for the following weed control classes to be applied to a plant by a weed control order:

Category	Description
Class 1, State Prohibited Weeds	Plants that pose a potentially serious threat to primary production or the environment and are not present in the state or are present only to a limited extent.
Class 2, Regionally Prohibited Weeds	Plants that pose a potentially serious threat to primary production or the environment of a region to which the order applies and are not present in the region or are present only to a limited extent.
Class 3, Regionally Controlled Weeds	Plants that pose a serious threat to primary production or the environment of an area to which the order applies, are not widely distributed in the area and are likely to spread in the area or to another area.
Class 4, Locally Controlled Weeds	Plants that pose a threat to primary production, the environment or human health, are widely distributed in an area to which the order applies and are likely to spread in the area or to another area.
Class 5, Restricted Plants	Plants that are likely, by their sale, or the sale of their seeds, or movement within the state or an area of the state, to spread in the state or outside the state.

A noxious weed that is classified as a Class 1, 2 or 5 noxious weed is a notifiable weed.

The *Noxious Weeds Regulation 2008* sets out the standard to which agricultural machines are cleaned to control the spread of noxious weeds.

A number of legislative instruments including proclamations, notifications and orders have been made under the Act to support its operation.

12.2 Proposed management

12.2.1 Legislative arrangements

The Act will wholly repeal the *Noxious Weeds Act 1993*, the *Noxious Weeds Regulation 2008* and all legislative instruments made under this Act.

It is proposed that weeds will be managed using the following key management powers and tools provided for under the Act:

1. Prohibited matter
2. Emergency powers and emergency orders
3. Control orders
4. Mandatory measures
5. Biosecurity zones
6. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

Four control orders are currently proposed to manage Boneseed (*Chrysanthemoides monilifera subsp. Monilifera*), Parkinsonia (*Parkinsonia aculeate*), Tropical soda apple (*Solanum viarum*) and Hawkweed (*Hieracium auraniacum & H. pilosella*). It is proposed that the content of these control orders will reflect existing arrangements.

The proposed Regulation contains a number of mandatory measures and three biosecurity zones and these are set out in Chapter 12.3 below.

12.2.2 Regional Weed Strategic Management Plans (RWSMP)

While the management requirements for a few weeds will be determined at the state level because they are targets for eradication, or are part of a broad containment strategy and/or are under a national management agreement (e.g., Weeds of National Significance (WonS)), the management requirements for most weeds will be determined locally using the expertise and local knowledge of Regional Weed Committees. The NSW State Weed Committee will play a complementary role in providing consistent policy advice on which locally significant weeds are technically feasible to eradicate or control.

The *Local Land Services Act 2013* provides for the development of a regional strategic plan for a region which is to set the vision, priorities and strategy in respect of the delivery of local land services in the region, with a focus on appropriate economic, social and environmental outcomes. The Local Land Services strategic plan allows for Regional Weeds Committees to develop a Regional Weeds Strategic Management Plan (RSWMP). A RSWMP will apply to all land in that region whether it is publically or privately owned.

An important function of the RSWMP is to clearly explain weed management responsibilities and obligations for land managers. It is proposed that the RSWMP will identify weeds of particular concern to that region as well as any applicable management requirements such as notification of those weeds and restrictions on the movement, importation or sale of those weeds. The Biosecurity Act and Regulation will provide the regulatory framework for management actions under these plans where appropriate.

12.3 The proposed Regulation

12.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.
Table 12 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation and the risk minimisation measures and conditions contained in the Biosecurity Manual have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

It is noted most existing regulatory arrangements cannot be transitioned exactly as is because all new management arrangements will need to be made under the heads of power contained in the Act. There may also be instances where for example, national lists need to be adopted for consistency with other states or jurisdictions or where the scientific or common name of a weed has been amended. Despite this, the proposed management approach has been determined as a transition of existing regulatory arrangements where there has been no noticeable change or impact on stakeholders.

Table 12: Overview of management arrangements to minimise the risks associated with weeds, carriers and dealings

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Prohibitions on certain dealings	**Mandatory Measure (Clause 29)** A person must not move, import into the State or sell any plant listed in Schedule 3 (see **Table 13** below for a list of these plants).		✓ Adoption of standardised management for all Weeds of National Significance (WoNS).		
Parthenium weed carriers – machinery and equipment	**Mandatory Measure (clause 31)** A person must not import grain harvesters, comb trailers, bins for holding grain during harvest operations, augers or similar equipment used for moving grain, vehicles used for transporting grain harvesters, vehicles used as support vehicles with grain harvesters that have been driven in paddocks during harvest operations or mineral exploration drilling rigs and vehicles used for transporting those rigs into NSW from Queensland unless all risk minimisation measures are taken and all other conditions are met as set out in the Biosecurity Manual.			✓ General machinery and equipment will no longer be required to be presented for inspection. The requirements that apply to grain harvesters and comb trailers are consistent with existing NSW DPI procedures however these requirements will now be formalised into regulation. These requirements will also now extend to mineral exploration drilling rigs and vehicles used for transporting those rigs. See 12.3.3 below for further details.	
Importation of plants into NSW	**Regulatory provision (clause 30)** A person must not bring a species of vascular plant (*Tracheophyta*) into NSW if the species is not currently				✓ See 12.3.4 below for

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	present in NSW unless the person has at least 20 working days before the plant is imported into NSW, notified the species of plant and its proposed location within the State to an authorised officer in accordance with Part 6 of the Regulation.				further details
Notification of importation of plants – information required to be notified	**Regulatory provision (clause 71)** Notification of a prohibited matter event, a biosecurity event or a matter that is required to be notified under the Regulation must include; a) the person's full name and contact phone number, b) details of the notifiable matter, c) the location of the matter (including the property identification code if applicable), d) details of the significant biosecurity impact in the case of a biosecurity events, e) and any other information reasonably requested by the person or body to whom notification is required to be given.				✓ To the extent that new species of vascular plants currently do not need to be notified.
Notification of importation of plants – manner in which notification is to be given	**Regulatory provision (clause 72)** Notification is to be given: a) in the event of a prohibited matter event or a biosecurity event, by immediately verbally notifying an authorised officer or by any other manner approved by the Secretary and published on the website of the Department b) in the case of a matter required to be notified under the Regulation, in a manner approved by the Secretary.				✓ To the extent that new species of vascular plants currently do not need to be notified.
Testing for prohibited matter - how	**Mandatory Measure (clause 8)** A person must not test or attempt to test for a prohibited matter unless:		✓ Provisions relating to diagnostic testing and how tests are to be		

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
tests must be conducted	a) the test is carried out in, or is carried out elsewhere and is confirmed in, a laboratory that is accredited by the National Association of Testing Authorities, Australia for such testing, or b) the test is carried out at a laboratory by a person for diagnostic purposes and the Secretary has approved the laboratory, the person and the diagnostic technique to be used, or c) the test is carried out at a place other than a laboratory by a person for diagnostic purposes and the Secretary has approved the person and the diagnostic technique to be used, or d) the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training.		conducted have been streamlined so that consistent provisions apply to all prohibited matter in Schedule 2 to the Act. Further detail regarding this provision is provided at 12.3.6 below.		
Alligator weed	**Biosecurity Zone (clauses 64 and 65)** See 12.3.6 below.	✓			
Bitou bush	**Biosecurity Zone (clauses 66 and 67)** See 12.3.6 below.	✓			
Water hyacinth	**Biosecurity Zone (clauses 68 and 69)** See 12.3.6 below.	✓			

12.3.2 Mandatory measure – Certain dealings prohibited

A list of Weeds of National Significance (WoNS) has been agreed to by the Commonwealth and state and territory governments following an assessment process that prioritises weeds based on their invasiveness, potential for spread and environmental, social and economic impacts. There is a minimum requirement for all WoNS that they are banned from sale.

The proposed mandatory measure includes a ban from sale but, NSW considers that to effectively ban a weed from sale, its distribution must be stopped and the additional prohibitions in the proposed Regulation against movement and importation are designed to address this. A list of WoNS to which this mandatory measure applies is in **Table 13** below.

Prickly acacia, mimosa, parthenium weed, pond apple and gamba grass are not included in **Table 13**, because they are prohibited matter under the Act. This means you cannot deal with them, thus mandatory measures are not required.

Table 13: Plants that must not be moved, imported or sold

Scientific name	Common name
Parkinsonia aculeata	Parkinsonia
Prosopis spp.	mesquite
Rubus fruticosus agg.	blackberry
Lantana camara	lantana
Cryptostegia grandiflora	rubber vine
Chrysanthemoides monilifera	bitou bush / boneseed
Hymenachne amplexicaulis	hymenachne
Salvinia molesta	salvinia
Cabomba caroliniana	cabomba
Nassella neesiana	Chilean needle grass
Tamarix aphylla	athel pine
Salix spp. except *S. babylonica, S. X calodendron* and *S. X reichardtii*	willows except weeping willows, pussy willow and sterile pussy willow
Nassella trichotoma	serrated tussock
Ulex europaeus	gorse
Asparagus asparagoides	bridal creeper
Alternanthera philoxeroides	alligator weed
Lycium ferocissimum	African boxthorn
Asparagus aethiopicus, A. africanus, A. asparagoides Western Cape form, A. declinatus, A. plumosus, A. scandens (Excludes A. officinalis, A. racemosus)*	asparagus weeds
Jatropha gossypiifolia	bellyache bush
Genista monspessulana, G. linifolia, Cytisus scoparius	brooms
Dolichandra unguis-cati	cat's claw creeper
Senecio madagascariensis	fireweed
Anredera cordifolia	madeira vine

Scientific name	Common name
Opuntia spp., Cylindropuntia spp., Austrocylindropuntia spp. (Excludes O. ficus-indica)	opuntioid cacti
Sagittaria platyphylla	sagittaria
Solanum elaeagnifolium	silverleaf nightshade
Eichhornia crassipes	water hyacinth

12.3.3 Mandatory measure – Parthenium weed carriers – machinery and equipment

Regulatory movement of certain types of machinery and equipment from Queensland into NSW is required because of the prevalence of parthenium weed in Queensland and the risk of its spread into NSW.

There are currently cleaning requirements that apply to agricultural machines – specifically grain harvesters and comb trailers, bins for holding grain during harvest, augers or similar equipment used for moving grain, vehicles used for transporting grain harvesters and vehicles used as support vehicles with grain harvesters and that have been driven in paddocks during harvest operations.

Different standards of cleaning apply to these agricultural machines. With the exception of grain harvesters and comb trailers, it is proposed to standardise the cleaning requirements such that the obligation to clean these can be satisfied by either removing all plant material, dust and soil and any accumulation of grease from the machine, or using a treatment to sterilise seed in or on that machine, but only if that treatment cannot contaminate any material harvested by the machine in the future. These requirements are set out in the Biosecurity Manual. These machines will no longer be required to be presented for inspection at the NSW/QLD border as long as the required paperwork is presented confirming that the machines have passed inspection in QLD.

More stringent requirements currently apply to grain harvesters and comb trailers. This is because parthenium weed seed is small and can lodge behind or within many mechanical or structural components of grain harvesters and comb trailers and thus these present the greatest risk of parthenium weed spread.

The Biosecurity Manual contains the cleaning requirements for harvesters and comb trailers which replicate existing requirements. However the existing process for bringing grain harvesters and comb trailers into NSW from Queensland will be formalised into regulation. The completion of a certificate stating that the machinery has been cleaned will be required and a copy of that certificate is to be presented to a place at or near the border of NSW for inspection – along with the machinery or equipment.

Mineral exploration drilling rigs and vehicles used for transporting those rigs coming into NSW from Queensland also present a biosecurity risk with regard to parthenium weed spread and the proposed Regulation introduces the same cleaning and entry requirements for this machinery as it does for grain harvesters and comb trailers.

12.3.4 Mandatory measure –Duty to notify of importation of plants into the state

This is a new regulatory provision and has been included to enable the assessment of the weed potential of a new plant species prior to importation. This provides NSW DPI with the ability to prevent the deliberate importation of high risk species without the need for blanket regulation. The deliberate importation of high risk species has the potential to reduce the productivity of land and waterways and reduce biodiversity in natural areas.

In order to determine whether a plant is currently present in NSW a person will need to consult the Plant Information Network System of The Royal Botanic Gardens and Domain Trust - see http://plantnet.rbgsyd.nsw.gov.au/.

12.3.5 Mandatory measure – Testing for invasive species (weeds)

The proposed Regulation formalises testing arrangements, establishing a standard provision to all prohibited matter listed in Schedule 2 of the Act.

The proposed Regulation provides that testing is carried out in a laboratory accredited by the National Association of Testing Authorities (NATA) Australia for such testing (e.g., the use of a pen-side tests), or that the testing is carried out at a laboratory or other place by a person for diagnostic purposes and the Secretary has approved the laboratory, the person, or if the test is carried out by a person for research or training purposes and the Secretary has approved the person and the research or training. This provision applies regardless of whether initial testing produces a positive, inconclusive or negative test result so that surveillance and management is underpinned by accurate diagnostic testing.

The proposed Regulation will also by a condition imposed by the Secretary, require the approval by the Secretary to release or otherwise publish positive or inconclusive results of all invasive weed species listed in Schedule 2 of the Act (prohibited matter). This is because there is potential for the inappropriate release of test results for these serious weed species to disrupt export markets and/or affect social amenity.

12.3.6 Biosecurity Zones – Alligator weed, bitou bush and water hyacinth

The alligator weed biosecurity zone, the bitou bush biosecurity zone and the water hyacinth biosecurity zone will be established to manage the biosecurity risk of *Alternanjthera philoxeroides* (alligator weed), *Chrysanthemoides monilifera* subsp. *Rotunda* (bitou bush) and *Eichhornia crassipes* (water hyacinth) respectively and will cover specified areas of NSW where there are existing specific management requirements that apply to these species.

The alligator weed biosecurity zone, the bitou bush biosecurity zone and the water hyacinth biosecurity zone will imposes a requirement for a person to notify to the local control authority of the presence or suspected presence of these species within 1 working day after the person first suspects or becomes aware of a new infestation of the weed on the land. They will also have a requirement to, eradicate the weed or if this is not practicable destroy as much of the weed as is practicable and supress the spread of any remaining weed. These management outcomes reflect, yet simplify, existing arrangements.

These are outcome-based measures and advisory material or the RSWMP for each affected Local Land Services region may specify how this can be achieved, noting that the requirements could be different in each Local Land Services region. The relevant RSWMP will contain the existing locations of the weed so that new infestations can be identified.

Alligator weed, bitou bush and water hyacinth and are all listed as WoNS and thus, the movement, importation or sale of these weeds is prohibited.

In addition to these species, there is also a requirement to notify the presence of suspected presence of other terrestrial and freshwater weeds, and freshwater algae which are listed as prohibited matter in Schedule 2 of the Act.

12.4 The general biosecurity duty

Dealing with a weed or a carrier of a weed that presents a biosecurity risk will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- stopping the spread of weeds from land by creating a weed free buffer zone
- requesting a declaration from contractors that their vehicles, machinery and equipment have been cleaned and are free of soil and weed seed
- requesting a declaration when purchasing fodder to ensure it is weed free
- undertaking good agricultural practices that limit the spread of common weeds including the development of a property biosecurity plan
- thoroughly cleaning clothing, shoes, vehicles and animals when leaving a known weed infested area.

The RSWMP will describe for each LLS region what weeds will be prioritised for management action, investment and compliance effort. For these priority weeds, priority action will be expected to be taken by landowners and occupiers to prevent, eliminate or minimise the impact of those weeds on neighbouring lands - primarily through stopping weed spread.

12.5 Identification of impacts

The proposed Regulation contains a number of mandatory measures, regulatory provisions and biosecurity zones to manage the risks associated with weeds. These represent a transition of existing regulatory arrangements as is, with minor or major amendments or a new regulatory provision.

12.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to invasive weed species would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation:

- specific restrictions on dealings with invasive weed species including weeds of national significance would not exist
- prescribed control measures relating to the importation, notification and management (or suppression) and eradication of invasive weed species would not exist
- prescribed control measures relating to the importation of agriculture equipment into NSW would not exist.

The removal of these provisions would result in an immediate reduction in the cost of doing business in NSW relative to the base case, with the cost of weed control for individual landholders falling and a reduction in compliance costs. Additionally, the removal of regulations would reduce administration costs for government.

In the long-run the removal of these provisions may increase the likelihood of invasive weed species entering NSW from other jurisdictions and spreading across the state. However, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty to reduce the spread of weed species onto neighbouring lands. NSW also has responsibility under national agreements for WoNs.

An increase in the spread and density of weeds could lead to an increase in costs to agricultural industries and further damage to NSW's biodiversity and the environment, relative to the base case.

The impacts on agriculture of weeds include reduced farm productivity through the smothering of pastures, contamination of crops and harvested commodities, and harm to livestock and increased costs of control. The annual cost of weeds to Australian agriculture is estimated as a combination of $2.15 billion per year in control activities (excluding the labour cost of chemical application) and $3.14 billion per year in lost production, converted to 2015-16 dollars (Sinden 2004).

The impacts of weeds on the environment are extensive, although the cost is difficult to quantify. Coutts (2006) identified that a total of 127 individual weed species harm 419 listed threatened species in NSW, or 45 percent of all threatened biodiversity. The species or groups impacted across the different types of biodiversity in NSW include:

- 279 plant species
- 62 animal species
- 14 endangered populations[1]
- 64 endangered communities.[2]

[1] An endangered population experiences direct threats to its species.

[2] A community would be threatened when its functions are degraded.

Table 14 below contains a number of weeds species that have a detrimental impact on biodiversity. The first four of these species were identified by Coutts (2006) as having the greatest impact and the types of biodiversity impacted by each species is also set out in the table. Under Option 1, removal of existing levels of regulation would increase harm to the NSW environment.

While the figures in **Table 14** do not provide an estimate of the cost of damage from weeds on the environment, they are an indication of the magnitude of impacts. Some of the potential impacts from the spread of invasive weed species include damage to native ecosystems including rivers and forests and threats to native plants and animals. It is likely that under Option 1, there would be an increased likelihood of weeds spreading in NSW and causing increased damage to NSW's biodiversity.

Table 14: The number of biodiversity resources at risk from a weed species in NSW

Weed species	Biodiversity at risk				Total
	Plant species	Animal species	Populations	Ecological communities	
Lantana (*Lantana camara*)	83	2	Not recorded	11	96
Bitou bush / boneseed (*Chrysanthemoides monilifera*)	34	4	3	5	46
Blackberry (*Rubus fruticosus* agg.)	14	3	Not recorded	4	21
Brooms (*Cytisus scoparius*)	8	2	1	1	12
Madeira vine (*Anredera cordifolia*)	3	1	Not recorded	3	7
African boxthorn (Lycium ferocissimum)	Not recorded	Not recorded	Not recorded	4	5

Source: Coutts *et.al.* 2006.

