Second Quarter Report 2018–19

National Red Imported Fire Ant Eradication Program

Queensland Government

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Contents

Summary

The broadcast baiting treatment season for the National Red Imported Fire Ant Eradication Program (the Program) began in October 2018. From October through to December 2018, treatment was conducted in the Gold Coast Development Corridor (Eastern Suppression Area), with one round of broadcast bait treatment being applied across 11 095 hectares (12 359 sites). Treatment was also undertaken in the west in Area 1 Eradication Treatment Area, with 72 895 hectares (12 527 sites) receiving treatment.

During the quarter, responsive treatment was also undertaken to destroy newly reported red imported fire ant (fire ant) infestation across 1798 sites (8590 mounds) through the application of *fipronil* via direct nest injection and insect growth regulator bait treatment. Overall, response times to these infestations remained similar to the results for the first quarter, or improved by 23%.

Planned surveillance was carried out along the operational boundary over 272 sites (509 hectares) and resulted in four new detections in Areas 2–4. All sites have received treatment and will undergo post-treatment validation surveillance in accordance with Program Protocol. The odour detection dogs conducted surveillance to verify the destruction of nests throughout the quarter, confirming the absence of infestation at over 79% of sites surveyed. A single significant detection was located outside of the Program's 2018–19 operational boundary at Fernvale on 22 October 2018, and treatment and engagement activities occurred.

Community and stakeholder engagement activities continued throughout this quarter to support the Program's treatment activities, with more than 3 million people engaged through broadcast and mass media methods such as static displays, Facebook and electronic road signage. Fire ant training sessions were attended by 542 personnel from local councils and industry groups, with 63% from local councils. Engagement activities also contributed to the Program receiving a total of 2518 ant reports, of which 1682 samples were diagnosed. Of those reports, 943 (56%) were positively identified as fire ants.

Scientific analysis occurred during the quarter to determine sentinel sites for the upcoming surveillance season from May–September 2019. Sites were selected based on preferred habitat, habitat disturbance levels, land use and proximity to nearest known infestations.

The Program also facilitated three significant meetings in this quarter, including the National Exotic Invasive Fire Ant Scientific Advisory Group, the Steering Committee and the Risk Management Sub-Committee meeting.

The relocation of staff to the new Berrinba headquarters was completed in November, and has enabled functional and practical collaboration across the Program.

As at 31 December:

- there were 98 permanent, 25 temporary and 157 contractor personnel employed by the Program.
- the Program tracked almost $258 000 above the year-to-date budget. The main variance reflects staff movements between areas within the Program, following recruitment activity and also delays in finalising recruitment activities to coincide with the planned budget.

Context

The fire ant is a pest of national significance that has an impact on wildlife, the environment, agriculture, animal industries, infrastructure, business and human health, not to mention the Australian way of life. All Australian jurisdictions have a vested interest in eradicating the pest as the impacts are far-reaching across multiple sectors of the economy and community.

An eradication program in South East Queensland has been operational since 2001 in response to the discovery of fire ants in western Brisbane and Fisherman Island. It has prevented widespread environmental, social, health and economic impacts seen in other countries where fire ants have invaded.

The eradication of fire ants continues under the nationally endorsed Ten Year Eradication Plan (Ten Year Plan) that commenced on 1 July 2017. This is the second quarter report for the second year of operations under the Ten Year Plan. The 2018-19 Work Plan was approved in December 2018 by the Steering Committee, and focuses on continuing planned eradication treatment in Area 1 and commencing eradication treatment in the Western Boundary Area. Planned targeted surveillance surrounding and beyond these areas are being conducted to limit the potential for undetected infestations to impact on this broadscale treatment regime. All other Program activities support this focus (refer to Appendix 10 for the National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets).

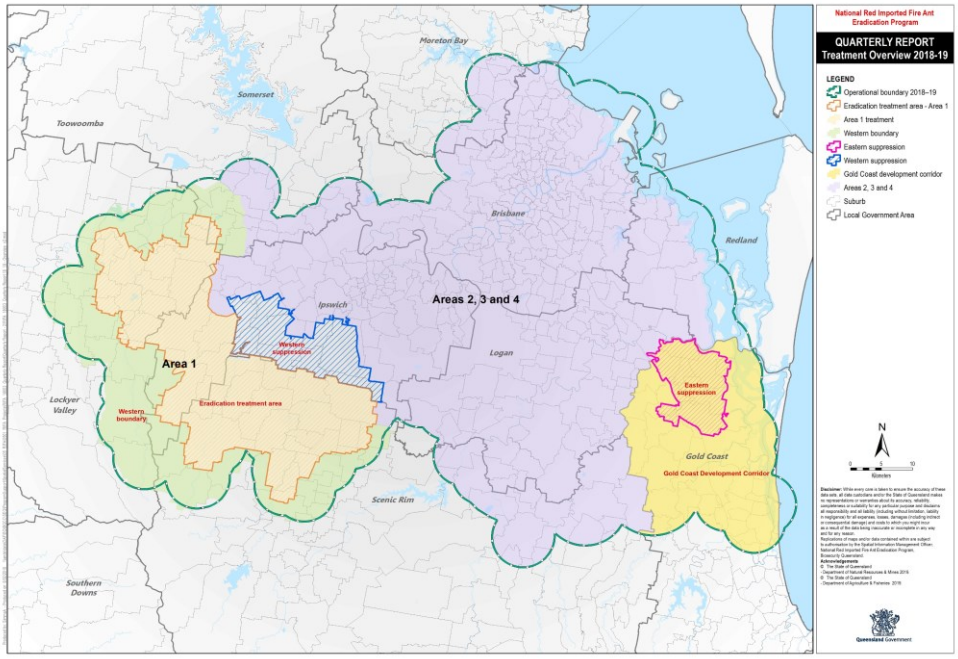
Our areas of operation

The **operational area** is defined in the Ten Year Plan as the 'Total area of known infestation confirmed by delimitation and adjusted for known and predicted infestation spread since completion of delimitation' (five kilometres beyond all known infestation). The visual representation of the operational area, the **operational boundary**, was first drawn five kilometres around infestations detected from 1 July 2012 to 30 June 2017. This was amended for the 2018–19 work program to include infestations detected to 31 August 2018.

The operational area serves the important function of identifying the extent of Program activities and of indicating the area where infestation has been detected. A fire ant detection beyond the operational area is considered significant and elicits an immediate and thorough Program response.

To manage the eradication process under the Ten Year Plan, the operational area has been divided into four priority target areas (Areas 1–4). The plan focuses eradication activities in each area in turn, working from west to east.

Refer to Appendix 1 for a map of the 2018–19 operational area.



Area 1 is to the west of the operational area and is predominantly rural and agricultural land. Eradication treatment commenced within Area 1 in 2017–18 and continues in 2018–19. The treatment area, known as **Area 1 Eradication Treatment Area**, extends two kilometres beyond all known infestations detected between 2012 and May 2017 (a total of 84 025 hectares). In the 2018–19 treatment season, this area is scheduled to receive the third and fourth round of broadcast bait treatment.

Since the Eradication Treatment Area was determined, detections have been made further west. The distribution and characteristics of this infestation suggests the eradication effort needs to expand as protection against further spread. In response to this risk, in August 2018, the Steering Committee endorsed broadscale eradication treatment at key risk locations outside the current Eradication Treatment Area. It was noted that the option of proactively treating (by broadscale aerial baiting) an area five kilometres beyond the recorded infestations would be the primary response. It was then proposed that two rounds of broadcast baiting be applied five kilometres beyond all recorded infestation in this area to be known as the **Western Boundary Area**.

To protect the Eradication Treatment Area to the east, treatment is planned for the area defined as the **Western Suppression Area**. This area is situated in Area 2 and covers 19 484 hectares. **Areas 2, 3 and 4** are identified in the Ten Year Plan as areas to receive eradication treatment in later years of the Program, progressing from the west (Area 1) to the east (Area 4).

To protect the operational boundary to the south, activities have commenced in the **Gold Coast Development Corridor**. Major development in this corridor provides the ideal habitat for the establishment and spread of fire ant infestation. Activities include industry and community engagement, suppression treatment in the northern part of the Gold Coast (Area 4), a 13 579-hectare area that has experienced high-density infestation **(Eastern Suppression Area)**, and the treatment of major development sites including infrastructure development and waste facilities.

Our activities

Treatment

To destroy fire ant infestation, depending on the circumstances, either an area is baited with an **insect growth regulator (IGR)** or a nest is directly injected with a non-repellent pesticide. The injection of the chemical insecticide *fipronil* directly into a fire ant nest has proven effective at destroying fire ants in a one-off application.

Bait is applied by field staff either using a hand-held spreader, distributed by manned all-terrain vehicle, or broadcast aerially by helicopter. Baiting is ideally conducted when soil temperature is greater than 20 °C, and usually occurs between mid-September and May–June.

Targeted **monitoring** of planned treatment areas will occur following each treatment round to assess treatment efficacy.

To quickly address newly reported small levels of infestation, **responsive treatment** is undertaken involving **direct nest injection** (**DNI)** and baiting the surrounding area with IGR. DNI is undertaken in instances where there is a risk to human or animal health and safety, to allow the continuation of business activity, where there is a threat to Program objectives, or if DNI is the most cost-effective option.

Surveillance

Surveillance is currently undertaken by field staff or by odour detection dog. For field staff, surveillance is most effective in the cooler months when the ants build up their mounds. Odour detection dogs can work throughout the year. Remote sensing surveillance (RSS) is currently under development, with testing scheduled for 2018–19.

Surveillance is conducted for different purposes and with different aims. To protect the operational boundary and the eradication treatment area, **planned targeted surveillance** is undertaken in this area to assess the level of infestation. To monitor the level of infestation beyond the operational area, **sentinel sites** have been established as early indicators of infestation that is further afield and needs to be immediately addressed. **Delineation surveillance** is conducted around any new detection to determine the extent of the infestation. Finally, to ensure treatment has successfully resulted in the destruction of infestation, **post-treatment validation surveillance** is undertaken. This is predominantly undertaken by odour detection dogs and priority is given to infestations that have been detected around the operational boundary.

Fire ant biosecurity zones

Fire ant biosecurity zones are in place to control the movement of fire ant carriers from the known infested area. The zone requirements apply to all those who live and work in the zone and move fire ant carriers. In addition to the specific requirements for fire ant biosecurity zones, all Queenslanders have a general biosecurity obligation (GBO) under the *Biosecurity Act 2014* to manage biosecurity risks and threats that are under their control, they know about or are expected to know about. In terms of fire ants, a biosecurity risk exists when dealing with the movement of fire ant carriers, that is, anyone involved in the movement of fire ant carriers has a GBO to ensure they don't spread fire ants (refer to Appendix 8 to view a map of the fire ant biosecurity zones).

The two distinct forms of fire ant infestation are:

- monogyne—a nest containing a single queen, with highly territorial behaviour
- polygyne—a nest containing multiple queens living in co-habitation.

Treatment

Planned treatment

Planned eradication treatment commenced on 2 October 2018; however, delays occurred in treatment throughout the quarter due to considerable high winds, most notably loss in aircraft time for aerial application.