12.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, it is likely that the introduction, spread and establishment of invasive weed species would be higher than under Option 1. However, as provisions prescribed under the Act (i.e., prohibited matter provisions and the general biosecurity duty) would also be removed the magnitude of these impacts would be greater.

Option 2 would require increased collaboration by industry and land managers to develop voluntary measures or codes of conduct for a number of different invasive weed species. This collaboration would increase costs relative to the base case, as government usually has no role under this form of regulation although in some causes it may provide information or advice.

An education strategy would also be required to inform landholders, risk-creators and the community of best practice measures for dealing with invasive weeds. While the existence of voluntary measures would encourage all affected stakeholders to implement controls, there is potential that the private incentives of individual parties would result in non-compliance and an increase in the likelihood of the spread of weed species.

12.5.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. There would be no additional impacts relative to the base case for proposed management arrangements that represent a transition of existing regulatory arrangements. However, for new proposed management arrangements or arrangements that represent a transition of existing arrangements with minor or major amendments, there would be potential impacts.

Option 3 includes the introduction of a provision that requires notification of the proposed importation of a vascular plant into NSW that is not currently present in the state. This provision would allow experts to assess the weed potential of a new plant species prior to its importation. Relative to the base case, this proposal would increase the cost of compliance for industry and administration costs incurred by government, however, it may also provide significant savings by protecting businesses, government, the environment and community from the potential damages of new or exotic pests, diseases or weed species.

Provisions for the movement of machinery and equipment have been expanded under Option 3 to include mineral exploration drilling rigs and the vehicles used for transporting those rigs. This proposal would increase the cost of compliance for industry and the administration costs incurred by government however an increase in the protection of the economy, environment and community relative to the base case would result. The impact of parthenium weed on Queensland beef producers was estimated at $16.5 million per year in 1990-91, which equates to about $32 million per year in 2015-16 dollars (Chippendale 1994).

Option 3 would also result in a more formal and transparent mechanism for diagnostic testing of weeds and the release of test results. Further, it streamlines diagnostic testing provisions for all prohibited matter listed in Schedule 2 to the Act and increases protections to the economy, environment and community.

13.0 Stock Foods

13.1 Existing legislative framework

There are three existing Acts and Regulations that contain provisions regulating stock foods in NSW.

The primary Act is the *Stock Foods Act 1940* which regulates the sale of food for stock. The *Stock Foods Regulation 2010* includes requirements for the labelling of stock foods, sets restrictions on foreign ingredients and provides for the taking of samples.

The *Stock Diseases Act 1923* and S*tock Diseases Regulation 2009* include prohibitions around food that can be fed to certain animal species. It addresses the feeding of prohibited pig feed to pigs, feeding restricted animal material (RAM) to ruminants and sets standards for the labelling of stock foods in respect of RAM. These matters are dealt with specifically in Chapter 8.

The *Stock (Chemical Residues) Act 1975* and the *Stock (Chemical Residues) Regulation 2010* contain provisions that relate to animals that become chemically affected as a result of ingesting food that is contaminated, or contaminants in the environment such as heavy metals, treatment of animals with veterinary medicines, and ingestion of crops, pastures or fodder that have been treated with pesticides within the withholding period. These matters are dealt with specifically in Chapter 14.

13.2 Proposed management

The Act will wholly repeal the *Stock Foods Act 1940*, the *Stock Foods Regulation 2010, the Stock Diseases Act 1923*, the S*tock Diseases Regulation 2009, the Stock (Chemical Residues) Act 1975* and the *Stock (Chemical Residues) Regulation 2010.*

It is proposed that stock foods will be managed using the following key management powers and tools under the Act:

1. Mandatory measures
2. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

The proposed Regulation contains a mandatory measure relating to substances in stock food and this is set out in Chapter 13.3 below.

It is noted that regulatory measures that relate to prohibited pig feed, feeding of RAM to ruminants and labelling requirements in respect of RAM are addressed in Chapter 8 (animal pests and diseases) and measures to prevent stock and animal products from becoming chemically affected and entering the food chain and/or export markets are addressed in Chapter 14 (chemicals in food animals and animal products).

13.3 The proposed Regulation

13.3.1 Overview of management arrangements

The proposed Regulation contains a mandatory measure that specifies actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 15 provides an overview of the proposed management arrangement and identifies whether it represents:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

Table 15: Overview of management arrangements to minimise the risks associated with contamination of stock foods

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Substances in stock food	**Mandatory Measure (Clause 36)** A person must not supply to another person stock food that contains a substance at a concentration that is higher than: a) if the substance is an ingredient for which a maximum amount is specified in Schedule 4 in relation to stock food – that maximum amount, or b) if the substance is a pesticide specified in respect of the stock food in the MRL Standard – the maximum residue limit of that pesticide.			✓ The list of foreign ingredients, now referred to as specified ingredients, has been reduced to include only high risk substances that are not regulated in NSW by other agencies or in other legislation. The labelling requirement for urea and salt has also been removed.	

13.3.2 Substances in stock food

The proposed Regulation will only prescribe maximum limits for foreign ingredients of the highest risk to animal health, trade and the community. The foreign ingredients that have a prescribed maximum are:

- Clenbuterol
- Cadmium, lead and mercury
- Aflatoxin B1
- Seeds of *Echium plantagineum* (Paterson's curse), *Heliotropium europaeum* (Common heliotrope), *Heliotropium amplexicaule* (Blue heliotrope), and *Ricinus communis* (Castor-oil plant) which contain toxic alkaloids.

13.4 Matters not included in the proposed Regulation

13.4.1 Labelling of stock food

The proposed Regulation does not contain labelling requirements for stock food other than RAM. RAM is dealt with in Chapter 8.

The *Commonwealth Agricultural and Veterinary Chemicals Code Regulation 1995* (Schedule 3AA, Part 3, Division 3.2 Section 7) deals with labelling of stock foods that do not require Australian Pesticides and Veterinary Medicines Authority (APVMA) registration (non-medicated stock foods). This regulation requires products to be labelled with a list of ingredients and instructions for use including the purpose for which the product is intended. Urea and salt are ingredients of many stock foods and are therefore included in the labelling requirement under this legislation.

13.4.2 Foreign ingredients

The proposed Regulation does not prescribe maximum limits for the following foreign ingredients currently regulated under the *Fertiliser Act 1985*:

- weed seeds other than *Echium plantagineum* (Paterson's curse), *Heliotropium europaeum* (Common Heliotrope), and *Heliotropium amplexicaule* (Blue Heliotrope), and *Ricinus communis* (Castor-oil plant) which contain toxic alkaloids
- ergots
- cannabis.

Natural toxins in human food products such as ergots are regulated by Food Standards Australia and New Zealand under the Food Standards Code. The NSW *Food Act 2003* requires a person to comply with any requirement imposed on them by the Food Standards Code in relation to the conduct of a food business or to food intended for sale or food for sale.

The proposed Regulation does not contain specific reference to maximum limits of organochlorine chemicals. Commonwealth legislation includes controls on the import, manufacture, use and export of Polychlorinated Biphenyls and Polybrominated Biphenyls, Aldrin, Chlordane, DDT, DTE, DDE, Dieldrin, Endrin, Hexachlorobenzene, Heptachlor, and Lindane. Possession and use of these chemicals in NSW is prohibited under the *Pesticides Act 1999*. Land contaminated by these chemicals is managed under the *Contaminated Land Management Act 1997*. Livestock contaminated by

grazing plants grown on contaminated properties will be regulated as chemically affected animals under the *Biosecurity Act 2015*. These chemicals are also listed in international agreements to which Australia is a signatory. Given existing provisions it is not considered necessary to further regulate these matters with respect to the sale of stock food.

13.5 The general biosecurity duty

Dealing with stock foods will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- manufacturers ensuring products are free of harmful contaminants for example ergots
- manufacturers labelling products that comply with the *Agricultural and Veterinary Chemicals Code Regulation 1995* to ensure consumer and market confidence in animal health and trade expectations
- manufacturers adopting procedures and guidelines that are publically available, such as industry standards, codes of practice, guidelines or other advisory material for example Grain Trading Standards by Grain Trade Australia
- consumers being aware of the contents of stock foods and making informed purchase choices
- purchasers not feeding obviously spoilt feed to animals such as mouldy grain or silage.

13.6 Identification of impacts

The proposed Regulation contains a mandatory measure to manage the risks associated with stock foods. The proposed amendments mean that the maximum acceptable limits for some foreign ingredients in stock foods have been removed, while others have been kept.

13.6.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to stock foods would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation there would be no specific restrictions on the contents of stock foods fed to livestock.

Under Option 1 there would be greater risk of unacceptable residues, or levels of residues, in animals entering the food chain.

The consumption of heavy metals has significant detrimental impacts on human health by damaging human organs. The World Health Organisation reports that ‘heavy metals such as lead, cadmium and mercury cause neurological and kidney damage’ (WHO 2015; WHO 2007).

Considering Australia is a major exporter of meat and livestock products, the removal of these provisions could threaten Australia's (and NSW's) image as 'clean and green' in export markets. Heavy metals, clenbuterol, Aflatoxin B1, *Echium plantagineum*, (Paterson's curse), *Heliotropium europaeum* (Common Heliotrope), *Heliotropium amplexicaule* (Blue Heliotrope) and *Ricinus communis* (Castor oil plant) are all toxic to animals and humans. These toxins may be transferred by food producing animals and animal food commodities through the food chain to impact human health. The impact of a risk to human health could be severe and result in reduced access to export markets, a reduction in the domestic consumption of affected products and reputational damage to NSW's agricultural industries.

Under this option, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty and duties in relation to prohibited matter events and biosecurity events. While provisions under the Act such as the general biosecurity duty would provide some protections to human health and a means to penalise businesses for harmful actions, the Act does not inform NSW businesses and the community of what constitutes acceptable standards. By only maintaining the Act, compliance costs on stock food producers would be reduced but there may be a higher risk that manufacturers could produce stock foods with unacceptable levels of prohibited or restricted substances and incorrectly label products.

While administration and compliance costs to government would be less under Option 1 relative to the base case, government would not be able to efficiently and effectively manage biosecurity risks and recover costs for providing services.

13.6.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there is an increased likelihood that stock foods would be contaminated by any number of toxins that threaten animal health and public health by transfer to the food chain through food producing animals, animal food commodities and international trade in manufactured stock food products. Impacts would include reduced farm productivity and control costs, as were identified in Chapter 12.5.1.

Industry self-regulation, including codes of practice and voluntary measures, would be the only measures for stock food producers to manage the inclusion of these substances. Industry self-regulation would increase costs to industry relative to the base case as government usually has no role under this form of regulation although in some cases it my provide information or guidance. It would also result in higher risks than the base case as there would be no legal mechanisms to ensure compliance or penalties for non-compliance.

While voluntary measures or codes of conduct could be implemented to maintain standards, in the event of trace substances harming the industry, environment or human health, livestock industries may request financial assistance from government and therefore create additional costs. This would have potential to harm the reputation of industry and undermine public confidence in the government's capacity to manage biosecurity risks.

13.6.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act representing a transition of existing arrangements with major amendments.

Under the proposed Regulation, the maximum requirements for some contaminants will not be transitioned as specified in Chapter 13.4.2. These changes are not considered to have a significant impact as the foreign ingredients omitted are regulated by other legislation as stated in Chapter 13.4.2.

14.0 Chemicals in food animals and animal products

14.1 Existing legislative framework

There are three existing Acts and Regulations that regulate chemical residues in food producing animals and animal food products in NSW.

The *Stock (Chemical Residues) Act 1975* aims to prevent the slaughter for human consumption of stock which contain certain concentrations of chemicals, or which are otherwise chemically affected and to prevent stock from becoming chemically affected. The *Stock (Chemical Residues) Regulation 2010* sets out the manner in which seized stock is disposed, the testing and reporting of chemically affected stock, the power of inspectors, persons to whom the Minister can delegate functions and data relating to the identification of stock.

A number of legislative instruments have been made under the *Stock (Chemical Residues) Act 1975* which declare certain species to be stock, specify maximum residue limits in stock, declare certain stock as chemically affected, and prescribe the manner of attaching a permanent identifier to chemically affected stock.

The *Stock Diseases Act 1923* and *Stock Diseases Regulation 2010* regulate the identification and tracing of stock.

The *Stock Foods Act 1940* and *Stock Foods Regulation 2010* include requirements for the labelling of stock foods, set restrictions on foreign ingredients and provide for the taking of samples.

14.2 Proposed management

The Act will wholly repeal the *Stock (Chemical Residues) Act 1975*, the *Stock (Chemical Residues) Regulation 2010,* the *Stock Diseases Act 1923*, the *Stock Diseases Regulation 2010,* the *Stock Food Act 1940*, the *Stock Food Regulation 2010* and all legislative instruments made under these Acts.

The Act provides all the necessary powers to respond to and manage a biosecurity impact from chemically affected animals. However Chapters 13, 14 and 15 of the RIS identify other management arrangements contained in the proposed Regulation that will eliminate, minimise and manage the risk of chemically affected animals.

This chapter discusses the following key management powers and tools under the Act that aim to minimise the risk of chemically affected animals and animal food commodities from entering the food chain:

1. Mandatory measures
2. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

The proposed Regulation contains a number of mandatory measures and these are set out in Chapter 14.3 below.

14.3 The proposed Regulation

14.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 16 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

It is noted most existing regulatory arrangements cannot be transitioned exactly as is because all new management arrangements will need to be made under the heads of power contained in the Act. Despite this, the proposed management approach has been determined as a transition of existing regulatory arrangements where there has been no noticeable change or impact on stakeholders.

Table 16: Overview of management arrangements to minimise the risks associated with chemicals in animals and animal products

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Reporting of test results	**Mandatory Measure (clause 37)** The owner of a laboratory or other facility at which a test has been carried out to determine the level of agricultural or veterinary chemical, polychlorinated biphenyl or a metal in a food producing animal or animal food commodity must furnish (in person or electronically) a written report of the results of the test containing all prescribed information to an authorised officer within 1 working day after the test results become available.	✓			
Notifying purchaser about consumption of chemical product by animal	**Mandatory Measure (clause 38)** The vendor of a food producing animal must (before or at the time of sale) inform the purchaser if the animal has (within 60 days before the sale) consumed anything treated with a chemical product during the withholding period (within the meaning of the Agvet Code) for that chemical product or the animal is chemically affected within the meaning of section 13 (2) of the Act.	✓			

14.4 The general biosecurity duty

Chemically affected food producing animals and animal food commodities will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- preventing food producing animals from grazing areas that contain sources of contamination
- food producing animals that may have been exposed to contamination are identified and prevented from entering the human food chain until testing confirms otherwise
- food producing animals already identified as being chemically affected are kept out of the human food chain until further testing confirms otherwise.

It is noted that the *Stock Medicines Act 1989* addresses the use of stock medicines in food producing animals. Under this Act, vendors have an obligation to inform purchasers of a food-producing animal that has been treated with a stock medicine and is still within the withholding period and the expiration of that withholding. In addition, a person must not allow a food producing animal that has been treated with a stock medicine and is still within the relevant withholding period, to enter the human food chain. This restriction applies to food commodities from the animal as well.

14.5 Identification of impacts

The proposed Regulation contains a number of mandatory measures to manage the risks associated with chemicals in food producing animals and animal food commodities. These represent a transition of existing regulatory arrangements as is.

14.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to chemical residues in food producing animals and animal products would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation there would be no requirement:

- for vendors to inform purchasers of food producing animals that the animal has consumed anything treated with a chemical product during the withholding period or the animals is chemically affected within the meaning of section 13 (2) of the Act,
- for laboratories to report a diagnosis of a chemically affected food producing animal or animal food commodity.

The provisions relating to chemicals entering the food chain state that a seller must inform the purchaser of an animal if the animal has consumed anything that has been treated with a chemical product during the withholding period, as specified by the *Agricultural and Veterinary Chemicals Code Act 1994* (Commonwealth legislation). This ensures the chemical residues in a carcass are below the Australian maximum residue limits, in order to reduce the risks that animals are unfit for human consumption (APVMA

2014; NSW DPI 2007). As there would be no regulation under Option 1 to effectively manage the risk of chemicals entering the food chain, there would be an increased risk to human health compared to the base case.

Under this option, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty and duties in relation to prohibited matter events and biosecurity events. While provisions under the Act including the general biosecurity duty would provide some human health protections and a means to penalise businesses for harmful actions, the Act does not inform NSW businesses of their obligations. By only maintaining the Act, there may be an increased risk that an unlawful transaction would proceed and be undetected.

While administration and compliance costs to government would be less under Option 1 relative to the base case, government would not be able to efficiently and effectively manage biosecurity risks and recover costs for providing services.

14.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there would be an increased risk that chemicals above the maximum residue limits would be consumed by humans. The impacts would be similar to those identified under Option 1, although without the general biosecurity duty there would be no protections in place for human health or means to penalise businesses for their harmful actions.

Codes of practice or voluntary rules that would be developed under this option are likely to provide an insufficient level of risk management. In the event of a human health incident linked to chemical residues, there is potential for both consumers of the affected products and businesses that created the problem to seek financial support from government. This would have significant potential to harm the industries reputation and increase costs to government.

14.5.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act There would be no additional impacts relative to the base case as the proposed management arrangements represent a transition of existing arrangements.

15.0 Fertilisers, liming materials and trace element products

15.1 Existing legislative framework

There is one existing Act that regulates fertilisers, liming materials and trace element products in NSW.

The *Fertilisers Act 1985* regulates the sale of fertilisers, liming materials and trace element products. The *Fertilisers Regulation 1997* was repealed on 22 March 2002.

A number of orders have been made under the *Fertilisers Act 1985* to:

- define fertilisers and identify substances that are excluded from regulation under the *Fertiliser Act 1985*
- include maximum allowable limits of cadmium, lead and mercury in fertilisers, liming materials and trace element products
- specify nutrients, contaminants and other particulars (such as warning statements) that must be marked on fertilisers, liming materials and trace element products.

15.2 Proposed management

The Act will wholly repeal the *Fertilisers Act 1985* and all legislative instruments made under this Act.

It is proposed that fertilisers, liming materials and trace element products will be managed using the following key management powers and tools under the Act:

1. Mandatory measures
2. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

The proposed Regulation contains a number of mandatory measures and these are set out in Chapter 15.3 below.