The Program focused effort on Area 1 and the Eastern Suppression Area, where treatment was applied across 83 996 hectares (24 964 sites—refer to Appendix 3: Map of planned treatment). A revised schedule has delayed treatment in the Western Boundary and Western Suppression areas, due to significant resourcing requirements; it is anticipated treatment will commence in the next quarter.

To assess treatment efficacy, the Program monitored nest activity in Area 1 Eradication Treatment Area since July 2018. Thirty-five nests that had received broadcast bait treatment were examined across six sites. Of all nests monitored since June–July 2018, 81% were found to be eradicated by November 2018.

Refer to Table 1 below for a breakdown of planned treatment activities undertaken during this quarter.

Table 1: Second quarter planned treatment

AREA	TOTAL					
	Ha			Sites		
	Required	YTD Complete	%	YTD Required	Complete	%
Area 1 Eradication Treatment Area (Round 3)*	87,583	72,895	83%	14,235	12,527	88%
Eastern Suppression (Round 2)*	13,577	11,095	81%	14,056	12,359	87%
Western Suppression (Round 2) *	19,181	<1	<1%	2,765	5	0.20%
Western Boundary (Round 1) *	77,713	6	<1%	10,022	73	0.70%
Total for all areas	**198,054 ha**	**83,996 ha**		**41,078 sites**	**24,964 sites**	

Source: Fire Ant Management System (FAMS)

* Rounds stipulated are reflected in the Ten Year Plan and equates to the first round of treatment outlined in the 2018–19 Work Plan

Responsive treatment

In response to new detections during the second quarter 2018–19, almost 1800 sites (8590 mounds) received application of *fipronil* through DNI, and 1288 hectares received IGR bait treatment to destroy the nests.

Refer to Table 2 for a breakdown per area, and view Appendix 4 for a map of responsive treatment undertaken during the second quarter.

Table 2: DNI and bait responsive treatment

DNI treatment		
Areas	**Sites treated**	**Mounds treated**
Area 1 Eradication Treatment Area, Western Suppression Treatment Area and Western Boundary Treatment Area	19	107
Areas 2–4	1521	7254
Gold Coast Development Corridor	258	1229
TOTAL	**1798**	**8590**

Responsive bait treatment	
Area	**Area Treated (ha)**
Area 1 Eradication Treatment Area, Western Suppression Treatment Area and Western Boundary Treatment Area	83
Area 2–4	1094
Gold Coast Development Corridor	111
TOTAL	**1288**

Source: Fire Ant Management System (FAMS)

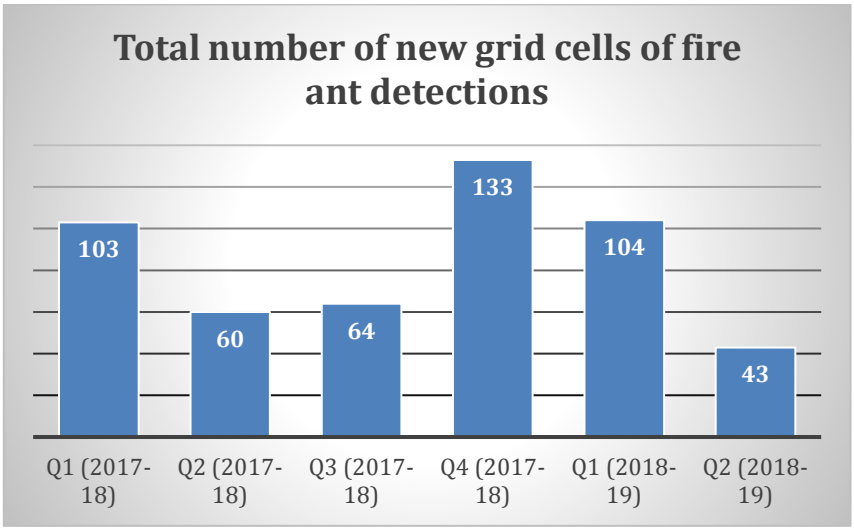
The Program continued a 12-week trial to test the efficacy of responsive treatment, focusing on the application of DNI. The trial examined current DNI procedures compared with untreated nests. An assessment of 18 fire ant mounds at Eagleby found that the 12 treated mounds recorded no fire ant activity seven days post-treatment, indicating that these mounds were functionally deceased. Preliminary results also indicate that the number of fire ant workers decreased in pitfall traps that were used, while the number of local ant species increased after fire ants had been removed. The final results of this trial will be reported in the next quarter.

Distribution of new areas of infestation

Infestation has been represented across the operational area in one square kilometre grid cells to clearly identify areas with new fire ant infestation (see Appendix 2).

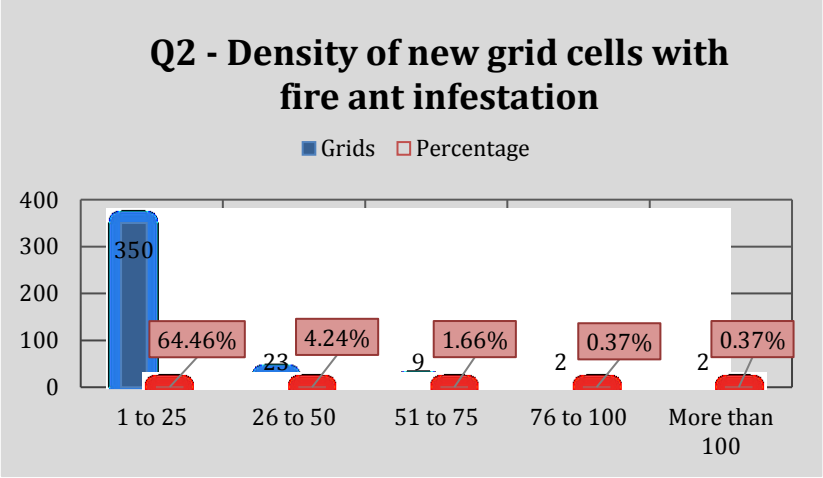
During the second quarter, there were 43 new grid cells containing one or more fire ant detections, a lower number of areas with new fire ant infestation since the last quarter (variance of 61 new grid cells), and a decrease in comparison to the second quarter period of during 2017–18 (variance of 17 new grid cells)(see Figure 1). These newly infested areas were located across the entire operational area, with a single significant detection at Fernvale. Of the new infested grid cells in this period, 64% had fewer than 25 nests, and only 0.37% had a density of over 100 nests. Refer to Figure 2 for a full breakdown of density of new grid cells.

Figure 1: New grid cells of fire ant detections



Source: Fire Ant Management System (FAMS)

Figure 2: Density of new grid cells with fire ant infestation



Source: Fire Ant Management System (FAMS)

Response rates

The Program aims to respond rapidly to detections that are considered high risk, which are categorised according to the type of risk they pose such as **all high-risk infestation** (including public safety, high spread risk, political risk or animal welfare) requiring a response within 10 days, with **public safety**[1] risks (including schools, parks and sporting grounds) requiring a response within two days. **All other detections** are not deemed high risk and are responded to appropriately (refer to Table 3 below for treatment response rates).

In **Areas 1, Western Boundary and Western Suppression**, there were no detections posing a high risk to public safety. A total of 50% of all high-risk detections were treated within 10 business days, and 33% of all new detections were treated within 15 business days. The new detections in the planned treatment areas did not receive scheduled responsive treatment as treatment will occur as part of the planned treatment regime.

In **Areas 2–4,** 44% of detections posing a high risk to public safety were treated within two business days, and 65% of all high-risk detections were treated within 10 business days.

In the **Gold Coast Development Corridor**, 67% of detections posing a high risk to public safety were treated within two business days, and 79% of all high-risk detections were treated within 10 business days.

Table 3: Treatment response rates

High risk to public safety – treatment within 2 days		
Areas	**Detection**	**Percentage**
Area 1 Eradication Treatment Area, Western Suppression Treatment Area and Western Boundary Treatment Area	Nil	Nil
Areas 2–4	55	44%
Gold Coast Development Corridor	3	67%
TOTAL	**58**	
All high-risk – treatment within 10 days		
Areas	**Detection**	**Percentage**
Area 1 Eradication Treatment Area, Western Suppression Treatment Area and Western Boundary Treatment Area	2	50%
Areas 2–4	182	65%
Gold Coast Development Corridor	14	79%
TOTAL	**198**	
All new detections – treatment within 15 days		
Areas	**Detection**	**Percentage**
Area 1 Eradication Treatment Area, Western Suppression Treatment Area and Western Boundary Treatment Area	24	33%
TOTAL	**24**	

Source: Fire Ant Management System (FAMS)

[1] Public safety is a subset of all high risks

Surveillance

The Program focused on the treatment season, with limited surveillance activities during the quarter.

Planned surveillance was predominantly undertaken beyond the operational boundary over a total of 272 sites, across 509 hectares. This resulted in four new detections where treatment was carried out, with further surveillance to confirm there was no further infestation in the vicinity. Table 4 provides a breakdown of planned surveillance surrounding each area, and a map is available at Appendix 5.

Table 4: Planned surveillance

Area	Number of sites	Hectares	Positive identifications
Area 1 Eradication Treatment Area, Western Suppression Treatment Area and Western Boundary Treatment Area	176	269	Nil
Areas 2–4	57	164	4
Gold Coast Development Corridor	31	76	Nil
Outside	8	Nil	Nil
Total for all areas	**272**	**509**	**4**

Source: Fire Ant Management System (FAMS)

Odour detection dog surveillance

Odour detection dogs conducted post-treatment, planned and responsive (delineation) surveillance over 234 sites, in 57 suburbs located in various city councils including Brisbane, Gold Coast, Ipswich, Lockyer Valley, Logan, Redland, Scenic Rim and Somerset. Of these, post-treatment validation surveillance was carried out over 166 sites by the dogs, with fire ant infestation persisting at 21% of sites. These were in suburbs located within Brisbane, Gold Coast and Logan city councils, where there is persistent fire ant infestation that may have caused reinfestation at these sites. All infestations will undergo treatment and will be reassessed by the dogs. No further detections were found at the remaining 79% of sites.

Other activities included training that was undertaken by one of the odour detection dogs called Cola to enable her to survey browsing ants. The training supports the Program's collaborative work with interstate and federal agencies in the prevention and control of all exotic invasive ants.

Significant detections

In the second quarter, there was a single significant detection located 3.8 kilometres from the operational boundary, at Fernvale in the Somerset region (refer to Table 5). The detection was made during planned surveillance undertaken on 22 October. The Program responded by destroying the infestation on 25 October 2018 and completing bait treatment out to a 100 metre radius from the infestation. Targeted surveillance was undertaken in suitable habitat across 36.5 hectares.

The infestation was found in one small mound, and was deemed low severity due to its size and the absence of larvae, pupae or reproductive castes. The mound contained only worker ants, suggesting it was a young (less than six month old) nest.

Genetic relatedness testing was previously conducted at Action Street, Wacol, 40 kilometres, south of Fernvale, however this is not likely to be the source nest and human assisted movement cannot be verified.

Both turf and quarrying products were moved onto the site as part of a housing development being undertaken, but none were sourced from within the fire ant biosecurity zone. Surveillance will be conducted on the quarries and the turf farm to assess if there is further infestation on these sites. No materials that can harbour fire ants were removed from the site.

It is anticipated that post-treatment validation surveillance will be undertaken in April 2019.

Engagement activities were also undertaken to inform the community, local council and industry personnel.

The map in Appendix 7 displays the operational boundary (2017–18 and 2018–19), and the geographic distribution of significant detections found from July 2018. A full summary of significant detections identified since the commencement of the Ten Year Plan in July 2017 can be found at Appendix 9.

Table 5: Significant detections made during the second quarter of 2018–19

Suburb	Date of detection	Date of destruction	Distance to nearest known infestation	Distance from Operational Boundary	Mounds	Social form
Fernvale	22/10/2018	25/10/2018	8.9 km	3.8 km	1	Monogyne

Source: Fire Ant Management System (FAMS)

Engagement

During the second quarter, communication and stakeholder engagement focused on supporting treatment activities through direct and indirect methods via media articles, social media, roadside signage, static displays, meetings, and training held at the Program's headquarters and off-site at various industrial locations, with over 3 million people engaged during this period (refer to Figure 3 and Figure 4 below for breakdown of direct and indirect engagement methods per Area).

To raise awareness, the Program continued to deliver presentations at various community events such as fairs and market stalls, as well as engaging with students and staff through the Aka the Fire Ant Tracker program.

Proactive collaboration was undertaken with representatives from various councils, including Logan, Gold Coast, Redland and Brisbane, to address the risk of fire ant spread between Brisbane and the Gold Coast Development Corridor due to residential and commercial development. These development sites have been identified as ideal habitat for fire ants, and the movement of machinery and carrier products such as soil and mulch increase the risk of spread. To mitigate this risk, the Program and local councils are working together to share information on key development activity, specify risk mitigation measures as part of the development approval process, consider embedding fire ant crews in-residence at local councils, and consider self-treatment options.

Other engagement activities undertaken this quarter included a visit to Queensland Parliament House with Program staff and a few odour detection dogs to deliver a demonstration on how the dogs detect fire ants. This was well received by all those in attendance.

Figure 3: Number of people directly engaged

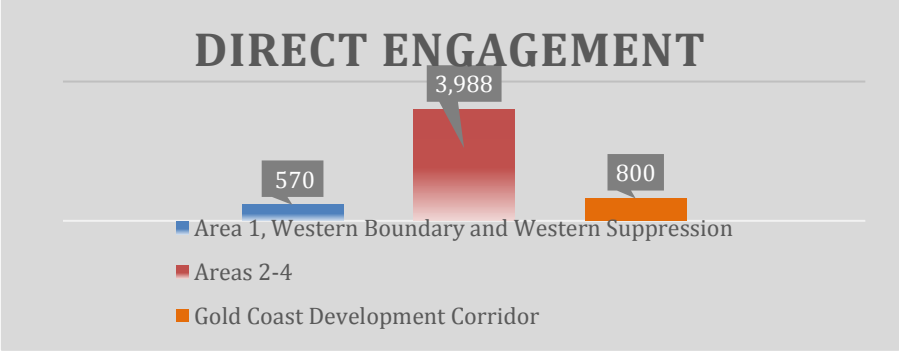
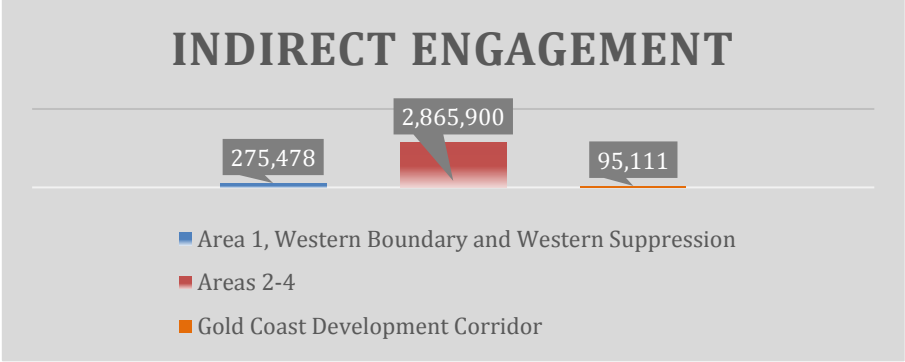


Figure 4: Number of people engaged indirectly[2]



[2] Broadcast and mass media methods such as static displays, Facebook and electronic road signage

Encouraging community surveillance

The new customer relationship management system (CaSES) received 2518 reports. Of those reports, 1682 samples required further diagnoses, with 943 samples (56%) identified as positive for fire ants.

A total of 35% of suspect ant reports were made through the Program's new online customer portal, with the remaining 65% made through the call centre.

Refer to Figure 5 for the reasons recorded in CaSES as to why people are reporting fire ants.

Figure 5: Reason why people are reporting

Source: Client and Stakeholder Engagement Solution (CaSES)

Industry collaboration and engagement

The Program continued engagement and collaboration with a number of industries that present a risk in terms of human-assisted movement of fire ants to raise awareness of the legislative requirements, and to address any barriers industry have with regard to the movement of fire ant carriers. The Program engaged with 55 civil construction companies, 53 farmers, 37 earthmovers or haulage companies, 30 nurseries, 29 builders, 13 landscaping yards, 8 poultry farms and 5 local councils regarding road construction activities.

Program officers met with representatives of five of the largest residential development and civil construction companies in the Gold Coast Development Corridor to discuss new development activities, risk mitigation and movement requirements, and industry's involvement in upcoming Program events.

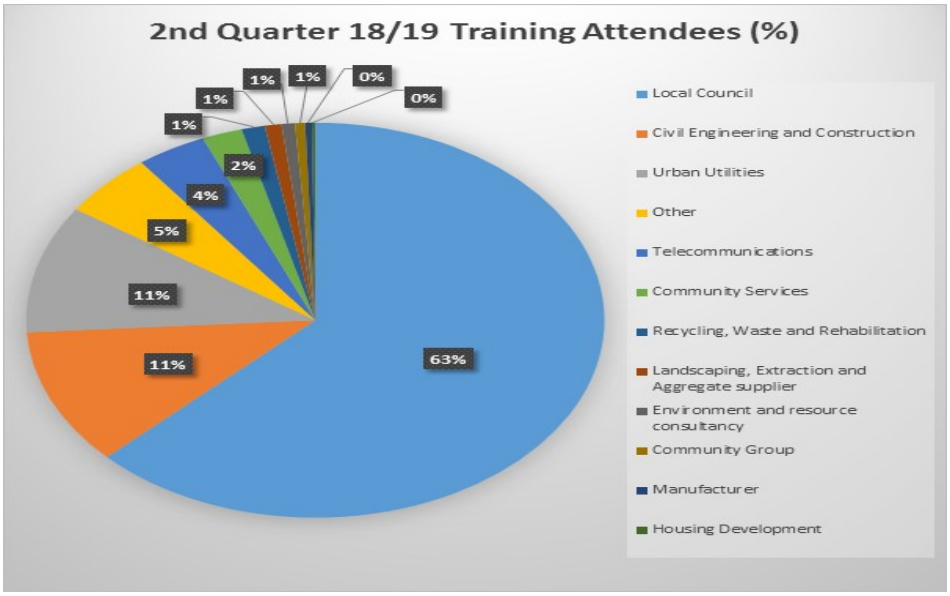
In late 2017, the Nursery and Garden Industry Australia/Queensland (NGIA/Q) made a submission to the Program stating that the movement restrictions within Biosecurity Regulation 2016 were creating confusion and an unreasonable regulatory burden on nursery operators. NGIA/Q also highlighted the lack of consistency between state and interstate market access requirements. A number of measures have been taken to create a better understanding of the requirements among operators, such as offering them assistance if they are having difficulty complying, and signalling the Program's intention to review the risk mitigation measures via an independent National Exotic Invasive Ant Scientific Advisory Group.

In December 2018 nearly 500 nurseries were contacted via email and letters, with 30 receiving visits by Program officers.

The Program held its inaugural Industry Collaboration Group meeting on 29 November 2018, with 22 representatives from local council and the building and development industry. The meeting focused on issues and key challenges specific to the building and development industry, with discussions pertaining to legislative requirements, implementation of measures to assist in reporting, treatment, and eradication of fire ants, as well as effective management of fire ants by industry.

A total of 542 industry personnel attended general awareness training, with six sessions held at the Program's headquarters in Berrinba and a further 11 training sessions delivered at the workplace of various organisations. 25% of training requests were made on the Program's online portal. See Figure 6 for a breakdown of industries that attended fire ant training during the quarter.

Figure 6: Quarter 2, 2018–19 training attendees



Source: Client and Stakeholder Engagement Solution (CaSES)

Significant meetings

In the second quarter, there were three significant meetings: the National Exotic Invasive Ant Scientific Advisory Group (SAG) meeting, the National Red Imported Fire Ant Eradication Program Steering Committee Meeting (Steering Committee) and the Risk Management Sub-Committee meeting (refer to Risk Management section for further information).

The National Exotic Invasive Fire Ant Scientific Advisory Group

The SAG provides specialist scientific advice from experts at a national and international level to the Red Imported Fire Ant Program and to the Steering Committee. Advice is also given on other exotic invasive ant eradication matters as required.

SAG held its inaugural meeting at Berrinba on 2 November 2018 by teleconference. Items discussed include:

- SAG Terms of Reference—this was tabled and accepted
- chair of the SAG—nominations were called

- consideration of the proposed 2018–19 treatment plan and whether it is scientifically valid—SAG agreed that treatment should extend to five kilometres beyond the currently agreed boundary to accommodate new detections outside the western edge of Treatment Area 1
- scientific principles for movement controls—considered the current scientific principles, and any areas that require further research or evaluation at their next meeting to be identified.

The next SAG meeting will be held in February 2019 at the Program's headquarters in Berrinba.

The Steering Committee met for the sixth time on 13 December 2018 in Brisbane, with the majority of members present. A field trip was undertaken on 12 December 2018 prior to this meeting, and afforded an excellent opportunity for members to see where Program bait efficacy trials are undertaken on polygyne sites, and to view Program compliance activities carried out with hay producers.

The meeting included a presentation from The University of Queensland (UQ) on an Innovative BioClay Platform for Fire Ant Eradication. The Committee:

- approved financial support over three years and in-kind support to the UQ BioClay project research and development, subject to consultation with SAG
- approved the policy proposal for self-management by landowners and pest management technicians
- approved the 2018–19 Work Plan, subject to amendments requested by the committee
- endorsed guidelines to replace the terms of reference for community collaboration and industry reference groups
- approved Bill Magee as the Chair of the SAG
- received an update from the inaugural Risk Management Sub-Committee meeting
- discussed the review of the committees.

The Steering Committee will participate in a workshop on the review of the Ten Year Plan on 20 February 2019, followed by its regular meeting on 21 February 2019 to be held in Brisbane.