15.3 The proposed Regulation

15.3.1 Overview of management arrangements

The proposed Regulation contains a number of mandatory measures that specify actions that a person who deals with biosecurity matter or a carrier must take to prevent, eliminate or minimise the risk posed or likely to be posed by the biosecurity matter, carrier or dealing.

Table 17 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation have been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

Table 17: Overview of management arrangements to minimise the risks associated with fertilisers, liming materials and trace element products

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
Maximum concentrations of cadmium, lead and mercury	**Mandatory Measure (clause 39)** A person must not import or supply a fertiliser, liming material or trace element product that has a concentration of cadmium, mercury or lead above the maximum concentration.			✓ Persons who were previously exempt from the requirements of the *Fertilisers Act 1985* are now subject to restrictions relating to maximum concentration levels of lead, mercury and cadmium. See 15.3.2 for more detail regarding this provision.	
Labelling of parcels	**Mandatory Measure (clause 40)** A person must not import into NSW or supply a fertiliser, liming material or trace element product unless the parcel (being the sack, package or container holding the fertiliser, liming material or trace element product) is clearly marked to show the proportion of cadmium, lead or mercury in the fertiliser, liming material or trace element product expressed as milligrams per kilo or parts per million. **Mandatory Measure (clause 40)** A person must not import into NSW or supply a fertiliser or liming material that has a concentration of cadmium, lead or mercury above the following levels unless the parcel of fertiliser is clearly marked with the prescribed warning:			✓ Persons who were previously exempt from labelling requirements under the *Fertilisers Act 1985* are now not. See 15.3.3 for more detail regarding this provision. ✓ Persons who were previously exempt from labelling requirements under the *Fertilisers Act 1985* are now not. See 15.3.3 for more detail regarding this	

Biosecurity Risk	Management arrangement	Transition of existing regulatory provisions			
		As is	Minor amendment	Major amendment	New arrangement
	a) Cadmium – 1 milligram per kilo of fertiliser or liming material b) Lead – 20 milligrams per kilo of fertiliser or liming material c) Mercury – 0.2 milligrams per kilo of fertiliser or liming material.			provision.	

15.3.2 Maximum concentrations of cadmium, lead and mercury

The proposed Regulation prescribes the maximum concentration of cadmium, mercury or lead in fertilisers, liming materials and trace element products. The maximum limits are consistent with those currently prescribed in the *Fertiliser Act 1985* and the National Code of Practice for Fertiliser Description and Labelling.

This management arrangement is a major change for those products that meet the definition of fertiliser, liming material or trace element products, and are currently exempt under the *Fertilisers Act 1985.* These products include, but are not limited to a range of recycled and organic products that are allowed for application to agricultural land and may contain heavy metals. An example might be industrial waste that meets the definition of fertiliser and contains cadmium. The change will require this product, and any other product that meets the definition of fertiliser, liming material or trace element product to adhere to the maximum concentration of cadmium, mercury or lead as prescribed in the proposed Regulation. Notably, many of these products are also regulated under the *Protection of the Environment Operations (Waste) Regulation 2014* which means that many potential biosecurity risks such as heavy metals are already addressed.

15.3.3 Labelling of parcels

The proposed Regulation prescribes that the proportion of cadmium, lead and mercury in the fertiliser, liming material or trace element must be labelled on the parcel. Furthermore, a warning statement must be included on the label with respect to the risk of the build-up of heavy metals in soil. These warnings are considered necessary to prevent accumulation in the environment, entry into the human food chain and threat to trading arrangements. The proposed warning statements are consistent with the wording included the *National Code of Practice for Fertiliser Description and Labelling.*

As described above, this management arrangement is a major change for those products that meet the definition of fertiliser, liming material or trace element product and are currently exempt under the *Fertilisers Act 1985.* Such products will now be required to be labelled with the proportions of cadmium, lead or mercury and warning statements if they exceed prescribed limits.

15.4 Matters not included in the proposed Regulation

The requirement for labelling to include nutrient content and formulation, the quantity of product, warning statements for dust, particle size and neutralising values for fertilisers, liming materials and trace element products is not included in the proposed Regulation.

The labelling of nutrient content and associated warnings is primarily aimed at ensuring that consumers are provided with information about the composition of the product, potential risks to productivity, and potential work/health and safety risks. The general biosecurity duty would require that importers, manufacturers and suppliers of fertilisers, liming materials and trace element products will manage these issues in accordance with the expectations of consumers and market demands and best practice guidelines, such as the *Code of Practice for Fertiliser Description and Labelling,* and is considered adequate to address this risk.

Issues such as contamination of waterways from excess application of nutrients and other environmental impacts are of concern but these risks are addressed by the general biosecurity duty (see Chapter 15.5).

15.5 The general biosecurity duty

Fertilisers, liming materials and trace elements will also be subject to the general biosecurity duty.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- adoption of best practice in fertiliser labelling contained in industry standards and codes of practice. For example, the *National Code of Practice for Fertiliser Description and Labelling* and other advisory and guidance material such as *Managing for Cadmium Minimisation in Livestock*
- taking care with fertiliser substances such as unprocessed animal manure (including composted manure), food processing wastes, compost and other waste products to ensure that animals do not have access to pathogens, high-levels of heavy metals or chemicals
- consumers selecting fertiliser products that display nutrient values to ensure product integrity.

15.6 Identification of impacts

The proposed Regulation contains a number of mandatory measures to manage the risks associated with heavy metals from fertilisers, liming materials and trace element products from entering the human food chain. These represent a transition of existing regulatory arrangements with major amendments.

15.6.1 Option 1 — No regulation is made to support the Act

Under Option 1, current management arrangements relating to fertilisers, liming materials and trace elements would lapse upon commencement of the Act and no new regulation would be made in its place. When comparing Option 1 against the base case, it is apparent that without maintaining existing levels of regulation there would be no labelling or content restrictions for these products in NSW.

The removal of labelling provisions would lower the labelling requirements of packages and reduce the cost of manufacturing for businesses. The removal of maximum concentration requirements of heavy metals would also mean that there would be fewer testing requirements for the composition of products. The removal of the above provisions would result in reduced input costs, which could lead to lower prices and increased benefits to consumers.

The removal of provisions related to labelling regulations may also have negative impacts on the environment and consumers. These provisions ensure that when purchasing fertilisers, liming materials and trace elements, consumers are fully informed of the concentration of heavy metals in these products. Without the provisions, users of these products may unknowingly cause unacceptable levels of heavy elements to enter the food chain, potentially increasing risks to human health and environmental

contamination (NSW DPI 2004a; NSW DPI 2004b). In such a case, the community may challenge the industry's social licence to operate.

Under this option, the NSW Government, industry and the community would still have duties under the Act including the general biosecurity duty and duties in relation to prohibited matter events and biosecurity events. While administration and compliance costs to government would be less under Option 1 relative to the base case, government would not be able to efficiently and effectively manage biosecurity risks and recover costs for providing services.

15.6.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, the likely impacts would be similar to those identified in Option 1.

Option 2 would require increased industry collaboration to develop codes of practice or voluntary measures. This collaboration would increase costs to industry relative to the base case, as government usually has no role under this form of regulation although in some cases it may provide information or advice.

While the removal of regulations would reduce the government's administration costs in the short-term, there is potential for costs to increase if a heavy metal contamination occurred and there was an outcry by the community in relation to the industry's social licence to operate and affected parties sought financial assistance from government to prevent business closures and loss of employment.

15.6.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act with proposed management arrangements representing a transition of existing regulatory arrangements with major amendments. The extension of maximum concentration limits for cadmium, lead, and mercury would ensure all products that meet the definition of fertiliser, liming materials or trace elements are regulated.

The provision of the proportions of cadmium, lead and mercury and warning statements on the labels of fertilisers, liming materials and trace elements would assist in preventing the risk of a build-up of heavy metals. These changes would increase the costs for the manufacturing businesses in terms of compliance and may increase government's administration costs. However, these changes would ensure that the regulations are applied equitably across the manufacturers of similar products, assist consumers in the safe use and application of products and most importantly provide further protections to human health (WHO 2015; WHO 2007).

16.0 Bees – conditions of registration

16.1 Existing legislative framework

There is one existing Act and Regulation that regulates the management of bees in so far as it relates to bee registration.

The *Apiaries Act 1985* regulates the keeping of honey bees in NSW by requiring and providing for the registration of beekeepers and the *Apiaries Regulation 2013* sets out conditions of registration and provides additional grounds upon which applications for registration can be refused, suspended or cancelled.

16.2 Proposed management

The Act will wholly repeal the *Apiaries Act 1985* and the *Apiaries Regulation 2013*.

The management of pests and diseases that have the potential to impact bees are discussed in Chapter 8. This Chapter relates solely to the requirement under the Act that a person must be registered to engage in a registrable dealing which in this instance is dealing with managed bees.

The proposed Regulation contains a number of conditions of registration and these are set out in Chapter 16.3 below.

16.3 The proposed Regulation

16.3.1 Registrable dealings

As noted in Chapter 6.2, amendments are proposed to Schedule 4 of the Act that contains provisions relating to registrable dealings. Details of these amendments are accessible at www.dpi.nsw.gov.au/biosecurityact.

16.3.2 Conditions of registration

Upon commencement of the Act, registration issued under the *Apiaries Act 1985* will automatically be taken as registration granted under the *Biosecurity Act 2015* and will be subject to the same conditions as under the *Apiaries Act 1985* as well as any conditions prescribed by the Biosecurity Regulation or imposed by the Secretary under the *Biosecurity Act 2015*. Once current registration expires, an application for the grant of registration under the *Biosecurity Act 2015* will be required.

The proposed Regulation contains a number of conditions of registration that relate to dealings with bees.

Table 18 provides an overview of the proposed management arrangements and identifies whether they represent:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the management arrangements contained in the proposed Regulation has been compared against existing regulatory arrangements. An assessment has then been made regarding the effect or impact of the change on stakeholders.

Table 18: Conditions of biosecurity registration - bees

Condition	Transition of existing regulatory provisions			
	As is	Minor amendment	Major amendment	New arrangement
Requirement as to hives (clause 80) A registered entity must not keep bees in a hive other than a frame hive.	✓			
Requirement as to hives (clause 80) A registered entity must ensure that each hive of the registered entity is identified with the registered entity's registration number and complies with any other conditions with respect to hives to which that registration is subject.	✓			
Records and notification (clause 81) A registered entity must keep a written (which may be in electronic form) record as prescribed in this clause and retain that record in a readily accessible form for a period of 5 years.	✓			

16.4 Matters not included in the proposed Regulation

A number of provisions from the *Apiaries Act 1985* and *Apiaries Regulation 2013* have not been included in the proposed Regulation. Abandoned and neglected hives, honey not be exposed, use of infected queen candy, infected bees not be kept/sold and the power to prohibit the keeping of bees in certain areas can be managed using the general biosecurity duty. Potential issues caused by keeping of bees in certain areas or night parking of vehicles could be managed on a case by case basis by including any necessary conditions on the registration of a particular registered entity.

16.5 Identification of impacts

The proposed Regulation contains a number of conditions of registration that represent a transition of existing regulatory arrangements as is.

16.5.1 Option 1 — No regulation is made to support the Act

Under Option 1, a person would be required to register as a registered entity to deal with bees under the Act once that person's registration expires under the *Apiaries Act 1985*. The Act provides that conditions of registration may be prescribed by the regulations or imposed by the Secretary, so when comparing this option against the base case, there is little impact on registered entities as the Secretary would impose the same conditions of registration as set out in the proposed Regulation. However, the inclusion of conditions on individual registrations would result in increased administration cost to government and less transparency to registered entities of the requirements attached to registration.

16.5.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there would be no requirement for beekeepers to be registered. Beekeepers would be the immediate beneficiaries of this scenario as there would be no fees for registration or conditions relating to records and notification, accommodation of bees and identification of bee hives.

However, this is likely to come at a cost of increased biosecurity risks to industry and the community in the event of a pest or disease outbreak compared to the base case. Without information about the keeping of bees and movement of hives, government would have less capacity to trace a pest or disease and limit its spread which could cause greater harm to the economy, environment and community.

Some of the potential costs of a pest or disease outbreak include:

- a reduction in the supply of pollination services, causing an increase in prices of these services. This would have significant impact on the production of commodities like avocados, almonds, onions, macadamias, apples and cherries, all of which are at least 90 per cent dependent on bee pollination for production (Gibbs & Muirhead 1998)
- higher bee mortality, resulting in lost pollination revenues and the cost of rebuilding hives
- a decline in honey production

Under this option, there would be an increased need for collaboration between recreational and commercial beekeepers to develop codes of practice and voluntary measures to maintain the traceability of hives in the event of a pest or disease outbreak.

While the removal of regulations would reduce the government's administration costs in the short-term, there is potential for costs to increase to producers (i.e., lost revenues and increased control cost) and the consumers of agricultural products (increased product prices), in the event of a bee-related pest or disease outbreak. Affected parties who sought financial assistance from government to prevent business closures and loss of employment can create long-term costs.

16.5.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act with a number of existing conditions representing a transition of existing arrangements as is. This option would create administrative efficiencies as these conditions would not need to be included on individual registrations and transparency.

There are a number of existing provisions that are not included in the proposed Regulation as set out in Chapter 16.4 above. The removal of prescriptive requirements would reduce compliance costs for businesses and potentially result in savings to businesses if innovative ways to manage these risks under the general biosecurity duty were developed. The removal of prescriptive regulation would reduce the immediate administration and compliance costs for government.

17.0 Non-indigenous animals

17.1 Existing legislative framework

There is one primary existing Act and Regulation that regulates the management of non-indigenous animals in NSW.

The *Non-Indigenous Animals Act 1987* (NIA Act) provides regulatory controls and powers with respect to the introduction, movement and keeping of non-indigenous (exotic) animals in NSW.

The NIA Act together with the *Non-Indigenous Animals Regulation 2012* (NIA Regulation) establish the following seven categories of terrestrial non-indigenous animals depending on their threat to the environment, agriculture or persons, security requirements for keeping and transporting, and pest potential:

Category	Description
Category 1a	Animals of extreme pest potential, the importation and keeping of which is generally not permitted.
Category 1b	Animals that have not been classified as belonging to any particular category, the importation and keeping of which is generally not permitted.
Category 2	Animals that pose an extreme or more serious threat to the environment, agriculture or persons, and that are restricted to being kept in licensed animal display establishments or by: a) a corporation that is accredited as a research establishment under section 20 of the *Animal Research Act 1985*, or b) an individual who holds an animal research authority issued under section 25 of the *Animal Research Act 1985*, or c) (a person who holds an animal supplier's licence issued under section 39 of the *Animal Research Act 1985*).
Category 3a	Animals that pose a less serious or moderate threat to the environment, agriculture or persons, and that are restricted to being kept in licensed animal display establishments or by: a) a corporation that is accredited as a research establishment under section 20 of the *Animal Research Act 1985*, or b) an individual who holds an animal research authority issued under section 25 of the *Animal Research Act 1985*, or c) a person who holds an animal supplier's licence issued under section 39 of the *Animal Research Act 1985*).
Category 3b	Animals that have the potential to establish in the wild a population that would present a new threat to the environment, agriculture or persons or aggravate an existing threat and that may only be kept under licence).
Category 4	Animals that would be unlikely to present a threat to the environment, agriculture or persons or greatly worsen an existing threat if they escaped into the wild, the importation and keeping of which are not restricted.

Category	Description
Category 5	Animals that are already widespread pests and which, if they escaped into the wild, would be unlikely to greatly worsen an existing threat.

Animals are classified by species into the prescribed categories with animals assessed as having an extreme pest potential (Category 1a) not permitted in NSW. Animals assessed as having a significant biosecurity risk are managed through a system of licences and permits and the NIA Regulation contains provisions that regulate their control, importation, keeping and movement.

17.2 Proposed management

The Act will wholly repeal the NIA Act and the NIA Regulation.

Broadly, it is proposed that non-indigenous animals currently regulated under the NIA Act will be managed using the following key management powers and tools provided for under the Act.

1. Prohibited dealings
2. Emergency powers and emergency orders
3. Permits
4. Registrable dealings
5. General biosecurity duty.

These terms are defined in Chapter 2.0 and are further discussed in Chapter 5.2.

The proposed Regulation contains a number of conditions of registration and these are set out in Chapter 17.3 below.

17.3 The proposed Regulation

17.3.1 Prohibited dealings and registrable dealings

As noted in Chapter 6.2, amendments are proposed to Schedule 3 (prohibited dealings) and Schedule 4 (registrable dealings) to the Act. Details of these amendments are accessible at: www.dpi.nsw.gov.au/biosecurityact.

17.3.2 Conditions of registration

Upon commencement of the Act, licences issued under the NIA Act for Blackbuck, Dromedary camel and Guanaco will automatically be taken as registration granted under the *Biosecurity Act 2015.* Registration will be subject to the same conditions as under the NIA Act as well as any conditions prescribed by the Biosecurity Regulation or imposed by the Secretary under the *Biosecurity Act 2015*. Once current licences expire, an application for the grant of registration under the *Biosecurity Act 2015* will be required.

A number of non-indigenous animals currently licenced to be kept under the NIA Act will not require registration under the Act and will constitute a prohibited dealing as set out in Schedule 3 to the Act. A permit under the Act will be issued to those people who are currently licensed to keep these animals and any conditions of the current licence will apply as conditions of the permit.

The proposed Regulation contains a number of conditions of registration that relate to dealings with the non-indigenous animals listed in Schedule 4 to the Act, in order to prevent these species escaping and forming pest populations.

Table 19 provides an overview of the proposed conditions of registration and identifies whether the proposed condition represents:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the proposed conditions of registration have been compared against existing conditions of registration and an assessment has been made regarding the effect or impact of the change on stakeholders.