Risk management

The management of risk is a priority and essential to ensure the Program is able to achieve its objectives. A sub-committee has been established, including independent members and, Commonwealth and interstate biosecurity senior representatives who will guide and ascertain risk management efforts for the Program.

On 12 December 2018, the inaugural Risk Management Sub-Committee meeting was held at the Program's headquarters. The sub-committee discussed issues, risks and strategies considered by the Steering Committee at the August meeting.

During the meeting specific challenges/risks were also mentioned, including:

- inadequate information technology systems, including paper-based processing and data extraction
- procurement processes for major contracts for bait supply and helicopter services
- workforce management
- verification of treatment success
- cash flow alignment with risk and operational requirements
- outdated biosecurity zones that are not aligned with infestation and risk
- public perceptions concerning likelihood of Program success.

The Program continued to implement strategies to mitigate these risks in accordance with the Program risk register. There has been no change to the risk ratings during the quarter.

Feedback to the risk register was also sought, and recommendations made for the development of a risk management plan and issues register that will be presented at the next sub-committee meeting in February 2019 (see Appendix 11 for the current status of the Program's high-level risks).

Preventing human-assisted movement

Engagement and collaboration with a number of industries that present a particular risk in terms of human-assisted movement of fire ants continued in the second quarter.

During the second quarter of 2018–19, the Program undertook 272 compliance verification checks (refer to Appendix 6: Map of compliance checks). 232 of these were against high-risk industries such as civil construction and principal contractors, hay producers, builders, earthmovers, nurseries and poultry farms, and there were 30 biosecurity instrument permit (BIP) checks. These checks revealed 23 non-compliant businesses, with further enforcement action either taken or being considered for three. In all instances, non-compliant businesses rectified their practices to meet legislated requirements.

Further enforcement action

A routine BIP check at a soil reprocessing facility at Acacia Ridge revealed that a high-risk carrier (i.e. mulch) was being moved outside the scope of the current BIP. Compliance officers have confirmed that no further movements of mulch are occurring, and are making enquiries to determine the receiving sites in order to manage any risk at these locations. Biosecurity Queensland's investigations team has been consulted and further action will be determined in the coming months.

One company's BIP was cancelled due to the failure to apply the risk mitigation measures outlined on the permit. This movement of soil occurred between zones and posed minimal biosecurity risk.

An advisory letter was issued to a large haulage company that has moved soil on two occasions a short distance outside the zones due to administrative error. The company has been proactive in reporting the issue, working with the Program to rectify this non-compliance and improve its processes. The biosecurity risk was managed through the use of odour detection dogs, and in one instance, the use of dogs and application of toxicant by the company.

Non-compliance by industry

Nurseries

Some focus was placed on the nursery industry this quarter to gauge the level of compliance. Non-compliance found within individual nurseries was generally due to lack of knowledge of acceptable risk mitigation measures and was rectified immediately. Barriers to compliance were limited to a small number of nurseries with concerns regarding chemical treatments. Storage requirements were explained to these nurseries as an acceptable alternative. Scientific input is being sought in relation to alternative risk mitigation options and the effects of the chemical treatments.

Animal manure

Non-compliance in this industry predominantly involved a failure to obtain the necessarily permits. Permits could be issued in all instances, as effective risk mitigation measures were being undertaken.

Landscaping

Similar to animal manure, a number of landscaping yards, although lacking the relevant permits, were largely undertaking effective risk mitigation. BIPs were subsequently issued.

Hay

One hay producer was found to being storing hay incorrectly. This producer did not move the hay from his property, which was confirmed in follow-up compliance checks.

Gold Coast Development Corridor

The risk of spread across the Gold Coast Development Corridor is significant given the extent of large-scale clearing, soil disturbance and movements of soil and other carriers associated with new residential estates. Program officers continue to work with high-risk industries on the Gold Coast to ensure they are aware of the pest and the risk of human-assisted spread, the movement restrictions, and their GBO. The Gold Coast strategy will be revised in coming months to allow a second phase of coordinated and prioritised activity.

Large-scale development sites

All large-scale development sites in the Gold Coast Corridor underwent compliance monitoring at least once in the quarter.

Continuous improvement

Information systems

The focus this quarter was on the integration between the Program's Fire Ant Management System (FAMS) and the CaSES system. Enhancements were made to the planning and job processing functions to improve the Program's information system's reporting capabilities to enable further operational efficiencies.

A number of releases occurred during the quarter with the CaSES system, including:

- the rollout of CaSES to build on the Program's capabilities and assist with improving customer service and communication with its clients. As the system transitions, ongoing support and maintenance will be required, and the Program has been working closely with the Department of Agriculture and Fisheries' internal information technology provider for assistance
- addressing residual project defects and enhancement requests. As the Program adjusts to the new system, new and residual system defects and enhancements will be prioritised and implemented, with a focus on continuous improvement.

The Program's FAMS application was available for approximately 99.99% of the period, with a few short unscheduled outages to rectify system issues. Since the CaSES go-live on 26 October 2018, there have been two unscheduled outages, resulting in a 98.18% uptime. All systems had full functionality for at least 95% of business hours, achieving above the required target.

The Environmental Systems Research Institute Australia, in conjunction with Program staff, delivered a proof of concept (PoC) mobile application in November 2018. The work required to determine the suitability and integrate the PoC with FAMS into a viable mobile solution did not progress further due to resource availability. The Program intends to establish a project structure around the mobility solution, and adopt the appropriate governance and controls to ensure timely delivery.

Remote sensing project

During the quarter, key delivery milestones for the RSS project included remaining on schedule and within budget, with the development of two reports:

- The Spectral Band Testing report details the approach, procedure and rationale behind the 2018 spectral imaging field trials. The trial was conducted to measure the spectral characteristics of fire ant nests and other typical infield objects such as animal scats, rocks and grass. The research resulted in the establishment of a dataset for subsequent image modelling and analysis detailed in the Imagery Analysis Report.
- The Imagery Analysis Report focused on three key areas:

    1. comparing imagery analysis results with previous 2012–2015 RSS activities:

        - A key target performance measure of this study was to improve on the previous 2012–2015 RSS results. Image datasets of fire ant nests from the 2012–2015 RSS program were prepared and analysed using an industrial grade artificial intelligence platform.

- Models using various band combinations were favourable, with the five-band colour and luminance fusion model yielding a high percentage of accuracy in comparison with previous 2012–2015 percentages.

2. field data analysis and modelling:
    - Machine Learning algorithms generated a selection of the most relevant spectral bands for fire ant nest detection from the wide-ranging field trial hyperspectral data collected in August 2018. In addition to the five bands used in the retired 2012–2015 aerial remote sensing camera system, two further spectral ranges were identified, namely short-wave infrared and ultraviolet. Modelling results indicate there is an opportunity to improve the detection of fire ant nests and reduce false positives through the introduction of the two additional spectral bands.
3. recommendations for the development of a prototype camera system:
    - The spectral bands that were identified above have been 'mapped' to commercially available cameras for each of the respective bands. Consideration has also been given to a range of metrics, including functional specifications, durability, cost and suitability for aerial platforms. The report also presents two configuration options for the prototype:
        - configuration 1: high resolution fixed array seven-band system
        - configuration 2: lower resolution panning array seven-band system.

The report recommends Configuration 1 as representing the best overall estimated production rate. This configuration option also presents the least technical risk for an aerial platform, particularly in terms of its development, setup and ongoing maintenance, as sensors are mounted on a fixed platform.

Science

The Program's key achievements and activities in science from October to December 2018 include:

- routine diagnostics and genetic testing of samples for social form testing and population analysis
- acceptance of a paper for publication in the scientific journal *Austral Entomology*—'Join the ant hunt: How accurately can the public recognise Red Imported Fire Ant *Solenopsis invicta* (Hymenoptera: Formicidae) in Australia?'
- ongoing support for the fire ants and browsing ant odour detection dog teams through production of odour-impregnated training and maintenance materials
- application of scientific criteria to identify over 300 sentinel sites outside the operational boundary for planned surveillance by the Program during May–September 2019
- verification of treatment efficacy in Treatment Area 1 through nest activity monitoring
- verifying the extent of known polygyne populations to inform treatment planning for eradicating high-priority polygyne infestations
- conclusion of a trial to evaluate if current Program DNI methods are effective at destroying fire ant nests. The final report is due for completion in early 2019
- continued discussion and trial planning with external organisations regarding alternative baits, including a silica-based product (with Davren Global), indoxacarb (Syngenta) and bioclay (UQ[3])
- sampling of bait batches for independent testing of bait quality following standard handling procedures implemented by the Program.

Diagnostic services and genetic testing

A total of 1868 ant samples were submitted for diagnosis in the second quarter. Of these ant samples, 100% were identified and entered into the internal database within the Program target of two days of receipt by diagnostics. The percentage of samples confirmed as positive for fire ants in the second quarter was 72.4%.

The Program confirms the accuracy of its species diagnoses by ensuring that each sample identified as fire ants is independently examined by a second diagnostician within the Program.

Program records show that, of the 1358 samples originally diagnosed as fire ants, 1353 were confirmed as accurate by a second diagnostician (99.6% accuracy).

This data gives confidence that fire ant infestations are correctly diagnosed.

[3] The collaboration with UQ is to evaluate the potential of BioClay-RNAi technology (for dsRNA-mediated gene silencing) in fire ant bait to replace current pesticides. The objective is to develop a bait option that can be used in wet weather and on environmentally sensitive properties (e.g. organic farming).

A total of 1334 social form tests (undertaken to determine whether a detection is monogyne or polygyne) were conducted during the quarter, with 1200 sites having monogyne colonies (99.3%) and eight sites polygynes (0.7%). This proportion of sites with polygyne infestation is lower than the last quarter and financial year. The locations of polygyne nests are of particular interest, as these colonies are especially prone to spread by human movement, require more rounds of treatment to eradicate, and can increase genetic vigour (health and resistance) in the Queensland population. Further efforts to reduce polygyne infestations are being implemented in the 2018–19 treatment season, with a strategy to target high-risk polygyne infestations.

During the period, the majority of social form testing had an approximate processing time of two weeks, which is within the 30 working days requirement of the Program.

Science planning

The Program relies on scientific knowledge of the invasion biology of fire ants to inform its treatment and surveillance planning.

From October to December 2018, criteria such as preferred habitat, habitat disturbance levels, land use and proximity to nearest known infestations were applied to identify over 300 sentinel sites outside the operational boundary for planned surveillance by the Program during May–September 2019. These sites will be critical in determining the extent to which current treatment efforts have been able to contain fire ants from spreading beyond the current operational boundary of the Program, especially beyond the Western Boundary Treatment Area.

Table 6 shows current progress towards selection and allocation of over 300 sentinel sites using a desktop analysis of spatial information.

During the next quarter (January–March 2019), the proposed sentinel sites will be further reviewed in preparation for the commencement of planned surveillance by field teams.