Table 19: Conditions of biosecurity registration - non-indigenous animals

Condition	Transition of existing regulatory provisions			
	As is	Minor amendment	Major amendment	New arrangement
Keeping animals in captivity (clause 84) A registered entity must not release an animal of the registered entity from captivity or otherwise permit the escape of any such animal.	✓			
Keeping animals in captivity (clause 84) A registered entity must, within 24 hours of first becoming aware of the theft, release or escape of an animal of the registered entity, notify the Secretary of the matters prescribed in the clause.		✓ Notification is currently required but the time permitted to notify has reduced from 7 days to 24 hours. See 17.3.3 for more detail about this provision.		
Keeping animals in captivity (clause 84) A registered entity must ensure that, at least every 7 days, an inspection is carried out to ensure no animals of the registered entity are missing and a record of each inspection is kept in a readily accessible form and that record is made available to the Secretary of an authorised officer on request.		✓ Inspection is currently required but the frequency has increased from at least once every 2 weeks to at least once every 7 days. See 17.3.3 for more detail about this provision.		
Reporting to Secretary (clause 85) A registered entity must, if requested to do so by notice in writing from the Secretary, provide the Secretary with in the time specified in the notice with a written report setting out the prescribed information.	✓			
Permanent identification (clause 86) A registered entity must ensure that each animal (including any animal born when the mother of the animals is held by the registered entity) is	✓	✓ Notification of pre-identified non-indigenous animals is being extended from 14 days to 21 days		

Condition	Transition of existing regulatory provisions			
	As is	Minor amendment	Major amendment	New arrangement
permanently identified using a microchip or an ear tag as required by the clause and that evidence of permanent identification is provided by the registered entity to the Secretary as follows: a) if the animals was permanently identified before the registration entity was granted biosecurity registration – within 21 days after the registration is granted, or b) in any other case – within 7 days after then animals is permanently identified or is acquired by registered entity (whichever occurs later).		to make it more achievable for persons with newly acquired non-indigenous animals to supply the correct information to the Secretary.		

17.3.3 Time frames for notification of escape, theft or release and inspection of animals and accommodation

Notification of the theft, release or escape of a non-indigenous animal is necessary to mitigate the biosecurity risks in the event that an animal has been stolen, released or escaped. The shorter time frame for notification to the Secretary is proposed as early notification provides the best chance of being able to locate the animal and stop species which are considered to have an invasive potential from establishing pest populations in NSW.

Inspection of animals and accommodation is required to ensure high levels of animal husbandry and that persons who own or are in charge of animals have an established system whereby they are able to check to see if an animal is missing and are able to notify the Secretary accordingly. The benefits of early notification are set out above.

17.4 Matters not included in the proposed Regulation

A number of provisions from the NIA Regulation have not been included in the proposed Regulation. Standards relating to housing of non-indigenous animals, provisions relating to security of accommodation, gates, sliding doors and other doors, barriers and warning signs are implicit in the condition of registration that a person must not release an animal from captivity or otherwise permit the escape of any such animal and can also be managed using the general biosecurity duty.

NSW DPI will however continue to advise keepers of non-indigenous animals about these matters on a case-by-case basis as each species and geographic situation is different. Potential issues could be managed on a case by case basis by including any necessary conditions on the registration of a particular registered entity.

17.5 The general biosecurity duty

The general biosecurity duty will apply to all dealings with non-indigenous animals.

The general biosecurity duty requires that a person take measures to prevent, eliminate or minimise biosecurity risks as far as reasonably practicable. Examples of measures could include:

- maintenance of appropriate infrastructure and systems to reduce the chance of escape, theft and intentional liberation of animals
- implementation of species management programs by licenced animal display establishments to ensure that the priorities of established species conservation programs are observed and that other animals are not bred in excess to the number of licensed exhibitor spaces available
- reporting illegal activity involving the unlawful movement, keeping, breeding or trading of an animal listed as a prohibited dealing.

17.6 Identification of impacts

The proposed Regulation contains a number of conditions of registration that represent a transition of existing regulatory arrangements as is or with minor amendments.

17.6.1 Option 1 — No regulation is made to support Act

Under Option 1, a person would be required to register as a registered entity to deal with certain non-indigenous animals under the Act once that person's licence expires under the NIA Act. The Act provides that conditions of registration may be prescribed by the regulations or imposed by the Secretary, so when comparing this option against the base case, there is little impact on registered entities as the Secretary would impose the same conditions of registration as set out in the proposed Regulation. However, the inclusion of conditions on individual registrations would result in increased administration cost to government and less transparency to registered entities of the requirements attached to registration.

17.6.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government intervention and management of biosecurity risks would be self-regulated. In this scenario, there would be no requirement for holders of certain non-indigenous animals to be registered. This would mean that there would be no fees for registration, no restrictions on the keeping, movement and accommodation of non-indigenous animals, no identification requirements, no requirement to keep written records and no requirement to inspect animals and notify of their theft, escape or release.

Removing all regulation around the keeping of non-indigenous animals would result in financial benefits to holders of non-indigenous animals due to reduced compliance costs and reduced costs of maintaining animals. However, this is likely to result in increased difficulties in managing biosecurity risks, poor animal welfare outcomes and challenges from the community regarding the group's social license to operate.

Non-indigenous animals that historically have been accidently or intentionally released and have become established have caused significant adverse impacts for the environment (damaging flora and fauna), agriculture and the human health and safety (NSW DPI 2016d). A summary of the costs of these impacts, quantitative or qualitative, is provided below and highlights the importance of ensuring that non-indigenous animals do not become established in the Australian environment.

Some non-indigenous animals are endemic today in some parts of Australia and include feral pigs, camels, cane toads, foxes, feral cats and rabbits and are now considered widespread pests. The estimated annual costs to Australian agriculture from select invasive animals include:

- wild rabbits - $206.0 million per year
- wild dogs - $48.5 million per year
- mice - $22.8 million per year
- foxes - $21.2 million per year
- feral pigs - $9.2 million per year (Gong et.al. 2009).

Established pests have also caused significant damage to Australia's environment and have negatively impacted communities. A list of some impacts is provided in **Table 20** below.

Table 20: Impacts of select invasive species on the environment and community

Invasive species	Impacts on the environment	Impacts on the community
Wild rabbit	• Grazing and burrowing by rabbits can cause serious erosion problems, reduce recruitment and survival of native plants, and modify entire landscapes (NPWS 2015) • Rabbits threaten the survival of a number of native animal species by altering habitat, reducing native food sources, displacing small animals from burrows, and attracting introduced predators such as foxes (NPWS 2015) • Native fauna threatened by rabbits in Australia include the Greater Bilby, the Night Parrot and the Brush-tailed Rock-Wallaby (Pest CRC 2004).	• Rabbit warrens pose a threat of injury to horses (Fitzgerald & Wilkinson 2009), potentially limiting recreational opportunities like horse riding • Rabbits create recreational opportunities for local hunt clubs and recreational shooters (Fitzgerald & Wilkinson 2009) • Source of income from the sale of rabbit skins (Fitzgerald & Wilkinson 2009).
European Red Fox	• Predation by foxes has been a significant contributor to native animal decline and continues to undermine recovery efforts for threatened species, such as the malleefowl, the bridled nail-tail wallaby and the night parrot (AUST. DSEWPC 2010) • Foxes eat wild berries and fruit and thus contribute to the spread of weeds, especially blackberry (Fitzgerald & Wilkinson 2009).	• The fox could also act as a carrier of rabies, should the disease accidentally be introduced into Australia. Rabies mostly affects members of the dog family, but can also be passed on to humans, livestock and native mammals (AUST. DSEWPC 2010) • Fox control imposes a financial cost of landholders and communities, but can also present a recreational opportunity for hunters (Fitzgerald & Wilkinson 2009) • Collisions between motor vehicles and foxes cause financial costs to motorists and other psychological upset and inconvenience (Fitzgerald & Wilkinson 2009 & Invasive Animals CRC 2011) • Psychological distress caused by fox predation on household pets, poultry and livestock (Invasive Animals CRC 2011).
Feral pigs	• Feral pigs cause severe environmental degradation by feeding selectively on plant communities, creating drainage channels in swamps, eroding soil and fouling water points with their wallowing, eating frogs, reptiles, birds and small mammals, and spreading weeds and possibly disease (NPWS	• Feral pigs impact rural communities by killing and eating young lambs, competing with livestock for pasture and drought feed, and damaging fences and waterholes (NPWS 2005) • Feral pigs can carry exotic diseases that present a threat to cattle, other animals and possibly humans

Invasive species	Impacts on the environment	Impacts on the community
	2005).	(Fitzgerald & Wilkinson 2009) • Feral pigs can attack and cause the death of working dogs (Fitzgerald & Wilkinson 2009), causing negative economic and psychological impacts • Feral pigs are a recreational hunting and commercial resources, including being able to sell the meat to 'wild boar' meat exporters (Fitzgerald & Wilkinson 2009). However, there have been instances of hunters releasing pigs into the wild to ensure they have a good supply of game (Fitzgerald & Wilkinson 2009).
Feral goats	• Feral goats have a major effect on native vegetation through soil damage and overgrazing of native herbs, grasses, shrubs and trees (AUST. DSEWPC 2011) • Feral goats foul waterholes and can introduce weeds through seeds carried in their dung (AUST. DSEWPC 2011) • Feral goats can act as weed biocontrol in the forests and on the rougher pastoral areas (Fitzgerald & Wilkinson 2009).	• Feral goats can be captured or fenced in because they tend to be territorial, then sold as live animals, thus generating farm income (Fitzgerald & Wilkinson 2009) • Create opportunities for recreational hunting (Fitzgerald & Wilkinson 2009).

It would be impracticable to develop a code of conduct to manage the biosecurity risk posed by the keeping of non-indigenous animals under Option 2, as there is no collective industry body to represent this group and establish a coordinated code. Without these provisions owners are likely to implement management actions that are consistent with their private incentives, but may not implement actions that extend protections to the environment and community.

While the removal of regulations would reduce government's administration costs in the short-term, there is potential that government would incur large clean-up costs in the event that non-indigenous animals were to become established. This could generate considerable costs to locate, contain, control and eradicate these pests.

For example in 2014, localised feral camel populations in western NSW were reported to be responsible for damaging farm infrastructure, causing hazards on public roads, adding to the total grazing pressure on rangeland properties and had the potential to devastate the areas edible native shrub species. This report prompted NSW DPI to facilitate a meeting with stakeholders, issue penalty notices to the offending party and consider options for management plans including applications for funding for remediation. In a self-regulation scenario, the cost to the economy, environment and community would be far greater as there would be no government oversight and penalties for non-compliance to minimise the impact of this species on the Australian landscape.

17.6.3 Option 3 — Make the proposed Regulation under the Act

Under the Option 3, the proposed Regulation would be made under the Act with the existing provisions transferred as is or with minor amendments.

The first proposed amendment would reduce the time to notify the Secretary of the escape, theft or release of a registered non-indigenous animal from seven days to 24 hours. The earlier the government is notified of the escape, release or theft of a non-indigenous animal, the greater the likelihood that the animal will be located and captured. The second proposed amendment would require the inspection of non-indigenous animal enclosures to be conducted once a week instead of once every two weeks.

Compliance costs for the owner of non-indigenous animal would increase under this option as they would be required to check enclosures more frequently, respond more quickly and make enclosures more secure (as the cost of an escape, theft or loss has increased). However, these provisions would increase the likelihood that missing, stolen or released animals are located and captured, thereby decreasing the likelihood of animals becoming established. These greater protections would also benefit agriculture industries for example through reduced livestock mortality or damage, and reduce damages to the environment and community.

The third proposed amendment relates to the notification of pre-identified non-indigenous animals and is being extended from 14 days to 21 days. This change would provide the owners of newly acquire non-indigenous animals with additional time to supply the correct registration documentation to NSW DPI.

18.0 Fees

18.1 Background

Most existing biosecurity legislation provides for the charging of fees for a range of services and actions. Current fees include registration fees for beekeepers under the *Apiaries Act 1985* and the keeping of certain non-indigenous animal species under the *Non-indigenous Animals Act 1987*.

In addition to the fees specified in existing Acts, a range of fees are charged administratively and are not subject of a provision of an Act or prescribed by Regulation. Current administrative fees include those charged for plant health certification services and the accreditation of participants in various animal and plant market assurance programs.

Most existing fees charged by NSW DPI have not been reviewed for some time nor have they been the subject of Consumer Price Index increases and subsequently have not increased for many years.

Implementation of the new legislative framework provides a unique opportunity to review the current fees charged by NSW DPI and determine new fees based on a robust cost recovery methodology.

18.2 The proposed Regulation

Schedule 5 of the proposed Regulation contains a list of the maximum fees that may be charged for services provided under the Act.

The maximum fees payable are set using estimates of the cost recovery fees. Cost recovery is appropriate for regulatory activities that are directly linked to a particular group of identifiable users or beneficiaries. In practice, governments set fees to recover costs for:

- the provision of goods or services, including fee-for-service or user charges[3]
- the administration of regulation[4] — for example, the provision of registration, licences, permits, monitoring of compliance, and education or enforcement activities (Productivity Commission 2001).

The Australian Government's overarching cost recovery policy is that where appropriate, non-government recipients of specific government activities should be charged some or all of the costs of those activities (Australian Government 2014).

Cost recovery fee amounts have been calculated using the Commonwealth Government Cost Recovery Guidelines (2014) and the 2001 Productivity Commission report *Cost Recovery by Government Agencies*. The calculation of fee amounts for a specific government good or service has been valued using 'Activity Based Costing' and the approach used ensures that the following principles are maintained:

[3] A fee-for-service or user charge is the market price for the provision of a good or service by the Government.

4 Fees for regulatory services are used to recover the costs of providing access to an activity (for example a licence to keep bees).

- Efficiency: whereby a fee-for-service is equated to the cost of providing the service. Fees provide a signal about the cost of activities required to provide a service. An efficient fee maximises the benefits of services provided to consumers
- Equity: the beneficiaries of a government provided service or the risk creators those that give rise to the need for government regulation should bear the cost of providing the service
- Full cost recovery: the fee of regulated services should incorporate all of the costs of providing a service, including the administration costs of regulation (Productivity Commission 2001).

Section 382 of the Act permits the Secretary to waive, reduce or refund payment of all or part of any fee or reduce any fee payable under the Act or the regulations. This provision provides a mechanism whereby a maximum fee could be prescribed in the proposed Regulation but the Secretary determines a more appropriate fee should apply in certain circumstances.

For example, the Act does not distinguish between a biosecurity certificate that is issued for a plant or animal service or a registration that is issued to a person who keeps bees or non-indigenous animals. As such, the proposed Regulation prescribes the maximum charge for each service, however the actual charge for the service as it relates to the commodity group may be prescribed by the Secretary.

Further, permits, registrations and accreditations may be issued for one or more years (up to a maximum of 5) to minimise administration costs and red tape. The fee prescribed in the proposed Regulation will reflect the maximum term and the Secretary may approve a scale of charges based on the period for which the authority is issued. All fees will be made available on NSW DPI's website.

Table 21 below provides the proposed fees payable with respect to matters set out in Schedule 5 to the proposed Regulation.

Table 21: Fees payable

Provision under Act	Service	Proposed Maximum fee
Section 159 (4)	Application for the grant of biosecurity registration	$720
Section 162 (3)(b)	Application for variation of biosecurity registration	$300
Section 163 (4)	Application for the renewal biosecurity registration	$420
Section 196 (5)(a)	Application for accreditation as biosecurity certifier	$750
Section 200 (5)(a)	Application for renewal of accreditation as biosecurity certifier	$160
Section 244 (5)(a)	Application for appointment as biosecurity auditor	$1000
Section 248 (5)	Application for renewal of appointment as biosecurity auditor	$1000
Section 263 (3)	Application for approval to exercise functions of accreditation authority	$1500
Section 267 (3)	Application for renewal of approval to exercise functions of accreditation authority	$1500
Section 341(3)	Application for permit	$720
Clause 28 (2) of Schedule 7	Application for certificate from local control authority as to weed control notices, expenses and charges on land	$200

Although the Act provides for the regulation to prescribe various fees, the Secretary has the discretion whether to charge a fee or not. At this time, a decision has been made that the proposed Regulation will not include fees for the services set out in **Table 22** below.

Table 22: Fees not included in the proposed Regulation

Provision under Act	Service
Section 132 (2)	Preparing and giving an individual biosecurity direction
Section 146 (2)	Preparing and accepting a biosecurity undertaking
Section 181 (2)(b)	Application for cancellation of biosecurity registration
Section 199 (3)	Application for variation of accreditation as biosecurity certifier
Section 247 (3)	Application for variation of appointment as biosecurity auditor
Section 266 (3)	Application for variation of approval to exercise functions of accreditation authority
Section 344 (3)	Application for variation of permit

Provision under Act	Service
Section 345 (3)	Application for renewal of permit
Section 359 (2)(b)	Application for voluntary cancellation of permit

18.3 Identification of impacts

18.3.1 Option 1 — No regulation is made to support the Act

Under Option 1, the NSW Government would not be able to recover the costs of providing goods and services to administer biosecurity. It is noted that there are a small number of exceptions to this including the conduct of compliance and accreditation audits or when a person fails to comply with certain provisions of the Act such as an emergency order, control order or a biosecurity zone. In these situations, the Secretary may authorise required actions and recover an amount that is no more than is reasonable to cover the costs and expenses incurred in connection with the actions taken.

When comparing this option against the base case it is apparent that without regulations, fees for many services would not be recovered by government. This would result in a reduction in costs for businesses and the costs of administration for government; however this would also mean that government would be unable to maintain the current level of service it provides.

As a result it is likely that there would be an increase in biosecurity risks and damage to the economy, environment and community.

18.3.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2, there would be no NSW Government regulation of biosecurity in NSW. And government would not have a legislative basis to recover the costs of providing goods or services to manage biosecurity risks.

18.3.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. This would allow the setting of a maximum fee that may be charged for goods and services under the Act.

The maximum fees have been set based on estimates of cost recovery fees. Cost recovery fees are calculated using the principles listed above and the broad intent of this approach is to ensure that:

1. Fees raise government awareness of the costs of providing biosecurity goods and services as it requires government to ask whether:

    - the activities are provided at least cost
    - the benefits of goods or services outweigh the costs of providing them
    - there is an alternate way to provide a good or service (i.e. through the private sector).

2. The risk creators and beneficiaries of government provided goods and services bear the cost of providing goods and services instead of taxpayers.

3. Stakeholders' have an improved awareness of the costs to government of providing goods and services.

As such, the implementation of cost recovery fees will improve the effectiveness of government provided goods and services to manage biosecurity risks, and improve the overall effectiveness of government service provision.

19.0 Compliance

19.1 Background

Most existing biosecurity legislation includes provisions for penalty notice offences. Penalty notice offences are a compliance tool that enables the prompt handling of an offence by the payment of a prescribed monetary amount within a specified time instead of having a matter dealt with by a court.

19.2 The proposed Regulation

Schedule 6 of the proposed Regulation contains the offences under the Act for which a penalty notice can be issued and the penalty notice amount. These are set out in **Table 23** below.

Table 23: Penalty notice offences under the Act

Offences under the Act	Penalty $
Section 23	1,000
Section 25	1,000
Section 28	2,000
Section 32	2,000
Section 37	2,000
Section 40	1,000
Section 58	2,000
Section 75	2,000
Section 87	1,000
Section 116	1,000
Section 138	1,000
Section 145	1,000
Section 152	1,000
Section 154	1,000
Section 179	1,000
Section 187	2,000
Section 188	2,000
Section 189	2,000
Section 190	2,000
Section 211	1,000
Section 212	2,000
Section 238	2,000
Section 257	1,000
Section 258	2,000
Section 276	1,000
Section 293	2,000
Section 298	2,000

Offences under the Act	Penalty $
Section 301	2,000
Section 308	2,000
Section 340 (1)	1,000
Section 340 (2)	1,000
Section 364	500

The penalty notice amounts contained in the proposed Regulation are commensurate with the risk and align with the principles that non-compliance in terms of biosecurity has a significant degree of externality (impact on others) and therefore penalties must have an adequate deterrent effect, similar to environmental legislation. The proposed Regulation does not identify separate penalties for individuals and corporations.

Offences are assessed to determine if a penalty notice is an appropriate penalty or if the offence should be the subject of a prosecution and potentially a more significant penalty. The issuing of penalty notice for an offence under the Act would only be done in accordance with departmental compliance and enforcement policy which provides for a graduated proportionate enforcement response to non-compliance. The recipient of the penalty notice may also choose not to pay the amount and instead, defend the matter in court.

19.3 Identification of impacts

19.3.1 Option 1 — No regulation is made to support provisions of the Act

Under option 1, there would be no penalty notice offences or amounts. When comparing this option against the base case it is apparent that without regulations if a person were to commit an offence the NSW Government would have no means to provide offenders with an alternative than to prosecute the matter in court. The impact of this option would be an increased pressure and reliance on the judicial system, and increased administration costs for the government and for people and businesses that commit offences against the Act.

19.3.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2 there would be no NSW Government regulation of biosecurity in NSW. Consequently, there would be no biosecurity offences and no reason to have penalty notice offences. The removal of these provisions and the associated fines would be reduced incentives to take necessary actions to minimise biosecurity risks.

19.3.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. Penalty notices would be available as a compliance tool where a person has committed an offence under the Act. The deterrent value offered by a penalty notice system should result, overtime, in greater compliance with the requirements of the Act.

20.0 Biosecurity registration, accreditation of biosecurity certifiers, appointment of biosecurity auditors, approval of accreditation authorities, permits and offences

20.1 Existing legislative framework

The *Apiaries Act 1985* provides for the registration of beekeepers and for conditions of registration to be prescribed. The *Non-Indigenous Animals Act 1987* provides for a person to be licenced to keep a non-indigenous animal and for that person to comply with the requirements and standards prescribed in Parts 3 - 5 of the *Non-Indigenous Animals Regulation 2012*.

The *Apiaries Act 1985* provides for the suspension or cancellation of registration by the Director-General in prescribed circumstances, including those set out in the regulation. The *Non-Indigenous Animals Act 1987* provides that the Director-General may cancel a licence in certain circumstances, including those set out in the regulation.

Currently there are no legislated requirements for the accreditation of a biosecurity certifier (or equivalent), appointment of a biosecurity auditor or the approval of an accreditation authority. These are all administrative arrangements which operate outside of existing legislation.

All existing biosecurity legislation provides for the issuing of permits. The process of applying for a permit includes ensuring the applicant provides certain information about themselves and for example, the action they propose to undertake under a permit. Information that may relate to the suitability of the person to be issued a permit, such as the person's compliance history, may be included in the assessment process.

There are some labelling requirements included in legislation to assist with traceability.

20.2 The proposed Regulation

The Act provides for matters to be prescribed by the regulations to enable the effective operation of provisions relating to biosecurity registration, the accreditation of biosecurity certifiers, the appointment of biosecurity auditors, the approval of an accreditation authority and the issuing of permits. These matters are set out in the proposed Regulation.

The proposed Regulation also creates an offence for removing or interfering with a label.

Table 24 provides an overview of the proposed provisions and identifies whether the provision represents:

- a transition of existing regulatory arrangements
- a transition of existing regulatory arrangements with minor amendment
- a transition of existing regulatory arrangements with major amendment, or
- a new regulatory arrangement.

To determine which of the above four categories is applicable, the provisions have been compared against existing provisions and an assessment has been made regarding the effect or impact of the change on stakeholders.

Table 24: Overview of miscellaneous provisions prescribed in the proposed Regulation

Provision	Transition of existing regulatory provisions			
	As is	Minor amendment	Major amendment	New arrangement
Biosecurity registration – additional grounds for refusing, suspending or cancelling registration (clause 74) The Secretary may refuse biosecurity registration to a person, refuse a renewal of biosecurity registration to a person or suspend or cancel a person's biosecurity registration on any of the following grounds: a) the person has, in the reasonable opinion of the Secretary, made a statement or furnished information that is false or misleading in a material particular in connection with an application under the Act or in purported compliance with any requirement imposed by or under the Act b) the person has previously been granted biosecurity registration and that biosecurity registration was cancelled within the previous 2 years and that cancellation has not been overturned on appeal c) the person, in the reasonable opinion of the Secretary, does not have the relevant skills, knowledge or experience to manage any biosecurity risk associated with the registrable dealing authorised by, or to be authorised by, the biosecurity registration d) the biosecurity risk associated with the registrable dealing authorised by, or to be authorised by, biosecurity registration is, in the reasonable opinion of the Secretary, unacceptable.		✓ There are currently factors that a decision-maker may take into account but these tend to vary depending on whether the decision relates to grant, renewal, suspension or cancellation – and these factors vary between bees and non-indigenous animals. The new requirements provide for consistent consideration of these factors by government.		
Biosecurity registration – additional matters to which the Secretary may have regard (clause 75) The Secretary, when determining an application by a person for biosecurity registration or renewal of biosecurity registration, may have regard to the following for the purposes of making a decision about the person's suitability to be involved in registrable dealings		✓ There are currently factors that a decision-maker may take into account but these tend to vary depending on whether the decision relates		

Provision	Transition of existing regulatory provisions			
	As is	Minor amendment	Major amendment	New arrangement
to be authorised by the biosecurity registration: a) whether the person has the capacity to properly discharge the person's obligations under the biosecurity registration b) whether the person has had biosecurity registration cancelled or suspended c) the person's history of compliance with the Act and this Regulation (or any other Act or law).		to grant, renewal, suspension or cancellation – and these factors vary between bees and non-indigenous animals. The new requirements provide for consistent consideration of these factors by government.		
Biosecurity registration – condition – notification to Secretary (clause 78) A registered entity must notify the Secretary of a change to the contact details of the registered entity, the contact details of a person in charge of animals of the registered entity (if that person is different from the registered entity) and the location of enclosures used to accommodate animals of the registered entity, within 7 days after the change occurs		✓ Provisions are a transition as is for non-indigenous animals however it is a change for keepers of bees who need to notify additional matters and in a shorter time frame. The new requirements provide for consistent consideration of these factors by government.		
Accreditation of biosecurity certifiers – critical non-compliance (clause 88) Each of the following is critical non-compliance by an accredited person: a) a biosecurity certificate issued by the person is incorrect in a material particular b) the person has interfered with a trap or other monitoring device in contravention of the person's accreditation c) the person refusing to participate in or assist in an audit of the person carried out a biosecurity auditor.				✓

Accreditation of biosecurity certifiers– additional grounds for refusing, suspending or cancelling accreditation (clause 89) An accreditation authority may refuse to grant accreditation to a person, refuse to grant a renewal of accreditation to a person or suspend or cancel a person's accreditation on any of the following grounds: a) the person has, in the reasonable opinion of the accreditation authority, made a statement or furnished information that is false or misleading in a material particular in connection with an application under the Act or in purported compliance with any requirement imposed by or under the Act b) the person has previously been accredited and that accreditation was cancelled within the previous 2 years and that cancellation has not been overturned on appeal c) the person, in the reasonable opinion of the accreditation authority, does not have the relevant skills, knowledge or experience to exercise all the functions of the biosecurity certifier.				✓
Accreditation of biosecurity certifiers – additional matters to which accreditation authority may have regard (clause 90) An accreditation authority, when determining an application by a person for accreditation or renewal of accreditation, may have regard to the following for the purposes of making a decision about the person's suitability to be granted accreditation: a) whether the person has the capacity to properly discharge the person's obligations as a biosecurity certifier b) whether the person has had an accreditation cancelled or suspended c) the person's history of compliance with the Act and this Regulation (or any other Act or law).				✓
Appointment of biosecurity auditors– additional grounds for refusing, suspending or cancelling appointment (clause 95) An accreditation authority may refuse appointment to a person, refuse to renew appointment to a person or suspend or cancel a person's appointment on any of the following grounds: a) the person has, in the reasonable opinion of the accreditation				✓

authority, made a statement or furnished information that is false or misleading in a material particular in connection with an application under the Act or in purported compliance with any requirement imposed by or under the Act b) the person has previously been appointed and that appointment was cancelled within the previous 2 years and that cancellation has not been overturned on appeal c) the person, in the reasonable opinion of the Secretary, does not have the relevant skills, knowledge or experience to exercise all the functions of a biosecurity auditor.				
Appointment of biosecurity auditors – additional matters to which accreditation authority may have regard (clause 96) An accreditation authority, when determining an application by a person for appointment or renewal of appointment, may have regard to the following for the purpose of making a decision about the person's suitability to be granted appointment: a) whether the person has the capacity to properly discharge the person's obligations as a biosecurity auditor b) whether the person has had an appointment cancelled or suspended c) the person's history of compliance with the Act and this regulation (or any other Act or law).				✓
Approval of accreditation authorities – additional grounds for refusing, suspending or cancelling approval (clause 100) The Secretary may refuse to grant approval to a person, refuse to grant a renewal of approval to a person or suspend or cancel a person's approval on any of the following grounds: a) the person has, in the reasonable opinion of the Secretary, made a statement or furnished information that is false or misleading in a material particular in connection with an application under the Act or in purported compliance with any requirement imposed by or under the Act, b) the person has previously been approved and that approval was cancelled within the previous 2 years and that cancellation has not been overturned on appeal, c) the person, in the reasonable opinion of the Secretary, does				✓

not have the relevant skills, knowledge or experience to exercise all the functions of an accreditation authority.				
Approval of accreditation authorities – additional matters to which the Secretary may have regard (clause 101) The Secretary, when determining an application by a person for approval or renewal of approval, may have regard to the following for the purpose of making a decision about the person's suitability to be granted approval: a) whether the person has the capacity to properly discharge the person's obligations as an accreditation authority b) whether the person has had an approval cancelled or suspended c) the person's history of compliance with the Act and this regulation (or any other Act or law).				✓
Permits – additional grounds for refusing, suspending or cancelling permit (clause 104) A relevant decision-maker may refuse to grant a permit to a person, refuse to grant a renewal of a permit to a person or suspend or cancel a person's permit on any of the following grounds: a) the person has, in the reasonable opinion of the relevant decision-maker, made a statement or furnished information that is false or misleading in a material particular in connection with an application under the Act or in purported compliance with any requirement imposed by or under the Act, b) the person has previously been granted a permit and that permit was cancelled within the previous 2 years and that cancellation has not been overturned on appeal, c) the person, in the reasonable opinion of the relevant decision-maker, does not have the relevant skills, knowledge or experience to manage any biosecurity risk associated with the conduct authorised by, or to be authorised by, the permit, d) the biosecurity risk associated with the conduct authorised by, or to be authorised by, the permit is, in the reasonable opinion of the relevant decision-maker, unacceptable.	✓			

Permits – additional matters to which the relevant decision-maker may have regard (clause 105) A relevant decision-maker, when determining an application by a person for a permit or renewal of a permit, may have regard to the following for the purpose of making a decision about the person's suitability to engage in conduct to be authorised by the permit: a) Whether the person has the capacity to properly discharge the person's obligations under the permit b) Whether the person has had a permit cancelled or suspended c) The person's history of compliance with the Act and this regulation (or any other Act or law).	✓			
Offence – removing or interfering with a label (clause 108) A person must not, without reasonable excuse, remove or interfere with a label or other identifier that is required by or under the Act, to be on any matter. Maximum penalty: $11,000.		✓ This offence reflects similar offences that exist in legislation, however applies generally to any label or other identifier.		

20.2.1 Consideration of matters by a decision maker

The proposed Regulation provides for a number of additional matters that a decision-maker may consider when making a decision about whether to grant, refuse, suspend or cancel a biosecurity registration, accreditation, appointment, approval or permit including:

- the provision of false or misleading information
- previous suspension or cancellation of authorities
- skills, knowledge, experience or capacity
- biosecurity risk
- a person's compliance history.

The accreditation of a biosecurity certifier (or equivalent), appointment of a biosecurity auditor and approval of an accreditation authority are all currently administrative arrangements that operate outside of the legislation. These arrangements enable greater industry ownership and participation in certification assurance arrangements and the inclusion of these provisions is designed to protect both the administration and operation of the certification arrangements and to improve transparency of the decision making process.

With regards to registration, the proposed Regulation streamlines provisions so that they can be applied consistently across bees and non-indigenous animals. With regards to permits, the provisions are consistent with pre-existing grants, refusal, suspension or cancellation of permits however these requirements will now be formalised in regulation to provide transparency and consistency of application.

20.2.2 Offence – Removing or interfering with a label

The proposed Regulation and Biosecurity Manual requires certain products to be labelled including those that come from an area that is free from a particular pest, disease, weed or contaminant. The labelling of products secures market access and inclusion of an offence provision will maintain the integrity of products destined for domestic and overseas markets.

20.3 Identification of impacts

The proposed Regulation contains a number of new provisions and a number of provisions that will be transitioned with minor amendments. The proposed Regulation sets out the matters that a decision-maker may consider when determining whether to grant, renew, suspend or cancel biosecurity registration, accreditation or an appointment, approval or permit. It also creates an offence for removing or interfering with a label.

20.3.1 Option 1 — No regulation is made to support the Act

Under Option 1, there would be no additional prescribed matters that a decision-maker may take into account when making their decision. Without these provisions, the Act will prescribe the requirements to grant, renew, suspend or cancel a biosecurity registration, accreditation, appointment, approval of auditors and permits. Therefore a person would still be able to access these services; however, the additional legislation that strengthens and protects the administration and operation of these measures would not exist. As a

result there would be a reduction in the efficiency of these measures under the Act. There would also be less transparency in the decision making process.

Without the inclusion of a labelling offence, there would be no penalty for removing or interfering with a label.

20.3.2 Option 2 —Self-regulation (no NSW Government intervention)

Under Option 2 there would be no NSW Government regulation of biosecurity in NSW. Under this scenario, there would be no need for the granting of biosecurity registration, accreditation, appointments and permits, and the approval of auditors. As such there would be no need for strengthened or transparent provisions.

20.3.3 Option 3 — Make the proposed Regulation under the Act

Under Option 3, the proposed Regulation would be made under the Act. The inclusion of the various provisions discussed in this chapter strengthens and protects both the administration and operation of the Act. They create administrative efficiencies and transparency and are not expected to impose additional costs on stakeholders; however they may incentivise stakeholders to improve their behaviour and compliance and ensure they are suitably qualified or experienced.

Provisions that are proposed for the approval of biosecurity registrations and permits are consistent with existing legislation or administration actions. Under Option 3, these provisions will have no significant impact in comparison to the base case.

The offence provision will maintain the integrity and robustness of the labelling requirements as it will allow compliance action against those who do the wrong thing.

21.0 Assessment of impacts

21.1 Summary of results

The costs and benefits that result from the impacts of the proposed Regulation have been assessed and compared against a base case of maintaining existing levels of biosecurity regulation. Two alternative options have been compared against the base case which is if no regulation is made to support the Act and self-regulation (i.e., no Act and no Regulation).

This assessment identifies and compares the costs and benefits of the impacts on businesses, government, the environment and community under the three options relative to the base case. It also considers the likelihood of pests, diseases, weeds and contaminants entering NSW and spreading, and the potential damage they could cause to the economy, environment and community. The preferred option is the one that generates the largest net benefit (i.e., benefits minus costs) relative to the base case.

Under Option 1 where no regulation is made to support the Act, the assessment conducted demonstrates that there would be an increased likelihood of damage to the economy, environment and community. Based on the expected costs on an outbreak of pests and diseases in the first year the minimum cost to NSW agriculture is estimated at $719 million in 2015-16 dollars. Under Option 2 of self-regulation, the estimated minimum cost would increase to $964 million in 2015-16 dollars.

A summary of these costs is provided in **Table 25** below and shows the values are mostly comprised of costs to the agricultural industry. An explanation of the approach used to calculate these values is provided later in this chapter as is an explanation of why these values are a conservative estimate of costs (or expected costs).

Making the proposed Regulation under the Act (Option 3) is identified as the preferred option because it generates the greatest net benefit to businesses, government, the environment and community. The proposed Regulation maintains or improves the protections provided by existing levels of biosecurity regulation resulting in no significant increase in the likelihood of damage to the economy, environment or community. It also provides reduced administration and compliance costs to businesses and government through the streamlining of provisions and processes and supporting best practice biosecurity management. The proposed Regulation therefore delivers on the objects of the Act and the objectives for biosecurity in NSW more generally.

Impacts to the environment, community and other businesses such as agri-businesses and tourism have been qualitatively assessed and support the conclusion that the proposed Regulation is the preferred option to protect the economy, environment and community from the negative impact of pests, diseases, weeds and contaminants. The removal of existing levels of biosecurity regulation under Option 1 and 2 is likely to increase damages to these groups by further increasing the cost estimates as presented in **Table 25**.

Table 25: Cost estimates by option relative to the base case

Values estimated ($ million)	Option 1	Option 2	Option 3
Expected costs to agriculture	-782	-970	0
Government Cost savings	0.43	6	0
Net cost	**-718.6**	**-964**	**0**

21.2 Methodology

The base case of this RIS is to maintain existing levels of biosecurity regulation. The following three options were assessed against the base case:

- Option 1: No regulation is made to support the Act
- Option 2: Self-regulation (no NSW Government intervention, i.e., no Act, no Regulation)
- Option 3: Make the proposed Regulation under the Act.

The evaluation of the costs and benefits was undertaken using the following assessment process. A description of costs and benefits for the impacts on businesses, government, the environment and community is provided for each option relative to the base case. This is a qualitative assessment that is supported by monetary values where feasible.