Table 6: Progress towards selection of sentinel sites in each boundary region and at respective distances from the Operational Boundary

Allocation of sentinel sites by distance from operational boundary (target % in brackets)	**Allocation of sentinel sites with respect to perimeter of Treatment Areas** (targets in brackets)			**Total sentinel sites identified**	**% of total**
	Western Boundary (50%)	**Remainder of operational boundary** (50%)			
		Gold Coast (min. 30)	**Remainder**		
0–5 km (60%)	90	25	65	180	54%
5–10 km (30%)	52	17	35	104	31%
10–30 km (10%)	17	17	17	51	15%
Total	**152**	**59**	**117**	**335**	**100%**

Performance management

Policy, governance and reporting

To ensure Program activities align with the Program's Ten Year Plan and the 2018–19 Work Plan, policy development, advice, strategic planning and reporting activities continued to be undertaken throughout the second quarter, including:

- providing support services to the Steering Committee, including coordinating meetings and preparing meeting papers for the December 2018 meeting
- development of the Program's first and second quarterly report for 2018–19
- development of the draft Annual Report 2017–18 for submission to the Steering Committee
- policy proposal for self-management by landowners, and Queensland Urban Utilities project plan approved to pilot self-treatment
- detections of importance and operational area protocols developed and approved
- review of the Ten Year Eradication Plan underway, to be finalised by mid-2019
- development of two internal audit reports (procurement review and governance and operational planning review). These reports will be submitted to the Department's Audit and Risk Committee (ARC) and the Director-General for consideration and endorsement during the next quarter.

Procurement

No procurement contracts were approved during this quarter. The Program continues to be compliant, with 100% of relevant staff completing the required training to carry out procurement activities.

Staffing

Overall there has been a decrease of staff since the last quarter (refer to Table 7 for an outline of the number of personnel in the Program year to date). This is attributed to staff resignations.

Table 7: Number of personnel in the Program

Personnel type	2018–19		Difference
	Q1	Q2	
Permanent	97	98	1
Temporary	30	25	-5
Contractor – office*	34	34	0
Contractor – field*	125	122	-3
Total	**286**	**279**	**-7**

Source: Aurion and *internal database

Workplace health and safety

During the second quarter, there was a 21% decrease in the overall number of workplace health and safety incidents (total of 50) compared to the previous quarter (64). This is attributed to leave and the departmental compulsory closure over the Christmas period in December.

One incident occurred in the category of major injury with time lost, which is a reduction of two in comparison to the last quarter (33%).

Thirteen near hit miss incidents occurred, which are minor in nature but are required to be reported, these types of incidents vary each quarter. An example of a near hit miss incident is of a field officer stepping on a piece of wood that had a nail sticking out, which is embedded in the grass, the nail pierces the work boot but does not make contact with the officers foot, to break the skin. The Program takes workplace health and safety very seriously and has completed a recruitment process for a designated full time workplace health and safety officer. All Program field officers receive induction training which includes mandatory requirements for staff to have the appropriate personal protective equipment/clothing prior to commencing duties as well as procedures to undertake work tasks in a safe manner.

A breakdown of workplace health and safety incidents per category is available at Figure 7.

Figure 7: Workplace Health and Safety Q2

Source: Fire Ant Management System (FAMS)

Accommodation

The relocation of staff to the new Berrinba headquarters was completed in November. The new office space encourages functional and practical collaboration across the Program.

Budget and finance

As at 31 December 2018, the Program tracked almost $258 000 above the year-to-date budget (refer to Table 8 for financial expenditure). Material variances included:

- directorate variance of $20 000 that relates to delays in appointment of an Executive Officer position
- science variance of $16 000 that reflects increased expenditure on lab consumables. The Science area has an increased spend on contractors ($24 000) that has been offset against

an underspend reflecting a delay in purchase of equipment and savings on disposal of samples prior to the Program relocation to Berrinba

- RSS variance of $188 000 that relates to the delays in payment of the third milestone, as a result of delayed approval for the Imagery Analysis report
- planned and responsive eradication variance of $437 000 relates largely to the decrease in use of bait due to the delay in treatment, which has been offset against an overspend in the field contractors* of $728 000.

Table 8: Financial expenditure as at 31 December 2018

Program Area	Original Budget	Revised budget [4]	YTD Budget	YTD Expenses	Variance
Directorate	453,551	453,551	185,453	164,545	20,907
Administration, procurement WH&S HR	3,402,599	3,402,599	1,627,103	1,726,458	(99,355)
Policy, governance & compliance	2,289,413	2,289,413	1,043,758	880,382	163,376
Communications & Engagement	1,600,246	1,600,246	688,012	667,464	20,548
Science	1,604,524	1,604,524	772,090	788,871	(16,781)
Planning & QA	2,324,547	2,374,547	1,158,746	1,250,104	(91,357)
Planned and responsive eradication	23,600,091	24,082,291	11,752,471	12,190,407	(437,936)
Remote Sensing Surveillance R&D	1,059,212	1,059,212	400,506	212,285	188,221
IT Development	2,295,201	2,578,186	1,361,108	1,365,853	(4,746)
Contingency	956,000	2,980,846	-	-	-
Total	39,585,385	42,425,416	18,989,246	19,246,369	-257,123

Source: SAP

[4] Revised budget was approved by the Steering Committee in August 2018.

*Overspend of field contractors is attributed to the need of recruiting more contractors than expected and costs associated with re-recruitment.

Appendices

Refer to Attachment 1:

- Appendix 1: Overview map of the operational boundary
- Appendix 2: Map of new detections (second quarter 2018–19)
- Appendix 3: Planned treatment (second quarter 2018–19)
- Appendix 4: Map of responsive treatment (second quarter 2018–19)
- Appendix 5: Map of planned surveillance (second quarter 2018–19)
- Appendix 6: Map of compliance checks (second quarter 2018–19)
- Appendix 7: Map of significant detections (year to date 2018–19)
- Appendix 8: Fire ant biosecurity zones
- Appendix 9: Significant detections (July 2017 to December 2018)

Refer to Attachment 2:

- Appendix 10: National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets

Refer to Attachment 3:

- Appendix 11: Program's high risks

Glossary

Area 1	An area comprising parts of the Lockyer Valley and western Scenic Rim regional council areas and a portion of the Ipswich City Council area. This area is located at the outer western and south-western extent of the operational area.
Areas 2, 3 and 4	The area within the operational area from the eastern extent of Area 1 to Moreton Bay in the east, from the northern suburbs of Brisbane to the northern suburbs of the Gold Coast and Mount Tamborine in the south.
Biosecurity zones	Fire ant biosecurity zones have been established under the *Biosecurity Act 2014* in areas of SEQ where fire ants have been detected or where it is likely that fire ant infestation exists. Zone regulatory provisions restrict movement of fire ants and fire ant carriers to help prevent human-assisted spread.
Boundary detection	A new detection found up to 5 km inside the operational boundary.
Boundary management	Activities concerned with maintaining the integrity of the operational boundary, including surveillance and responses to outlier detections.
Broadcast bait	Broadcast baiting uses an insect growth regulator to destroy fire ant infestation.
Colony	A group of ants that are living together and depend on each other for reproduction and survival.
Community surveillance	Searching by the community, industry and other areas of government for fire ants. Also referred to as passive surveillance.
Delineation surveillance	Surveillance undertaken around new detections to confirm the extent of the infestation.
Detections of importance	See significant and outlier detections.
Direct nest injection (DNI)	Involves the injection of chemical directly into a nest or mound to destroy the nest.
Eradication treatment	The treatment regime, including chemicals, rates and methods of application specified by science and regulation, required to achieve eradication of fire ants from an area.
Fire ants	Red imported fire ant or *Solenopsis invicta* Buren 1972.
General biosecurity obligation (GBO)	Under the *Biosecurity Act 2014*, all Queenslanders have a legal obligation to manage biosecurity risks and threats that are under their control, they know about or they are expected to know about.

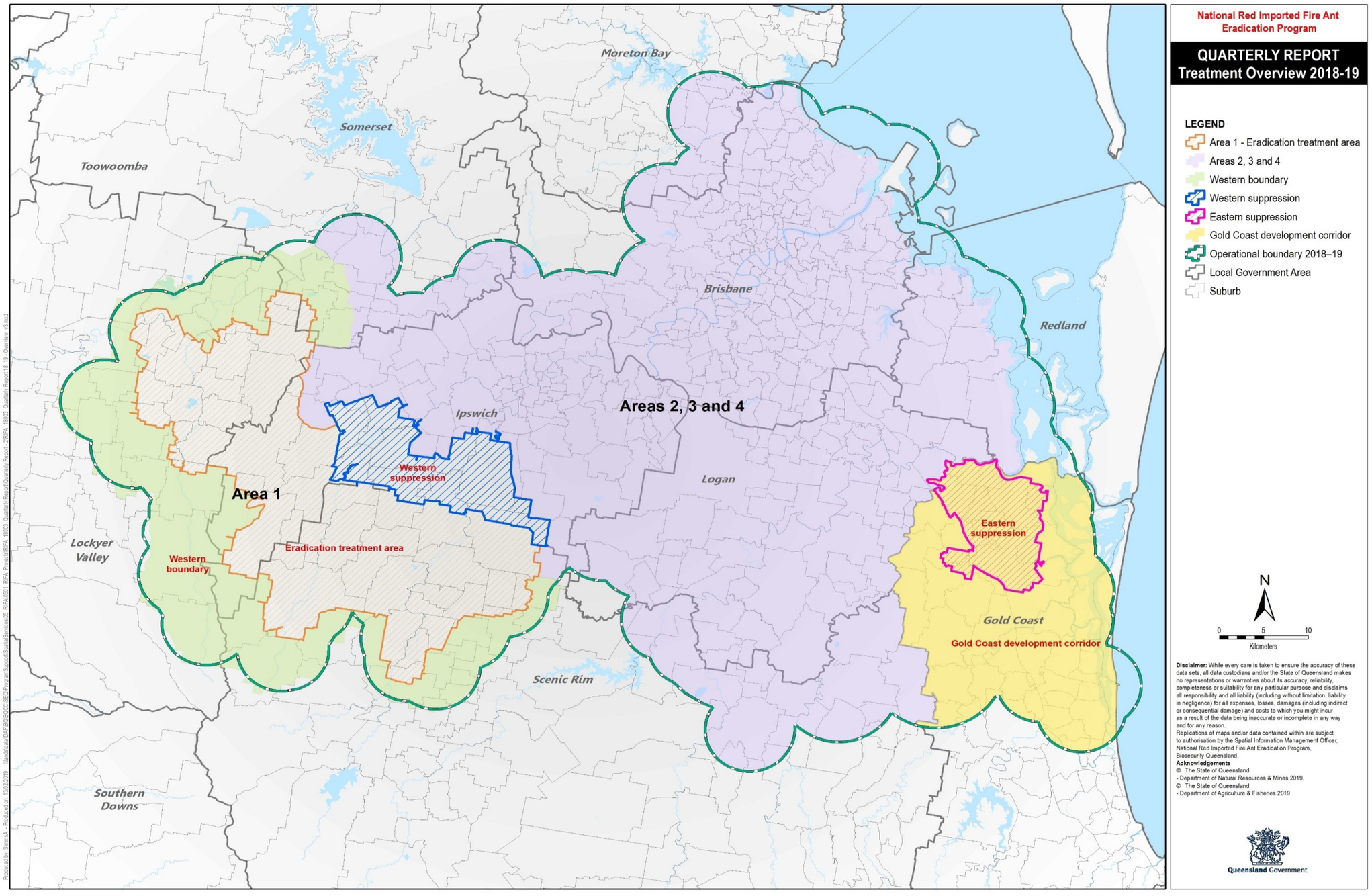
Genetic testing	Refers to a range of specific tests, and analyses of the results produced from these tests, to determine genetic traits that indicate the fitness of individuals in fire ant samples and the relatedness of colonies within the infestation, as well as the social form (monogyne vs polygyne) of a nest.
High-risk detection	Those detections that pose the greatest risk to the objective of eradication by virtue of location or density of infestation, or pose a risk to public safety and to human and animal health.
Infestation (infested areas)	Areas which have had fire ants confirmed.
Monogyne	A social form of fire ant where each colony consists of a single queen and her offspring.
Mound	An above-ground structure that ants use for survival or reproduction that is associated with one colony of ants.
Nest	A structure that ants form and use for reproduction and survival. A nest may not always take the form of an above-ground mound, but usually includes sub-terrain tunnels and chambers.
Pest	For the purpose of this report, 'pest' means red imported fire ant.
Planned surveillance sites	Areas of land used to monitor for the presence or absence of fire ants over time.
Planned treatment area	Areas which are targeted for eradication or suppression treatment.
Polygyne	A social form of fire ant where a colony may contain multiple queens and their offspring.
Positive identification	The point at which a suspect ant sample is determined to be fire ant.
Post-treatment surveillance	Surveillance undertaken following treatment to confirm or validate that all fire ants have been destroyed. This is also referred to as validation surveillance.
Priority area	Sub-areas within the operational area that will receive coordinated and focused eradication activity, in accordance with a staged approach. The boundaries of each area are indicative only and will be updated as a part of the biennial review of the Ten Year Plan.
Program	National Red Imported Fire Ant Eradication Program in South East Queensland
Progressive 'rolling' strategy	The west to east progression over the operational area of planned treatment and surveillance activities contributing to pest eradication.
Odour detection dogs	Dogs specifically trained for the purpose of searching for and positively identifying fire ants.