The preferred option is the one that generates the largest net benefit (i.e. benefits minus costs) relative to the base case. The assessment also considers the likelihood of pests, diseases, weeds and contaminants entering NSW and spreading, and the potential damage they could cause to the economy, environment and community.

Monetary values are estimated under each option relative to the base case for the:

- expected value of NSW biosecurity legislation to agricultural industries
- costs of administration and compliance operations of the Biosecurity and Food Safety branch of NSW DPI, which oversees biosecurity management in NSW on behalf of government. The administration and compliance costs for activities conducted by other key agencies such as the Office of Environment and Heritage, Local Land Services and Local Government to provide biosecurity services have not been included in this assessment
- value of fees for government provided services.

Impacts of pests, diseases, weeds and contaminants on the environment, community and other businesses such as agri-businesses and tourism have been qualitatively assessed under each option.

The assessment also considers the current number of investigations, offences taken to court and penalty infringement notices. While there is insufficient information to specify how these numbers may change under the proposed options, it does provide an indication of the current pressures on the judicial system and demand for compliance activities.

21.3 Costs and benefits to businesses

Tables 26 – 28 provide a description of the costs and benefits to businesses under the above options relative to the base case. The impacted parties primarily comprise of agricultural producers, agri-businesses (such as livestock transport or feed stock suppliers) and flow-on impacts to other businesses including tourism and hospitality.

21.3.1 Agricultural industry

This section estimates the expected net benefits to the NSW agricultural industry from implementing the proposed options relative to the base case.

The assessment identifies all pests and diseases that affect the agricultural industry and are managed by provisions in the proposed Regulation and estimates the expected net impact for the affected commodities. The expected net impacts of each pest and disease on agricultural production are determined from the likelihood of entry (by option) and the maximum revenue losses. Maximum revenues losses are estimated as a product of the:

- gross value of production for the affected commodity
- potential reduction in yields resulting from a pest or disease incursion
- loss of access to export markets
- proportion of the NSW industry impacted.

The maximum revenue loss - or loss if 100 per cent of the pests and diseases controlled by the proposed Regulation were to enter and spread across NSW - is a minimum of $3.5 billion per year in 2015-16 dollars, or 26 per cent of NSW agriculture's annual Gross Value of Production (GVP). Note this is a conservative estimate of the maximum revenue losses, as explained below in Chapter 21.3.2.

The above values and the estimated maximum revenue losses for Options 1 and 2 are presented in **Table C1** and **Table C2** of **Appendix C**, respectively.

Expected revenue losses under each option

Expected revenue losses are calculated as the maximum revenue losses multiplied by the likelihood of a pest or disease entering and/or spreading across in NSW for each option relative to the base case.

Under Option 1, if no regulation was made to support the Act, the minimum expected revenue loss to NSW agriculture based on the expected costs of an outbreak of pests and diseases in the first year is estimated at $782 million in 2015-16 dollars (**Table C1** of **Appendix C**).

Under Option 2, if there was no NSW government regulation of biosecurity, the minimum expected revenue loss to NSW agriculture based on the expected cost of an outbreak of pests and diseases in the first year is estimated at $970.5 million in 2015-16 dollars (**Table C2** of **Appendix C**).

Under Option 3, if the proposed Regulation was made, the expected revenue loss to NSW agriculture would be about $0 per year in 2015-16 dollars. This is because the proposed Regulation maintains or improves the protections provided by existing biosecurity regulation, resulting in no additional revenue losses to the economy, environment or community.

The estimates expected net benefit is a conservative estimate of the value of NSW government regulation of biosecurity to agricultural production, as:

- the estimates do not include the cost of control or eradication measures
- the estimates do not include costs and benefits beyond the initial year of impact
- the assessment omits the impacts of pests, diseases, weeds and contaminants that cannot be attributed to a particular commodity
- the assessment excludes the protections provided by some biosecurity zones (i.e., rice and potatoes) where there are a wide variety of potato- or rice-related diseases so it is infeasible to quantify impacts. The assessment does include the expected revenue losses for potato cyst nematode and rice blast, as the impacts are measurable (**Appendix C**).

21.3.2 Impacts on other businesses

There are a range of other businesses that benefit from NSW biosecurity regulation and would lose revenue from the removal of these protections. The types of industries that are impacted include tourism, hospitality and other businesses in the agricultural supply chain such as veterinary services, livestock transportation and fertiliser manufacturers. The costs and benefits for these businesses are not quantified but described in **Tables 26 - 28**.

Under Option 3, there would be greater protections that benefit these businesses. The proposed Regulation would minimise or maintain the current level of biosecurity risk to businesses which would assist businesses in maintaining and improving their financial viability (**Table 28**).

21.3.3 Costs and benefits summary tables

Tables 26 - 28 on the following pages describe the costs and benefits of each option to businesses relative to the base case.

Table 26: Costs and benefits to *Business* under Option 1 relative to the base case

Option 1: No regulation is made to support the Act

Costs:

A. Loss of net revenues

There would be an increased likelihood of pests, diseases, weeds and contaminants entering NSW, spreading faster and further across the state and occurring in higher densities. This would result in an increase of revenue loss and costs to businesses, that may result from:

A1. Agriculture producers

- increased production losses from damages caused by pests, diseases, weeds and contaminants to crop and livestock production and the quality of agricultural products
- revenue losses from trade restrictions or export bans on infected products
- a reduction in prices received for damaged products or the perception that produce is infected or damaged
- increased costs to:
  a. control and/or eradicate pest or disease outbreaks
  b. reduce the damage of a pest or disease on yields or livestock.

The minimum cost to NSW agriculture is estimated at $719 million per year in 2015-16 dollars, and includes losses for the value of production and exports.

A2. Other businesses

An increase in the spread of pests, diseases, weeds and contaminants would result in a range of indirect impacts for related businesses and the economy. Some producers may lose revenues. For example, in the event of a BSE outbreak, the demand for livestock transport and feedstock supplies would decline.

B. Increased costs of enforcement

All reported offences under the Act would have to be prosecuted in the judicial system, as there would be no penalty notice provisions. This would lead to an increase in costs for offenders.

Benefits:

A. Increased flexibility for businesses

Businesses would have increased flexibility to move terrestrial and aquatic animals, livestock, plants, carriers of pests and diseases including equipment, coverings and soil, non-indigenous animals, invasive species and bees, reducing operating costs in the short-term.

B. Other businesses

The producers of commodities that are substitutes for infected products would benefit. For example, in the event of a BSE outbreak consumers may replace their consumption of beef or lamb with products like chicken or fish, increasing the demand for these products and revenues to producers.

C. Reduction in compliance costs

Businesses would not have to comply with the movement, treatment and notification provisions of existing regulations, reducing their compliance costs in the short-term.

D. Reduction in administration costs

There would be no requirements for businesses to maintain or submit records or reports or notify the presence of certain pests and diseases. This would reduce the costs of administration for businesses.

E. No fees and charges

Businesses would not have to pay fees-for-services as the fee amounts would not be prescribed in regulation. However, the government could use administrative fees for the provision of services. The value of fees for regulated goods and services that would not be collected from businesses is estimated at approximately $1.2 million per year in 2015-16 dollars. Note the value of fees does not affect the selection of a preferred option in this assessment (Chapter 21.4).

Table 27: Costs and benefits to *Business* under Option 2 relative to the base case

Option 2: Self-regulation (no NSW Government regulation of biosecurity)

Costs:

A. Loss of net revenues:

Pests, diseases, weeds and contaminants are likely to enter more quickly and spread faster across the landscape, relative to a potential outbreak under Option 1 and the base case. The impact of pests, disease, weeds and contaminants on the revenue of agriculture producers in this option are similar as the impacts described above in Option 1, but it is likely that the magnitude of costs would be greater as there is no regulatory framework to encourage compliance and risk minimisation practices. Similarly, the damages to other businesses would also be greater.

The minimum cost of production and export losses to NSW agriculture is estimated at $970.5 million per year in 2015-16 dollars (**Table 25**), and includes the losses for the value of production and exports.

B. Code of practice or voluntary rules

There would be an increased need for industry-led or community-led codes of practice to manage and/or minimise the impacts of biosecurity risks posed by posed by pests, diseases, weeds and contaminants. This would require greater collaboration between businesses and the community, and is likely to increase the costs to these groups.

A single industry or community code of practice may be difficult to coordinate and implement, as there are competing interests from the many different industries and communities in NSW. Also a voluntary approach is likely to provide insufficient biosecurity services and actions to maintain conditions of the environment.

The NSW Government's contribution would be limited to the provision of advice and information and it would not contribute to the costs of managing biosecurity risks. It is likely that the costs to industry from maintaining an industry-led voluntary program would be on-going.

Benefits:

A. Increased flexibility for businesses

Businesses would have increased flexibility to move terrestrial and aquatic animals, livestock, plants, carriers of pests and diseases including equipment, coverings and soil, non-indigenous animals, invasive species and bees, reducing operating costs in the short-term.

B. Other businesses

Producers of agricultural products that are substitutes for infected products would benefit from an increased demand for their product, increasing the revenues received.

C. Reduced compliance costs

There would be no legal mechanisms to ensure compliance or penalties for non-compliance with an industry-led code of practice.

D. Reduced administration costs

There would be no legislated requirements for businesses to maintain or submit records or reports or notify the presence of certain pests and diseases. This would reduce the administration costs for businesses.

E. No regulated fees

No fees would be payable to government as no regulatory services would be provided by government. The value of fees for regulated goods and services that would not be collected from consumers is estimated at approximately $1.2 million per year in 2015-16 dollars. Note the value of fees does not affect the selection of a preferred option in this assessment (Chapter 21.4).

Table 28: Costs and benefits to *Business* under Option 3 relative to the base case

Option 3: Make the proposed Regulation under the Act.

Costs:

A. Increase in compliance costs

Changes in regulation would result in increased compliance costs to businesses. These include:

- **Extension of provisions to all businesses creating risks**
  i. Mineral exploration drilling rigs and the vehicles used for transporting those rigs have been included in provisions for the movement of machinery and equipment on account of parthenium weed(Chapter 12)
  ii. The extension of maximum concentrations of cadmium, lead, and mercury would ensure all products that meet the definition of fertiliser, liming materials or trace elements are regulated and the maximum concentrations are clearly marked on the parcel of fertiliser, liming material or trace element product (Chapter 15).

- **Reduction in the time limits for businesses to complete regulatory requirements**
  i. The time for reporting the escape, release or theft of a registered non-indigenous animal has decreased to 24 hours (Chapter 17).

- **Strengthening of existing provisions**
  i. A copy of a completed and signed declaration must be completed to bring a pig into NSW from a porcine brucellosis high risk area and lodged with LLS to reduce biosecurity risks (Chapter 8)
  ii. The adoption of nationally agreed definition of prohibited pig feed will streamline swill feeding legislation (Chapter 8)
  iii. Provisions relating to diagnostic testing and the release of test results have been broadened to apply to all prohibited matter
  iv. All vascular plants that are not currently present in NSW must be notified to allow it to be assessed prior to importation (Chapter 12)
  v. Inclusion of warning statements and maximum concentrations on the labels of fertilisers, liming materials and trace elements will minimise the risk of a build-up of heavy metals (Chapter 15)
  vi. All host plants will be required to be treated before leaving the citrus red mite zone (Chapter 10).

Benefits:

A. Maintain or increase net revenues

The proposed Regulation is expected to maintain or improve the economic viability of businesses.

A1. Agricultural producers

- minimising production losses by reducing the incidence and spread of pests, diseases, weeds and contaminants that reduce crop and livestock production and the quality of products
- maintaining market prices received for domestic and exported products by maintaining our 'clean and green' image
- maintaining revenues from abroad by minimising the likelihood of trade restrictions or export bans on NSW products
- reducing the long-run costs of controlling and/or eradicating a pest, disease or weed

A2. Other businesses

The effective management of pests, diseases, weeds and contaminants will also protect the economic viability of other businesses such as, tourism, hospitality and other businesses in the agricultural supply chain such as livestock transportation and fertiliser manufacturers. As indirect beneficiaries of the proposed Regulation, this Regulation would provide flow-on benefits to the NSW economy.

B. Administrative efficiencies

Businesses would benefit from improvements in administration efficiencies that reduce their costs. The proposed Regulation:

- contains provisions that are necessary, appropriate and proportionate to risk. This aims to minimise the burdens and administration costs imposed on businesses to comply with the regulations
- simplifies and streamlines provisions which would improve efficiency and transparency for businesses
- applies protections more equitably across businesses
- removes prescriptive requirements that would reduce compliance costs for businesses and potentially increase savings that may be used to develop innovative approaches to manage risks
- removes duplication of existing biosecurity regulation and matters covered by other NSW or Commonwealth legislation.

C. Reduced compliance costs

The removal of a lengthy list of prescriptive requirements would reduce compliance costs for businesses and potentially result in savings to businesses if innovative ways to manage these risks under the general biosecurity duty were developed.

21.4 Costs and benefits to government

The options assessed in this RIS, if implemented, would result in varying costs and benefits for the NSW Government relative to the base case. A description of the costs and benefits to the government is provided in **Tables 32 – 34**.

The following values that have been quantified for each option include:

- administration and compliance costs for the Biosecurity and Food Safety branch of NSW DPI in 2015-16
- value of fees that were collected in 2015-16
- number of inspections undertaken by DPI authorised officers and offences committed in August 2015-16.

The cost savings for the administration and compliance measures and the value of fees-for-services that are provided by the NSW Government are estimated for each option relative to the base case as shown in **Table 29** and **Table 30**, respectively. While cost savings are considered in this assessment to identify the preferred option, the total amount of fees does not impact on the identification of the preferred option. That is the fees would have no additional impact in the net benefit estimate under each option, as fees are a transfer of funds between the consumers of regulated goods and services and the provider of goods and services (government).

21.4.1 Administration costs

Table 29 shows that the estimated cost savings for the Biosecurity and Food Safety branch are minimal for all options. The largest savings are approximately $6 million per year for Option 2, expressed in 2015-16 dollars. In Option 1 where no regulation is made to support the Act, the expected savings are smaller at $0.43 million per year.

There are no significant cost savings from Option 3 as the proposed Regulation would free up government resources, allowing for the improved targeting of biosecurity education, extension compliance measures and the provision of services.

Under Option 1, cost savings are limited as the government would still need to comply with the provisions of the Act. While all NSW biosecurity legislation would be removed under Option 2, the cost savings are also limited as the government would still need to comply with Australian Government legislation and any national agreements.

In addition to these costs, the administration and compliance costs incurred by the Office of Environment and Heritage, Local Land Services and Local Government for the provision of regulated biosecurity services have not been quantified in this assessment.

Table 29: Administration and compliance costs of the Biosecurity and Food Safety Branch by option ($millions 2015-16 dollars)

Biosecurity and Food Safety Branch	Annual Expenditure in the base case	Expenditures by option		
		Option 1[1]	Option 2[2]	Option 3
Animal Biosecurity & Welfare	10.5	10.5	10.5	10.5
Biosecurity & Food Safety Compliance	2.95	2.65	0.00	2.95
Emergency Operations, Intelligence & Programs	6.52	6.52	6.52	6.52
Executive	1.23	1.23	1.23	1.23
International Engagement	3.26	3.26	3.26	3.26
Invasive Plants & Animals	18.07	18.07	18.07	18.07
Plant Biosecurity & Product Integrity	4.58	4.58	4.58	4.58
Policy, Legislation, Performance & Consultation	3.10	2.96	0.00	3.10
Science & Research	6.22	6.22	6.22	6.22
Total	**56.44**	**56.00**	**50.39**	**56.44**
Cost savings relative to base case	**N/A**	**0.43**	**6.05**	**0.00**

Notes: 1. Under Option 1 the source of cost savings includes a 10 per cent reduction in costs of the Biosecurity and Food Safety Compliance unit and a saving of 1 FTE (estimated at a Grade 7/8 level) in the Policy Legislation, Performance and Partnerships unit.

21.4.2 Fees

An estimate of the total amount of fees collected under each option and the base case is provided in **Table 30**. In Options 1 and 2, there would be a reduction in the total amounts of fees collected by the government of $0.6 million and $1.1 million respectively per year in 2015-16 dollars. If the proposed fees were applied in Option 3, the government would collect a further $62,360 per year in fees relative to the base case.

Table 30: Value of fees collected by the government by option relative to the base case ($'000 in 2015-16 dollars)

Regulated programs	Base case	Option 1	Option 2	Option 3: using the proposed fee
NSW Cattle Tick Program	42.9	0	0	42.9
Non-indigenous Animals	2.23	0	0	5.616
Plant Biosecurity	933.06	587.24	0	1128.21492
Beekeeper registrations	142.97	0	0	6.79188
Total value of fees collected	**1,121.16**	**587.24**	**0**	**1,183.52**
Value of fees collected relative to the base case	**N/A**	**-587.24**	**-1,121.16**	**62.36**

21.4.3 Compliance activities

Table 31 provides a list of compliance activities that the Biosecurity and Food Safety branch conducted for the 2015-16 financial year under existing biosecurity legislation.

This table shows that one offence under the *Non-Indigenous Animals Act 1987* was taken to Court.

This information shows that under the base case there are a minimal number of matters that proceeded to Court. With the removal of penalty notices under Options 1 and 2, it is likely that this number would increase.

Table 31: Number of compliance activities conducted for existing biosecurity regulations

Biosecurity compliance activities	Number of events (2015-16)	Act enforcing the offence
Investigations	1155	
Properties quarantined	689	*Stock diseases Act 1923*
Prosecution	1[1]	*Non-indigenous animals Act 1987*
Written warning letters	125	*Stock Disease Act 1923* *Plant Diseases Act 1924*
Directions/orders/undertakings	39	
Penalty infringement notices	13	

Note: 1. There were 10 charges for this offence.

21.4.4 Costs and benefits summary tables

Tables 32 - 34 on the following pages identify the costs and benefits of each option to government, relative to the base case.

Table 32: Costs and benefits to *Government* under Option 1 relative to the base case

Option 1: No regulation is made to support the Act
Costs:
A. Loss of revenues from fees Governments would not have fee amounts prescribed in legislation for services that could be recovered. However, the government could use administrative fees for the provision of services. The potential loss of fees has been estimated at approximately $587,240 per year in 2015-16 dollars. Note the value of fees does not affect the selection of a preferred option in this assessment (Chapter 21.4). **B. Increased administration costs** The government would still have to meet its obligations under the Act, such as the enforcement of the general biosecurity duty and prohibited matter requirements. However, it may not have the available funding to implement the most effective and efficient biosecurity controls. For example, in the absence of existing regulations the Secretary would impose conditions of registration on individual registrations that require businesses to maintain or submit records which would result in increased administration costs to government. **C. Increased cost of enforcement** There would be increased pressure and reliance on the judicial system and increased administration costs for government in prosecuting cases. This is because without regulations, there would be no penalty notices and any person that did not comply with the provisions of the Act would be prosecuted in court.
Benefits:
A. Avoided administration costs There would be a small reduction in the government's administration costs that would result from the removal of existing levels of regulation. The avoided costs to the Biosecurity and Food Safety branch of NSW DPI have been estimated at approximately $0.43 million per year in 2015-16 dollars.