Operational area	Total area of known infestation confirmed by delimitation and adjusted for predicted infestation spread since completion of delimitation. The operational area will not remain static, possibly increasing initially as surveillance increases in Stage 1, and then decreasing as the areas with confirmed infestation reduce over the life of the Program.
Operational boundary	A 5 kilometre buffer around known infestations detected within a set timeframe. This boundary is reviewed on an annual basis.
Outlier detection	An infestation detected beyond the fire ant biosecurity zone.
Regulation	Biosecurity Regulation 2016, which prescribes procedures that must be followed when moving or storing a fire ant carrier.
Remote sensing surveillance (RSS)	Remote sensing surveillance involves airborne cameras mounted on helicopters which fly over broad areas to capture visible, near infrared and thermal images of possible fire ant mounds.
Scientific Advisory Group (SAG)	A group of eminent scientists brought together to identify and advise on key scientific principles, as well as on policy and compliance matters. This group may also include technical and analytical experts from time to time.
Search and clear activities	The treatment and surveillance required to identify and treat remnant fire ant infestation post eradication treatment, in order to clear an area of infestation.
Search and suppress	See 'Suppression activities'.
Sentinel sites	Term used to describe areas of land that will be used to monitor for the presence or absence of fire ants.
Significant detection	A new infestation discovered beyond the operational boundary.
Staged approach	Priority areas will receive coordinated and focused eradication activity in three phases. Underpinning this approach, each area will receive an optimal treatment regime of up to six treatments over two years during phase 2.
Steering Committee	A committee of nominated representatives from each Program cost-sharing partner, with an independent chair, tasked with providing oversight of performance and risk.
Suitable habitat	That part of an area to which treatment is being applied that would sustain a fire ant population, exclusive of 'hard stand' such as buildings, and of environs unable or highly unlikely to support a fire ant population such as bodies of water and very dense forest.
Suppression activities	The minimum required treatment and surveillance to contain and suppress spread, in accordance with the Program Treatment Protocol. Infestation in areas that are not in the current priority area receiving treatment will receive suppression treatment. The intent of suppression

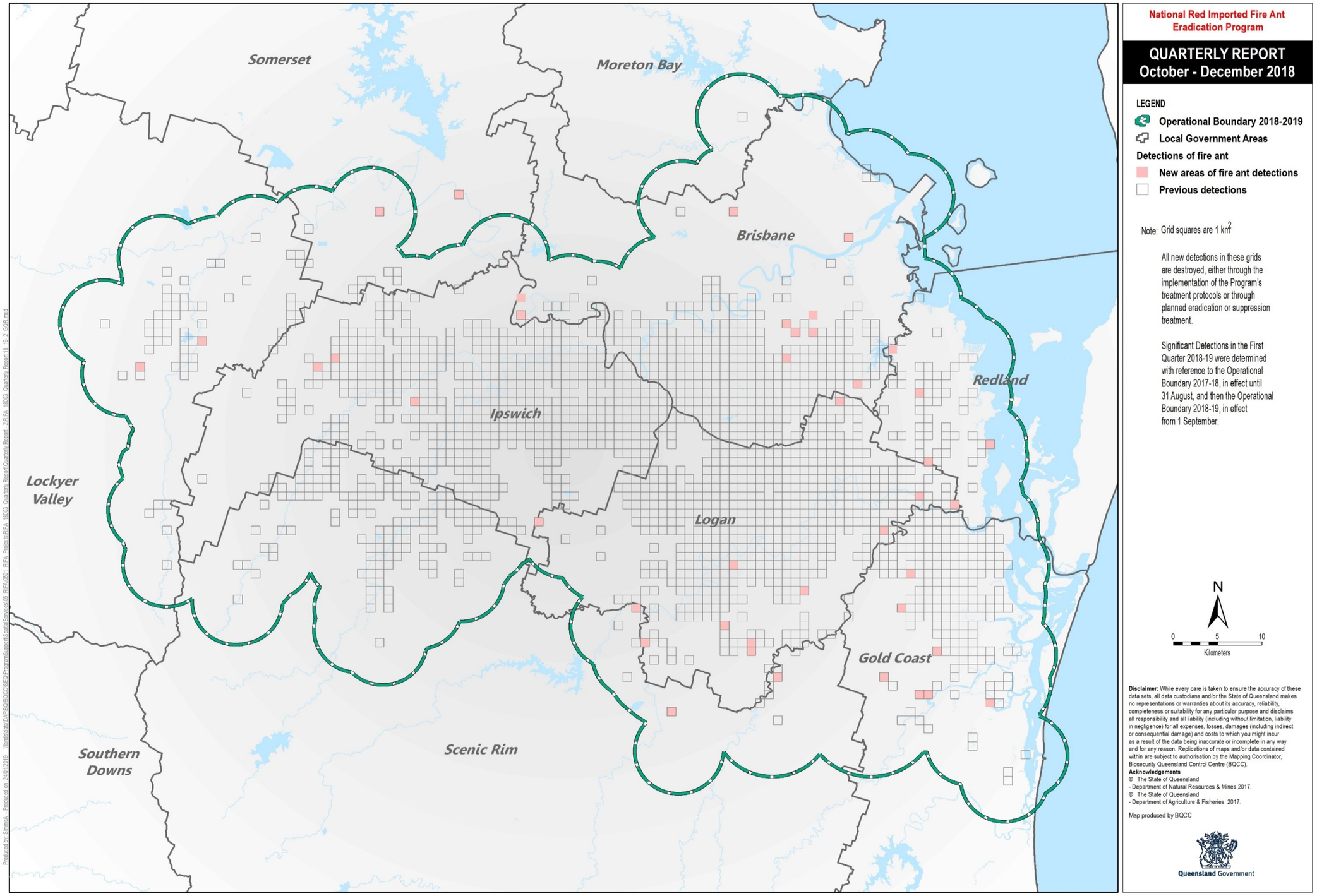
	treatment will be to mitigate spread from and in the areas that have not yet undergone focused and coordination eradication activity.
Surveillance	An official process that collects and records data on pest occurrence or absence by survey, monitoring or other procedures.
Ten Year Eradication Plan (or Ten Year Plan)	Ten Year Eradication Plan for the National Red Imported Fire Ant Eradication Program South East Queensland 2017–18 to 2026–27.
Treatment	Means the application of chemical solution, or substance impregnated with a chemical solution, for the purposes of destroying an infestation of red imported fire ant.
Treatment season	Treatment is undertaken during the warmer months when fire ants are more likely to forage. The season is generally from September to May.
Work Plan	Detailed plan outlining the eradication activities that will be undertaken in the upcoming financial year.

Attachment 1 – second quarter report 2018–19

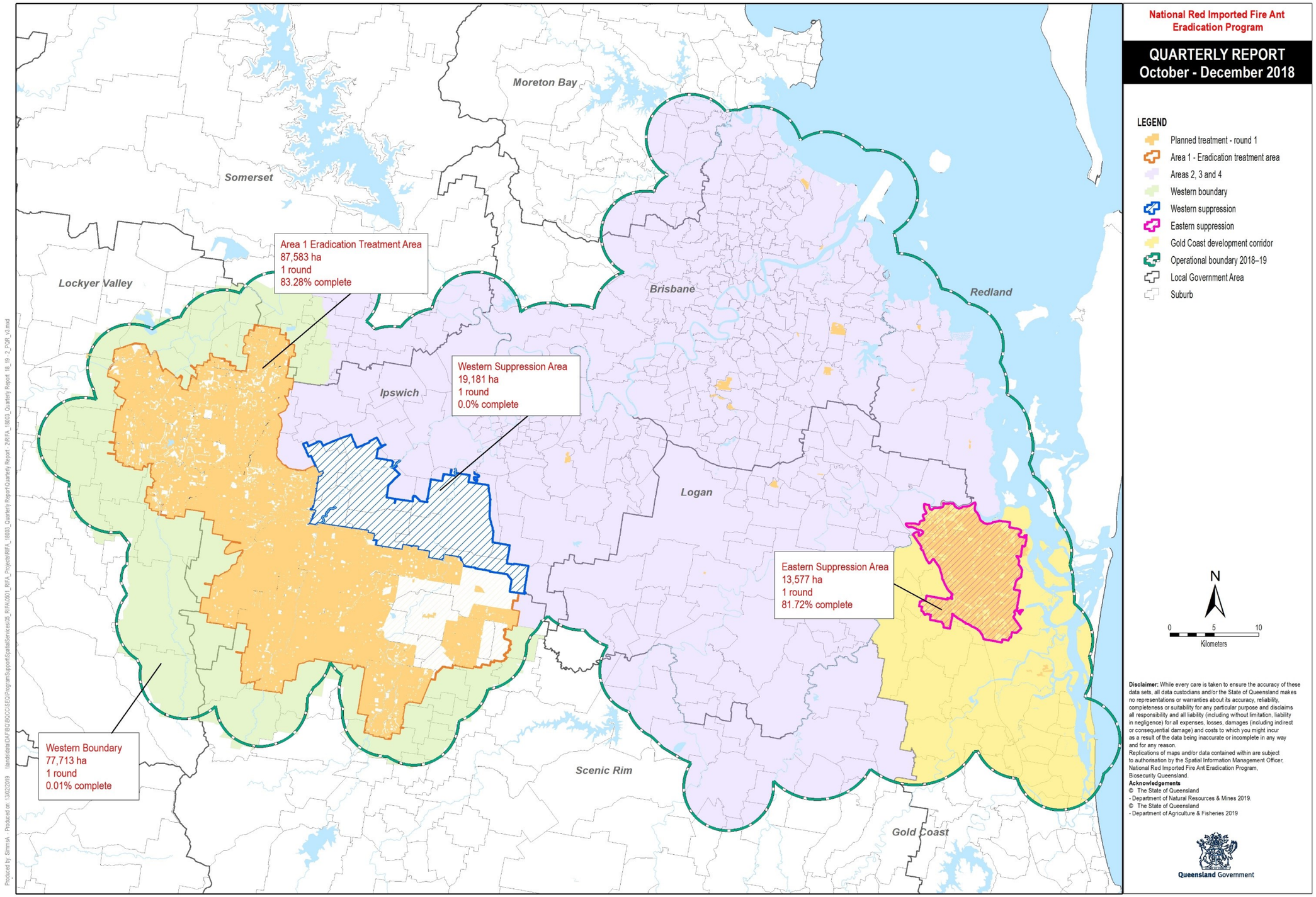
Appendix 1: Overview map of the 2018–19 operational boundary



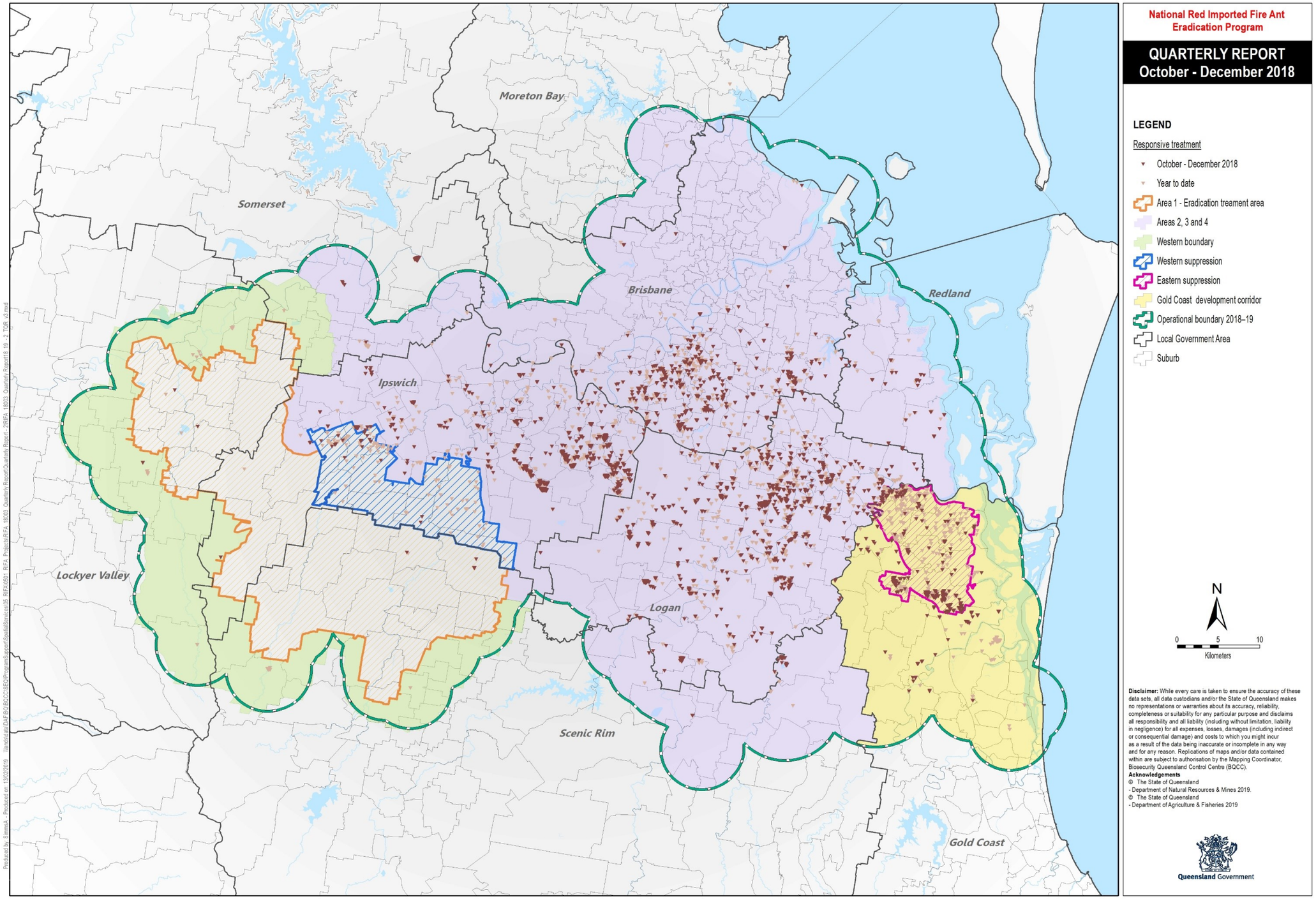
Appendix 2: Map of new detections (second quarter 2018–19)



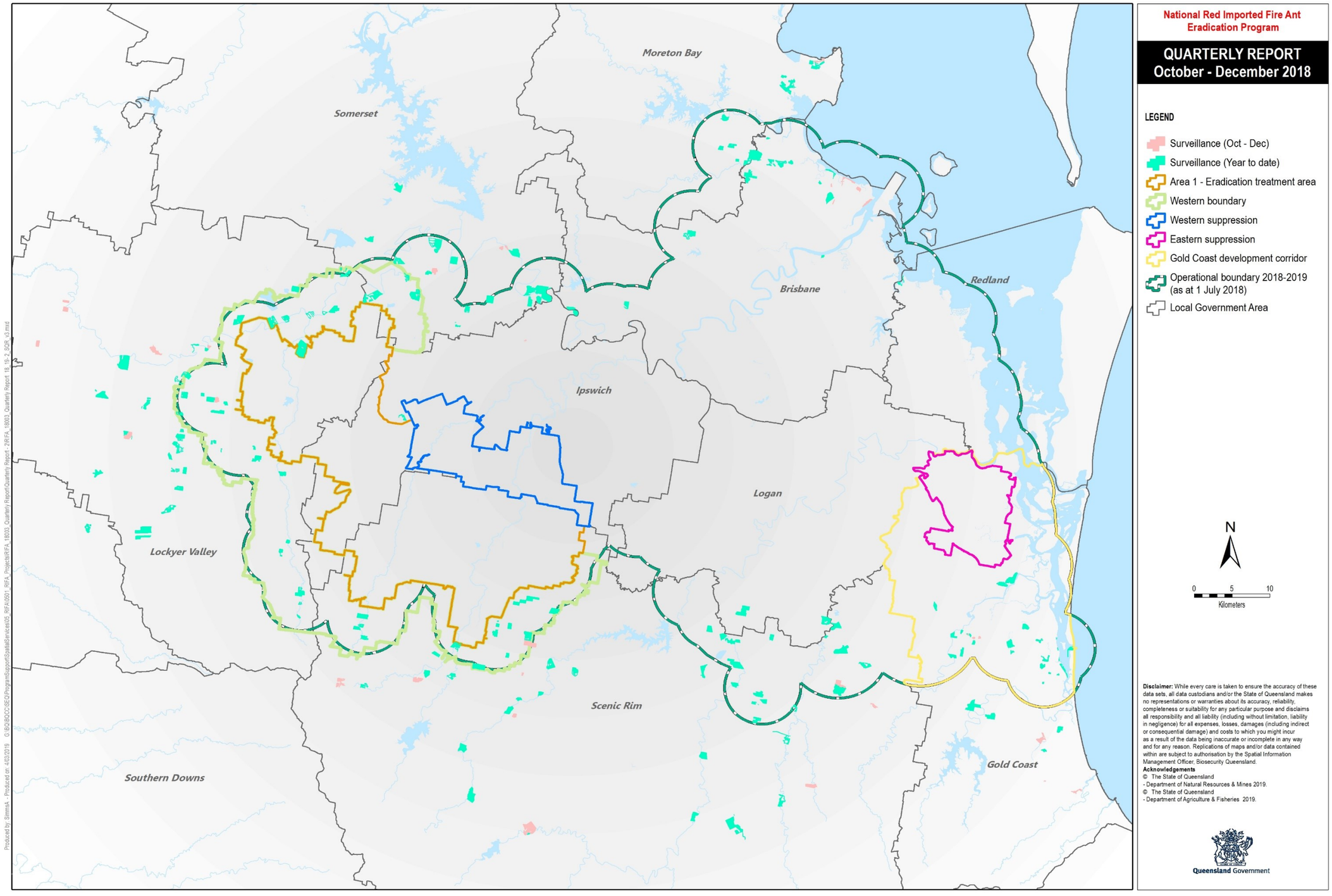
Appendix 3: Planned treatment (second quarter 2018–19)



Appendix 4: Map of responsive treatment (second quarter 2018–19)



Appendix 5: Map of planned surveillance (second quarter 2018–19)



National Red Imported Fire Ant Eradication Program

QUARTERLY REPORT
October - December 2018

LEGEND

- Surveillance (Oct - Dec)
- Surveillance (Year to date)
- Area 1 - Eradication treatment area
- Western boundary
- Western suppression
- Eastern suppression
- Gold Coast development corridor
- Operational boundary 2018-2019 (as at 1 July 2018)
- Local Government Area