Table 33: Costs and benefits to *Government* under Option 2 relative to the base case

Option 2: Self-regulation (no NSW Government regulation of biosecurity)
Costs:
A. Loss of revenues from fees There would be no legislated provisions to collect fees. The loss of revenues from fees has been estimated at approximately $1.1 million per year in 2015-16 dollars (**Table 29**). Note the value of fees does not affect the selection of a preferred option in this assessment (Chapter 21.4). **B. Demand for financial assistance** Total industry self-regulation is likely to result in an increased risk of pests, diseases, weeds and contaminants entering and spreading throughout NSW. Under this option, there is potential for community outcry in relation to the industry's social licence to operate and affected parties may seek financial assistance from government to prevent business closures and loss of employment. **C. Information and education expenses** The government may have to provide information and advice to assist businesses and the community with the development and maintenance of industry-led voluntary codes of practice and, education strategies if required. The government would also be required to work to support the objectives of national deeds and agreements to which NSW is a signatory. While the government would incur costs for the provision of these services, under this option it would be unable to recover the costs of services. There is an increased chance that these costs would be taken from public revenues.
Benefits:
A. Avoided administration costs There would be a reduction in the government's administration costs from the removal of the existing regulations and the Act. The avoided costs to the Biosecurity and Food Safety branch of NSW DPI have been estimated at approximately $6.05 million per year in 2015-16 dollars. **B. Reduced pressure on courts and compliance activities** Without government intervention in the regulation of biosecurity risks, there would be no offences or penalties for non-compliance. This would reduce costs to the NSW Government.

Table 34: Costs and benefits to *Government* under Option 3 relative to the base case

Option 3: Make the proposed Regulation under the Act

Costs:

A. Increased administration costs

The government may be required to provide additional administrative assistance, in instances where its regulatory obligations have been strengthened. For example, under the proposed Regulation, notification of vascular plants is required to allow it to be assessed prior to importation; this would increase administration costs to government.

Benefits:

A. Improvement in administrative efficiencies

The proposed Regulation promotes improvements in administrative efficiency by:

- clearly defining responsibilities and obligations under the Act
  For example, mandatory measures clearly state the actions that a person who deals with certain biosecurity matter or carriers must take
- removing prescriptive measures that require the government to allocate its resources to the management of pests, diseases or weeds that are established in NSW and may be adequately managed by the general biosecurity duty. This will benefit the government in allowing for the more efficient use of its resources
- streamlining provisions such as diagnostic testing for pests and diseases and notification of pests and diseases
- replacing a number of biosecurity regulations with a single Biosecurity Regulation
- consolidating and removing provisions that are outdated and overly prescriptive. This frees up government resources, allowing for the improved targeting of biosecurity education and extension. The proposed Regulation removes provisions for beekeepers, non-indigenous animals, weeds and aquatic pests and diseases.

B. Complementing the objectives of Australian, state and territory government policies:

Actions implemented by the NSW Government under the proposed Regulation are in line with the national deeds and agreements to which NSW is a signatory and are compatible with Commonwealth biosecurity legislation and legislation in other states and territories. As such, under the proposed Regulation the NSW Government would maintain protections at the NSW border and contribute to National biosecurity objectives to manage biosecurity risks. It also assists in delivering on the NSW *Biosecurity Strategy 2013 – 2021*.

C. Fees

A list of proposed fees that may be charged for services provided under the Act would be prescribed. It is estimated that the total revenues from fees under Option 3 is approximately $1.2 million per year in 2015-16 dollars (an increase of $62,360 per year relative to the base case). Note the value of fees does not affect the selection of a preferred option in this assessment (see Chapter 21.4). The inclusion of these fees in the proposed Regulation provides the government with the tools to fully-recover the costs of government provided services.

21.5 Costs and benefits to the environment and community

Existing levels of regulation provide a range of protections to the environment and community. **Tables 35** and **36** provide a description of the potential costs and benefits to these groups under all options relative to the base case. The arguments presented in this section illustrate that the removal of legislation would increase costs to the environment and community (i.e., increased damages to human health) with no benefits for these groups. Furthermore, the proposed Regulation would generate the greatest net benefits to the environment and community, which supports the conclusion that making the proposed Regulation under the Act (Option 3) is the preferred option.

Table 35: Costs and benefits of Biosecurity legislation to *the environment and community*, under Option 1 and 2 relative to the base case

Option 1 & 2: **No regulation is made to support the Act and self-regulation**
Costs:

A. Community
Under Options 1 and 2 the costs to community include
• increased risks of price shock (sharp and sudden increase in prices) for agricultural products that may result from the increased incidence and spread of pests, diseases, weeds and contaminants. This would result in consumers paying higher prices for agricultural products
• increased potential for harm to human health from the removal of regulations for stock foods; chemical residues in food producing animals and animal products; and fertilisers, liming materials and trace elements. Increased chance that unacceptable levels of these materials would enter the food chain
• increased costs to households arising from the repair and replacement of damaged household items. For example, tramp ants and European house borer can infest and damage furniture, food, electrical equipment and the ceiling frames in houses
• deterioration of a community's wellbeing
  ○ the removal of biosecurity measures to prevent FMD from entering NSW would increase the likelihood of a disease outbreak that would result in significant hardships in affected rural communities (as was observed in the 2001 FMD outbreak in the United Kingdom)
  ○ human health associated with zoonosis and weed species that may cause health conditions such as asthma and allergic reactions
• flow-on effects from the removal of biosecurity regulation could reduce the economic viability of local businesses such as tourism operations, hospitalities, manufacturing, retail and recreational fisheries. This could result in increased job losses and damage to the social wellbeing of communities.
 	
B. Environment
Under Option 1 and 2 there is a likely reduction in protections to the environment and community that would result in an increased:
i. Loss of biodiversity
• likelihood of aquatic pests and disease infecting aquatic fauna, such as abalone viral ganglioneuritis (AVG) in wild abalone, resulting in increased mortality and changes to the current balance of native biodiversity. Aquatic pests and diseases have the potential to outcompete or displace native species, or modify the current balance of native biodiversity
• likelihood of invasive species spreading through and becoming endemic in NSW such as the European house borer and tramp ants, which could modify habitat structures and alter ecosystem processes
• likelihood of non-indigenous animals entering the wild and becoming endemic. As a result there could be overgrazing of native flora and increased spread of weeds
• spread of animal pests and diseases throughout NSW which would increase damage

Option 1 & 2:
No regulation is made to support the Act and self-regulation

to the environment. For example,
i. avian influenza would cause damage to populations of wild birds.
ii. the spread of bee diseases like braula fly would degrade bee colonies and reduce pollination services essential to flora.

ii. Damage to native habitats
- damage from the further spread of invasive weed species
- likelihood of non-indigenous animals entering the wild and becoming endemic. As a result there could be increased erosion.

iii. Decline in native species
- likelihood of invasive weed species spreading, such as the pond apple (Queensland Government 2016), and crowding out native aquatic flora
- risk of non-indigenous animals escaping and becoming endemic, damaging native habitats, competing with native fauna and putting already threatened populations under further pressure.

iv. Spread of weeds
- spread of invasive weed species across NSW

v. Contamination of the environment by heavy metals and fertilisers
- likelihood of over application of chemicals and fertilisers due to poor labelling which causes damage to the environment.

The magnitude of impacts described above are likely to be greater under Option 2 relative to Option 1, as further provisions prescribed under the Act would also be removed. This could include the notification of the presence or suspected presence of prohibited matter. For example, the removal of control measures would mean that there were no protection is place to protect wildlife from diseases like *Mycobacterium bovis* (bovine tuberculosis) or screw worm fly.

Benefits:

The removal of biosecurity regulation as defined by Options 1 and 2 will provide no additional identified benefits to the environment or the community relative to the base case.

Table 36: Costs and benefits of Biosecurity legislation to *the environment and community*, under Option 3 relative to the base case

Option 3: Make the proposed Regulation under the Act

Costs:

The making of the proposed Regulation would result in no additional costs imposed on the environment or community, relative to the existing level of regulations (the base case).

Benefits:

A. Community:

The benefits to communities include protections:

- that minimise the risks of price shock (sharp and sudden increases in prices) for agriculture products that may result from the increased incidence and spread of pests, diseases, weeds and contaminants. This would benefit consumers by maintaining food security
- to human health through regulations for stock foods; chemical residues in food producing animals and animal products; and fertilisers, liming materials and trace elements. These measures protect human health by ensuring that unacceptable levels of heavy metals do not enter the food chain
- to household items that would damage from infestations of invasive insect species. Tramp Ants can infest and damage furniture, food, electrical equipment and the ceiling frames in houses. This would minimise any additional costs to households
- that maintain a community's wellbeing. Biosecurity controls that minimise the likelihood of an animal disease outbreak such as FMD entering NSW and protecting regional communities from emotional hardships. Biosecurity controls protect human health from diseases that spread between animals and humans and weed species that may cause conditions such as asthma and allergic reactions
- that support the economic viability of local businesses like tourism, hospitality, manufacturing, retail and recreational fisheries. This would also protect the jobs and the social wellbeing of communities.

B. Environment:

The proposed Regulation contains prescribed measures such as mandatory measures and biosecurity zones that maintain and increase protections for the environment. These provision are likely to maintain or increase protections that minimise:

i. Biodiversity

- the displacement of native species and the competition for habitat could result from the introduction, spread and establishment of aquatic pests and diseases. For example, the proposed regulations minimise the likelihood of aquatic diseases, such as, Abalone viral ganglioneuritis (AVG) in the wild abalone, infecting aquatic fauna and changing the current native biodiversity
- the likelihood of an animal pest or disease entering, spreading and becoming established in the NSW environment. For example, regulation for
  i. avian influenza and cattle tick regulation would protect native populations of wild bird and mammals
  ii. bee diseases like Braula fly would protect bee colonies and maintain pollination services that benefit native flora and biodiversity.

ii. Native habitats

- damage from the control of invasive weed species
- the likelihood of non-indigenous animals entering the Australian environment and becoming endemic. This would reduce the incidence of erosion, desertification and overgrazing of native flora.

iii. Native species

- the likelihood of invasive weed species spreading, such as pond apple and crowding out native aquatic flora
- the risk of non-indigenous animals escaping and becoming endemic, damaging native habitats, competing with native fauna and putting already threatened populations under further pressure.

iv. Spread of weeds

- spread of invasive weed species across NSW.

v. Contamination of the environment by heavy metals and fertilisers

- the likelihood of heavy metals in chemicals and fertilisers causing damage to the environment.

APPENDIX A: Biological Risk Assessment Process

Once a risk is identified in NSW or another state or territory, the first step is to determine the risk it poses to the NSW economy, environment and community. The assessment method used varies, with a number of 'biological risk assessments' utilised to properly identify and understand the risk.

Risk identification and assessment methods, including import risk assessments, utilised by BFS in determining biological risk levels and the appropriate management response include:

The Invasion Curve and return on investment

The generalised invasion curve illustrates changes over time if pests and diseases successfully invade new areas and the different actions appropriate to counter invasion at each stage. The return on investment for different stages in pest and disease management is also shown, along the bottom axis. The invasion curve highlights that the most cost-effective approach to pest and disease management is achieved through preventing the entry of new threats. In the event of an incursion of a pest or disease initial efforts are usually focused on containment and eradication. Long term though the authority responsible must determine the feasibility and cost of eradication as compared to the cost of long term containment or asset based protection strategy. These decisions will determine the nature of the response and the appropriate use of management tools under the Act as the response moves from eradication to containment and asset based containment.

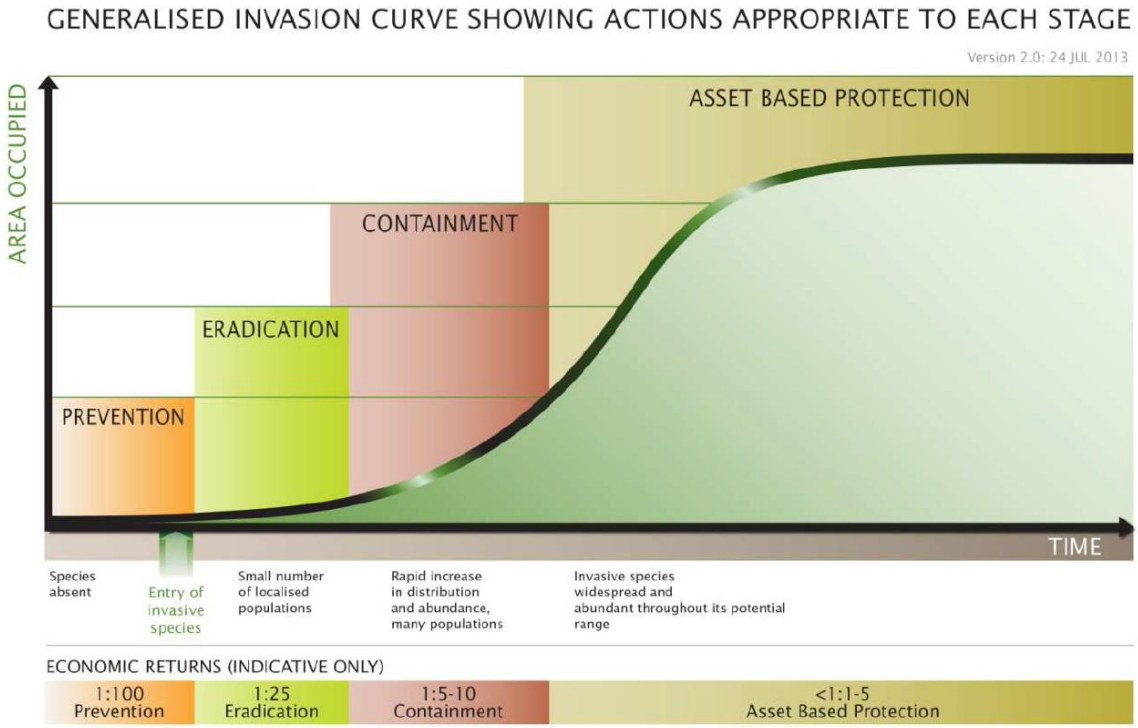


Figure: Invasion Curve, sourced from Biosecurity Victoria, Department of Primary Industries, Victoria.

NSW Weeds Risk Management System

The New South Wales Weed Risk Management (WRM) system was developed by NSW DPI in consultation with stakeholders to assist weed managers in NSW to determine priorities for weed management at state, regional and local levels.

The NSW Weed Risk Management system uses a series of questions to arrive at a score for weed risk (invasiveness, impacts, potential distribution) and feasibility of coordinated control (control costs, persistence, current distribution). Once scores are determined, a table comparing the scores directs the assessor to what management priorities may be needed for the weed.

How this has been applied to determine the appropriate management tools is represented below:

Guide to regulatory outcomes

Weed risk	Feasibility of coordinated control				
	Negligible (113+)	Low (56-113)	Medium (31-55)	High (14-30)	Very high (<14)
Negligible (<13)	Stop regional introduction	Stop regional introduction	Stop regional introduction	Stop regional introduction	Reduce spread
Low (13-38)	Stop regional introduction	Stop regional introduction	Stop regional introduction	Reduce spread	Regional extirpation or containment
Medium (39-100)	Stop regional introduction	Stop regional introduction	Reduce spread	Regional extirpation or containment	Regional extirpation or containment
High (101-192)	Stop regional introduction	Reduce spread	Regional extirpation or containment	Regional extirpation or containment	State scale eradication or containment
Very high (192+)	Reduce spread	Regional extirpation or containment	Regional extirpation or containment	State scale eradication or containment	State scale eradication or containment

	Tool	**Examples of how regulatory obligation might be discharged**	
Regional scale regulation	General biosecurity duty	• Land managers have a duty to mitigate the risk of new weeds being introduced to their land. • Weed may be subject to mandatory measures such as ban from sale.	Weeds to be effectively managed to reduce impacts on a regional basis
	General biosecurity duty - Weed listed in RSWMP - control obligations detailed within RSWMP	• Land managers have a duty to mitigate the risk of new weeds being introduced to their land. • 20m buffer must be in place around extremity of property. • Density of weeds must be maintained within 25 per cent ground cover to minimise risk of wind and animal spread. • Best practice measures that inhibit spread • Weed may be subject to Mandatory Measures i.e. WONS such as a 'ban from sale'.	
	General biosecurity duty -Weed listed in RSWMP - control requirements detailed in separate published Weed Management Plan	• Land managers have an obligation to mitigate the risk of new weeds being introduced to their land. • Land must be managed in accordance with a published weed management plan. In the absence of a plan a duty still applies. • Weed may be subject to Mandatory Measures i.e. WONS such as a 'ban from sale'.	

	Tool	Examples of how regulatory obligation might be discharged	
State scale regulation	Regulations & Control Orders	Biosecurity Zone • Land managers have an obligation to mitigate the risk of new weeds being introduced to their land. • Weed must be within a prescribed area and managed as required by the Regulation.	Weeds excluded from entering the State. Weeds to be eradicated.
		Control Order • Land managers have an obligation to mitigate the risk of new weeds being introduced to their land. • Weed must be suppressed as required by the Control Order.	
		Prohibited Matter • Notification obligations apply with respect to Prohibited Matter. It is also an offence to deal with Prohibited Matter.	
		• Weed is notifiable according to a Mandatory Measure.	

Non-Indigenous Animal Risk Assessment Process

NSW currently regulates the entry, movement and keeping of certain non-indigenous animals in NSW (amphibians, reptiles, birds and mammals) in accordance with guidelines provided by the Invasive Plants and Animals Committee (IPAC). The IPAC is a cross-jurisdictional sectoral sub-committee of the National Biosecurity Committee (NBC). The Committee is responsible for implementing the Intergovernmental Agreement on Biosecurity and providing policy and technical advice to the NBC on national weed, vertebrate pest and freshwater invertebrate pest issues. IPAC membership comprises representatives from the Commonwealth, state and territory primary industry or environment departments.

The IPAC has adopted the Bomford risk assessment method, developed specifically to determine the risk posed by the import and keeping of exotic vertebrates, based on likelihood of establishment and potential impact. When considering the risk of establishment, the Bomford method considers the species propagule pressure, climate match, previous establishment in other ecosystems and, the taxonomic group of the species. In addition to the risk of establishment, the Bomford method also considers what adverse impacts a species may have on its introduced environment, including its feeding behaviour, ability to harbour pests and diseases and ability to spread following release. (NB, the Bomford method does not consider the beneficial attributes of a species such as its value as a livestock species or a domestic pet).

The vast majority of exotic vertebrates in Australia have not been formally risk assessed using the Bomford method (Over 500 species have not been risk assessed compared with about 100 species that have been risk assessed). The IPAC has adopted a precautionary approach in relation to these unassessed species, and assigns an Extreme threat risk rating to them. Over time, and as resources are made available at a national level, IPAC aims to put more species through the formal risk assessment method.

The IPAC list does not define the legal status of species under Commonwealth, state or territory legislation. However, under the IPAC guidelines, the Commonwealth, state and territory agencies may use this list as a reference when deciding whether to regulate the entry, movement and keeping of nonindigenous animals.

Some of the species which have not had a specific and thorough risk assessment in accordance with the national Guidelines are established pests and/or livestock, common pets and farm animals widely kept in Australia.

For practical, economic and social reasons relevant authorities may decide not to apply the threat risk management strategies contained in the national guidelines where species are established pests and/or livestock, common pets or other farm animals widely kept in Australia.

The results of the IPAC assessment and its recommendations are used by BFS to identify the appropriate control tools within our legislation. The tool selected for the management of a non-indigenous animal will be determined by the level of risk posed, existing presence, beneficial attributes (e.g., livestock species, common pets) and capacity to control the risk.

Animal and Aquatic Biosecurity Risk Assessment Process

Animal and aquatic biosecurity management in NSW is informed based on advice from key national bodies, including the national Animal Health Committee (AHC). The main purpose of AHC is to develop science-based and nationally consistent policy on animal health issues. In doing so, AHC provides leadership in developing and implementing policy, programs, operational strategies and standards for government in the areas of animal (including aquatic) health, domestic quarantine, animal welfare and veterinary public health.

The AHC members are comprised of the Chief Veterinary Officers (CVO) of the Commonwealth, states and territories along with representatives from the Australian Animal Health Laboratory, the Department of Agriculture and Water Resources and the Department of the Environment.

The aquatic biosecurity risk assessment process is informed by a number of national committees and groups. They include the Sub Committee on Aquatic Animal Health (under AHA), the Marine Pest Sectoral Committee which provides guidance on marine pest management and the Freshwater Fish Expert Group, under the Invasive Plants and Animals Committee (IPAC), which undertakes an assessment of risk to result in recommendations for listing of ornamental fish species on the national noxious freshwater fish list.

In NSW, when a specific terrestrial or aquatic biosecurity risk is identified, a strategic risk assessment process is initiated using a standard strategic risk assessment template developed by NSW DPI. [Note: The current risk assessment process used by BFS should be reviewed against the Risk Management Toolkit for the NSW Public Sector for compliance with the current Australian/New Zealand International Standard (ISO 31000): *Risk management – Principals and guidelines*.]

The risk assessment process is undertaken by a panel of internal officers to determine the risk ranking and appropriate risk mitigation measures. The outcome from this risk assessment process includes recommendations for the NSW CVO to consider for the management of the specific risks identified. BFS works closely with the AHC to ensure its recommendations and national policy agenda will protect the economy, environment and community of NSW from animal pests and diseases including aquatic biosecurity risks.

Plant Biosecurity Import Risk Assessment Process

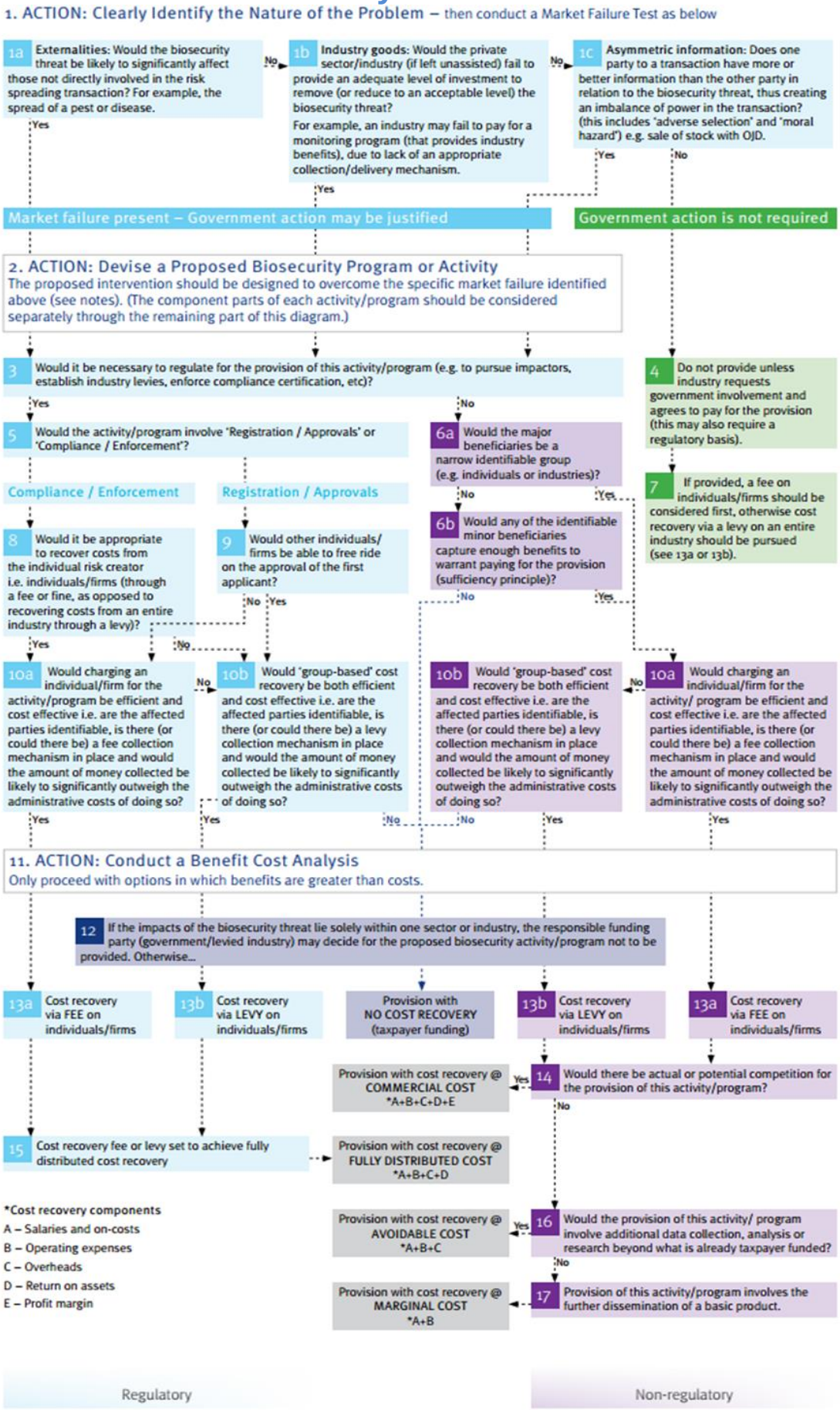
Plant Biosecurity risk management in NSW is informed by advice from committees under the national Plant Health Committee (PHC). The PHC is the peak government plant biosecurity policy forum. Its role is to maintain or improve plant health in Australia through strategic policy, technical and regulatory advice. The PHC's membership includes the Chief Plant Protection Officers (or equivalent) in each state or territory and the Commonwealth.

Under the PHC there are a number of sub committees including the Subcommittee on Domestic Quarantine and Market Access (SDQMA). SDQMA is responsible for the development of domestic market access conditions for plants and plant products. SDQMA formed the Community of Practice for Pest Risk Analysis (COPPRA) to provide pest risk advice with the objective of national harmonisation of plant and plant product entry conditions with respect to specific pests and diseases.

BFS conducts its own independent risk assessment of plant and plant product importation proposals in accordance with the Import Risk Analysis process developed by the Federal Department of Agriculture and Water Resources. The outcome of this assessment in conjunction with the advice received from committees under PHC, determines suitability for importation and when required the appropriate management tools under the Act. This process also informs the choice of management tools required for the regulation of plant biosecurity risks present within NSW.

The plant biosecurity team contributes to the consultation papers developed by the Commonwealth's Import Risk Analysis process. BFS is consulted on whether the Commonwealth has identified the hazards and evaluated the risks effectively in its Import Risk Analysis process. The Commonwealth's Import Risk Analysis process is consistent with the World Trade Organization's (WTO's) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which states that import risks have to be scientifically based and are not corrupted to protect local industries as 'non-tariff trade barriers'. This is a Commonwealth responsibility under the *Quarantine Act 1908* (to be superseded by the Commonwealth's *Biosecurity Act 2015*).

APPENDIX B: Biosecurity Threat Decision Tree



APPENDIX C: Estimating the costs to agriculture of biosecurity regulations under each option relative to the base case

Table C1: Estimation of the expected costs of pest or disease outbreak under Option 1 relative to the base case

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Animal pests and diseases	**Braula fly**	**Honey**	40.59	5.00	50.00	0	1.01	72	0.73
	Cattle tick	**Beef cattle**	2314.05	10.00	33.00	0	76.36	72	54.98
		Dairy cattle (for milk products)	617.56	10.00	10.00	0	6.18	72	4.45
	Footrot	**Sheep (meat)**	760.52	20.00	30.00	0	45.63	72	32.85
		Sheep (wool)	898.22	20.00	30.00	0	53.89	72	38.80
		Goats	6.06	20.00	30.00	0	0.36	72	0.26
	Newcastle disease	**Chicken (meat)**	884.83	100.00	5.00	0	44.24	4	1.77
		Chicken (eggs)	241.47	100.00	5.00	0	12.07	4	0.48
	Porcine brucellosis	**Pigs (meat)**	195.60	5.00	5.00	0	0.49	72	0.35

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Aquatics	**Abalone viral ganglioneuritis (AVG)**	**Abalone**	0.13	100.00	95.00	0	0.12	50	0.06
	Pacific Oyster Mortality Syndrome (POMS)	**Pacific oysters**	4.04	100.00	100.00	0	4.04	75	3.03
	Marteilia sydneyi (QX disease) biosecurity zone	**Sydney Rock Oysters**	35.09	75.00	100.00	0	26.32	75	19.74
	Bonamia ostreae & B. exitiosa	**Sydney Rock Oysters**	35.09	50.00	50.00	0	8.77	0.8	0.07
		Flat oyster	0.08	100.00	100.00	0	0.08	10	0.01

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Plants pests and diseases	**Banana freckle & Panama disease**	**Bananas**	10.53	100.00	10.00	0	1.05	40	0.42
	Cucumber green mottle mosaic virus	**Cucumber**	16.50	25.00	10.00	0	0.41	40	0.16
		Melons	68.96	75.00	10.00	0	5.17	40	2.07
		Pumpkin	25.53	5.00	10.00	0	0.13	40	0.05
	Green snail	**Broadacre crops**	4567.65	25.00	1.00	0	11.42	40	4.57
		Vegetables	421.57	25.00	1.00	0	1.05	40	0.42
	Lupin anthracnose	**Lupins**	74.08	75.00	10.00	0	5.56	40	2.22
	Mediterranean fruit fly	**Fruit and nuts (excluding grapes)**	520.16	50.00	10.00	0	26.01	40	10.40
	Orange stem pitting strains of Citrus tristeza virus	**Orange**	134.03	25.00	50.00	0	16.75	20	3.35
	Tomato yellow leaf curl virus (TYLCV)	**Tomatoes**	33.28	100.00	50.00	0	16.64	72	11.98

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
	Red citrus mite	**Mandarin**	8.94	25.00	90.00	0	2.01	80	1.61
		Orange	134.03	25.00	90.00	0	30.16	80	24.13
		Other citrus n.e.c	4.82	25.00	90.00	0	1.08	80	0.87
	Potato cyst nematode	**potatoes**	60.01	100.00	90.00	0	54.01	80	43.21
		tomatoes (not as much)	33.28	5.00	1.00	0	0.02	20	0.00
		eggplants (not as much)	6.19	5.00	1.00	0	0.00	20	0.00
	Rice blast	**Rice**	274.10	100.00	100.00	0	274.10	80	219.28
	Grapevine phylloxera biosecurity zone	**Grapes**	212.54	75.00	50.00	0	79.70	40	31.88

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Invasive species - animals	**European house borer**	**Untreated timber**				0			
Animal food	**Prohibited pig feed -FMD**	**Pigs (meat)**	195.60	20.00	5.00	11.53	24.52	8	1.96
		Beef cattle	2335.42	20.00	5.00	61.69	1464.19	8	117.13
		Dairy milk products	617.56	20.00	5.00	59.64	374.48	8	29.96
		Sheep (meat)	767.54	20.00	5.00	62.11	484.40	8	38.75
		Sheep (wool)	906.52	20.00	5.00	87.70	804.05	8	64.32
		Goats	5.58	20.00	5.00	95.00	5.36	8	0.43
	Feeding restricted animal material to ruminants - TSE	**Beef cattle**	2314.05	1.00	1.00	61.69	1427.88	0.8	11.42
		Sheep (meat)	760.52	1.00	1.00	62.11	472.44	0.8	3.78

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
		Sheep (wool)	898.22	1.00	1.00		0.09	0.8	0.00
		Goats	5.58	0.01	1.00	95.00	5.30	0.8	0.04
	TOTAL	**N/A**	**12604.34**	**N/A**	**N/A**	**N/A**	**3539.19**	**N/A**	**782.02**

Table C2: Estimation of the expected costs of pest or disease outbreak under Option 2 relative to the base case

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production)	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Animal pests and diseases	**Braula fly**	**Honey**	40.59	5	50	0	1.01	90	**0.91**
	Cattle tick	**Beef cattle**	2314.05	10	33	0	76.36	90	**68.73**
		Dairy cattle (for milk products)	617.56	10	10	0	6.18	90	**5.56**

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production)	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
	Footrot	**Sheep (meat)**	760.52	20	30	0	45.63	90	**41.07**
		Sheep (wool)	898.22	20	30	0	53.89	90	**48.50**
		Goats	6.06	20	30	0	0.36	90	**0.33**
	Newcastle disease	**Chicken (meat)**	884.83	100	5	0	44.24	5	**2.21**
		Chicken (eggs)	241.47	100	5	0	12.07	5	**0.60**
	Porcine brucellosis	**Pigs (meat)**	195.60	5	5	0	0.49	90	**0.44**
Aquatics	**Abalone viral ganglioneuritis (AVG)**	**Abalone**	0.13	100	95	0	0.12	95	**0.12**
	Pacific Oyster Mortality Syndrome (POMS)	**Pacific oysters**	4.04	100	100	0	4.04	90	**3.63**
	Marteilia sydneyi (QX disease) biosecurity zone	**Sydney Rock Oysters**	35.09	75	100	0	26.32	90	**23.69**
	Bonamia ostreae & B. exitiosa	**Sydney Rock Oysters**	35.09	50	50	0	8.77	1	**0.09**
		Flat oyster	0.08	100	100	0	0.08	10	**0.01**

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production)	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Plants pests and diseases	**Banana freckle & Panama disease**	**Bananas**	10.53	100	10	0	1.05	50	**0.53**
	Cucumber green mottle mosaic virus	**Cucumber**	16.50	25	10	0	0.41	50	**0.21**
		Melons	68.96	75	10	0	5.17	50	**2.59**
		Pumpkin	25.53	5	10	0	0.13	50	**0.06**
	Green snail	**Broadacre crops**	4567.65	25	1	0	11.42	50	**5.71**
		Vegetables	421.57	25	1	0	1.05	50	**0.53**
	Lupin anthracnose	**Lupins**	74.08	75	10	0	5.56	50	**2.78**
	Mediterranean fruit fly	**Fruit and nuts (excluding grapes)**	520.16	50	10	0	26.01	50	**13.00**
	Orange stem pitting strains of Citrus tristeza virus	**Orange**	134.03	25	50	0	16.75	25	**4.19**
	Tomato yellow leaf curl virus (TYLCV)	**Tomatoes**	33.28	100	50	0	16.64	90	**14.97**

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production)	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
	Red citrus mite	**Mandarin**	8.94	25	90	0	2.01	100	**2.01**
		Orange	134.03	25	90	0	30.16	100	**30.16**
		Other citrus n.e.c	4.82	25	90	0	1.08	100	**1.08**
	Potato cyst nematode	**potatoes**	60.01	100	90	0	54.01	90	**48.61**
		tomatoes (not as much)	33.28	5	1	0	0.02	30	**0.00**
		eggplants (not as much)	6.19	5	1	0	0.00	30	**0.00**
	Rice blast	**Rice**	274.10	100	100	0	274.10	100	**274.10**
	Grapevine phylloxera biosecurity zone	**Grapes**	212.54	75	50	0	79.70	50	**39.85**
Invasive species - animals	**European house borer**	**Untreated timber**				0			

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production)	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
Animal food	**Prohibited pig feed -FMD**	**Pigs (meat)**	195.60	20	5	12	24.52	10	**2.45**
		Beef cattle	2335.42	20	5	62	1464.19	10	**146.42**
		Dairy milk products	617.56	20	5	60	374.48	10	**37.45**
		Sheep (meat)	767.54	20	5	62	484.40	10	**48.44**
		Sheep (wool)	906.52	20	5	88	804.05	10	**80.41**
		Goats	5.58	20	5	95	5.36	10	
	Feeding restricted animal material to ruminants -TSE	**Beef cattle**	2314.05	1	1	62	1427.88	1	**14.28**
		Sheep (meat)	760.52	1	1	62	472.44	1	**4.72**
		Sheep (wool)	898.22	1	1	0	0.09	1	**0.00**

Subject matter	Pests and diseases regulated in the proposed Regulation	Affected commodities	NSW Gross Value of Production ($m in 2014-15)	Yield reduction (%)	Proportion of the NSW industry impacted (%)	Loss of production sent to export markets (% of total production)	Maximum revenues loss for a pest or disease entering NSW ($m)	Likelihood of a disease occurrence - Option 2 relative to the base case (%)	Expected costs - Option 2 relative the Base case ($m)
		Goats	5.58	0	1	95	5.30	1	**0.05**
	TOTAL	N/A	12,604.34	N/A	N/A	N/A	3,539.19	N/A	970.49

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