N

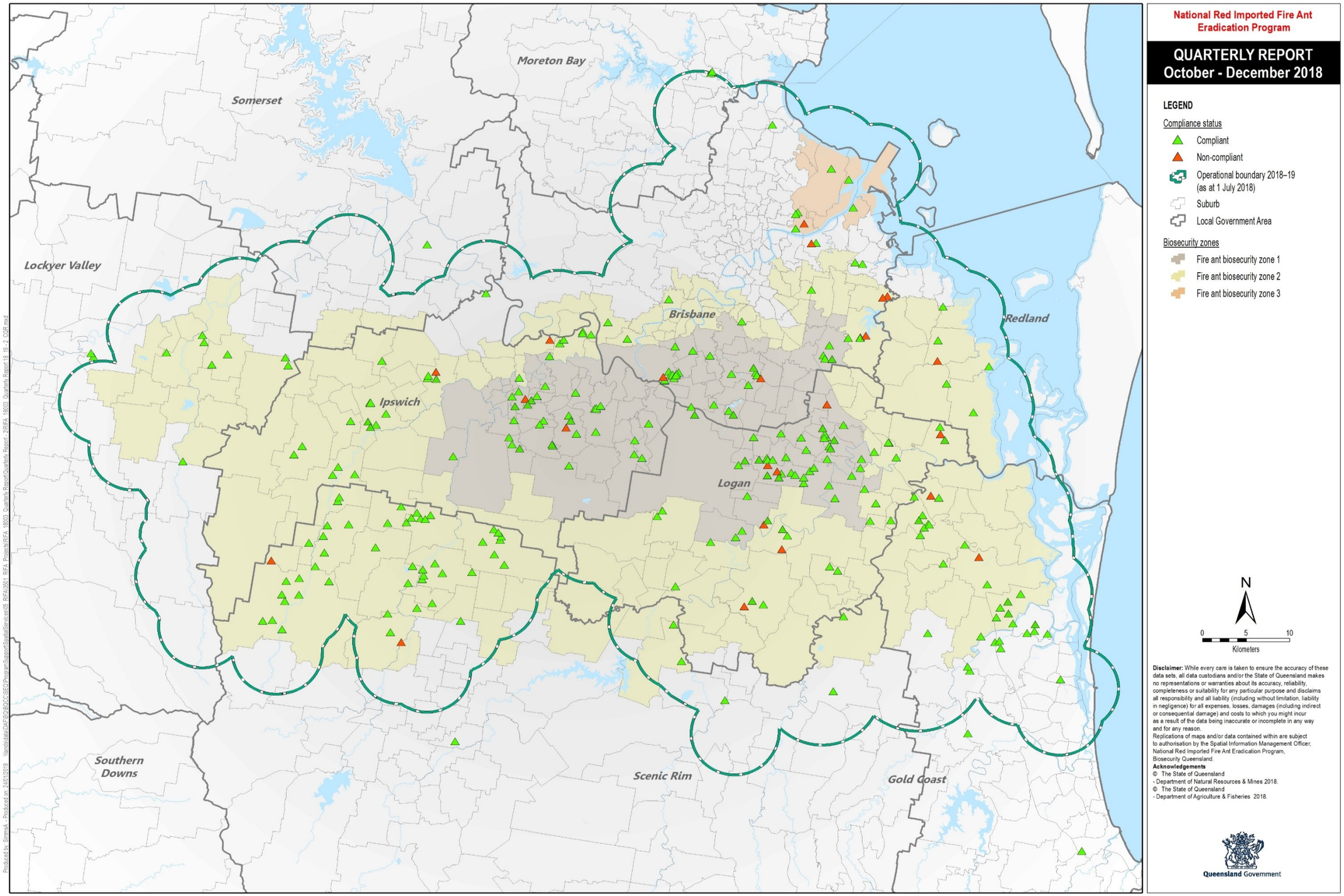
0 5 10
Kilometers

Disclaimer: While every care is taken to ensure the accuracy of these data sets, all data custodians and/or the State of Queensland makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs to which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason. Replications of maps and/or data contained within are subject to authorisation by the Spatial Information Management Officer, Biosecurity Queensland.

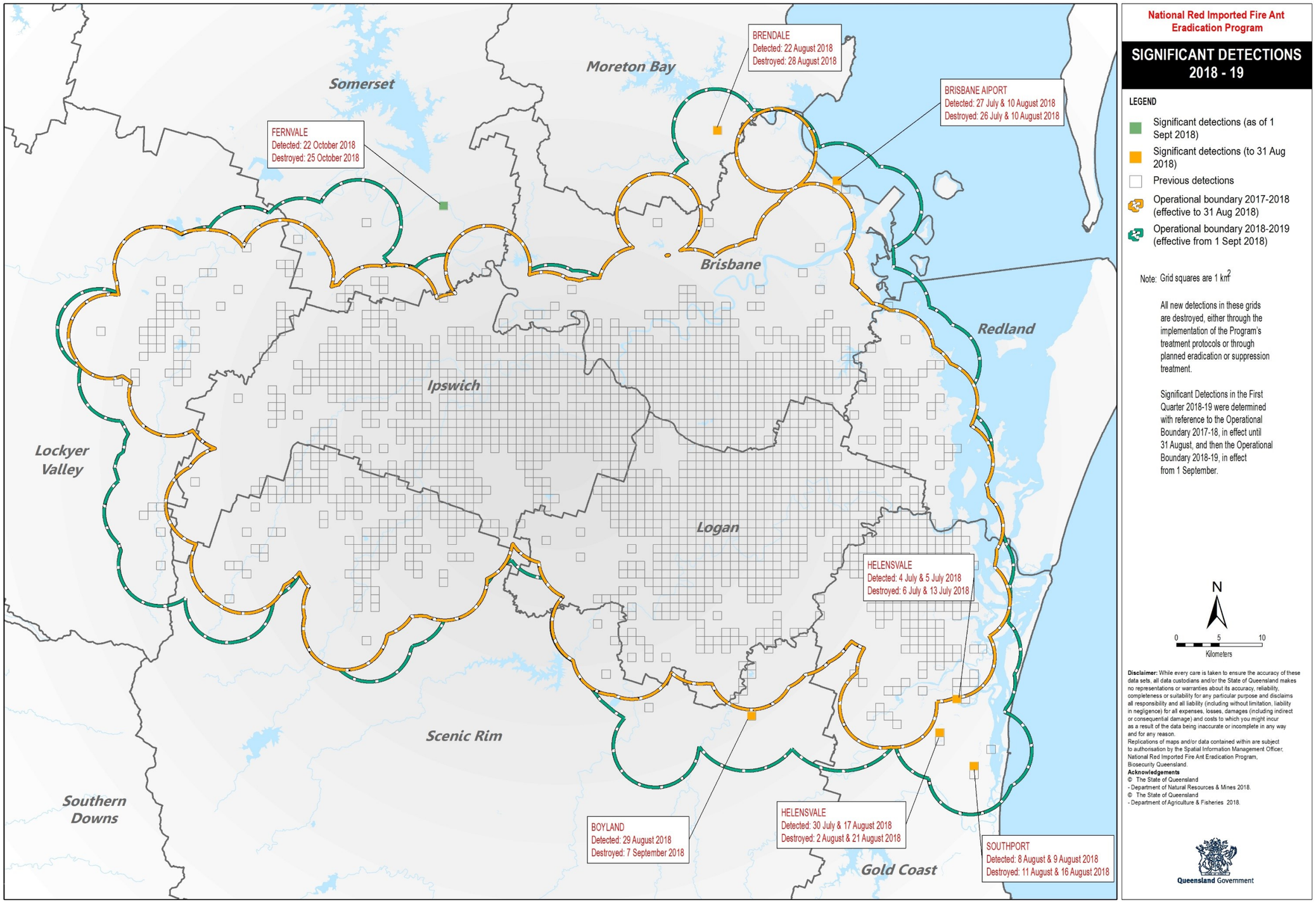
Acknowledgements

Queensland Government

Appendix 6: Map of compliance checks (second quarter 2018–19)



Appendix 7: Map of significant detections year-to-date (second quarter 2018–19)



Appendix 8: Fire ant biosecurity zones

Fire ant biosecurity zone 1

Acacia Ridge	Forestdale	Raceview
Algester	Gailes	Redbank
Amberley	Goodna	Redbank Plains
Archerfield	Greenbank	Regents Park
Augustine Heights	Heathwood	Richlands
Basin Pocket	Heritage Park	Ripley
Bellbird Park	Hillcrest	Riverview
Berrinba	Holmview	Rochedale
Bethania	Inala	Rocklea
Blackstone	Ipswich	Runcorn
Booval	Karawatha	Sadliers Crossing
Boronia Heights	Kingston	Silkstone
Brookwater	Kuraby	Slacks Creek
Browns Plains	Larapinta	South Ripley
Buccan	Leichhardt	Spring Mountain
Bundamba	Logan Central	Springfield
Calamvale	Logan Reserve	Springfield Central
Camira	Loganlea	Springfield Lakes
Carole Park	Mackenzie	Stretton
Churchill	Mansfield	Sumner
Coalfalls	Marsden	Sunnybank
Collingwood Park	Meadowbrook	Sunnybank Hills
Coopers Plains	Moggill	Swanbank
Crestmead	Moores Pocket	Tivoli
Darra	Munruben	Underwood
Deebing Heights	New Chum	Wacol
Dinmore	Newtown	Waterford
Doolandella	North Booval	Waterford West
Drewvale	North Maclean	West Ipswich
Durack	North Tivoli	White Rock
East Ipswich	One Mile	Willawong
Eastern Heights	Oxley	Willowbank
Ebbw Vale	Pallara	Wishart
Eight Mile Plains	Park Ridge	Woodend
Ellen Grove	Park Ridge South	Woodridge
Flinders View	Parkinson	Wulkuraka
Forest Lake	Purga	Yamanto

Fire ant biosecurity zone 2

Alberton	Holland Park	Ormeau Hills
Alexandra Hills	Indooroopilly	Peak Crossing
Allenview	Jacobs Well	Pimpama
Anstead	Jamboree Heights	Pinjarra Hills
Ashwell	Jeebropilly	Plainland
Bahrs Scrub	Jimboomba	Priestdale
Bannockburn	Jindalee	Radford
Barellan Point	Kagaru	Redland Bay
Beenleigh	Kairabah	Riverhills
Belivah	Karalee	Robertson
Bellbowrie	Karana Downs	Rochedale South
Belmont	Karrabin	Rosevale
Blacksoil	Kenmore	Rosewood
Blenheim	Kents Lagoon	Salisbury
Brassall	Kingsholme	Seventeen Mile Rocks
Burbank	Laidley	Shailer Park
Calvert	Laidley Heights	Sheldon
Camp Hill	Laidley North	Sherwood
Capalaba	Laidley South	Silverbark Ridge
Carbrook	Lanefield	Silverdale
Carina	Lawes	Sinnamon Park
Carina Heights	Limestone Ridges	South Maclean
Carindale	Logan Village	Springwood
Cedar Creek	Loganholme	Stapylton
Cedar Grove	Lower Mount Walker	Steiglitz
Cedar Vale	Luscombe	Stockleigh
Chambers Flat	Lyons	Summerholm
Chandler	Macgregor	Tallegalla
Chapel Hill	Marburg	Tamborine
Chelmer	Merryvale	Tanah Merah
Chuwar	Middle Park	Tennyson
Cleveland	Milbong	Thagoona
Coleyville	Milora	The Bluff
College View	Minden	Thornlands
Coomera	Monarch Glen	Tingalpa
Coorparoo	Moorooka	Undullah
Corinda	Mount Cotton	Upper Coomera
Cornubia	Mount Crosby	Upper Mount Gravatt
Crowley Vale	Mount Forbes	Victoria Point
Daisy Hill	Mount Gravatt East	Walloon
Eagleby	Mount Marrow	Warrill View
Ebenezer	Mount Mort	Washpool
Edens Landing	Mount Ommaney	Westlake
Fig Tree Pocket	Mount Walker	Willow Vale
Flagstone	Mount Walker West	Wilsons Plains
Flinders Lakes	Mount Warren Park	Windaroo
Forest Hill	Muirlea	Wolffdene
Gilberton	Mundoolun	Woodhill
Glen Cairn	Mutdapilly	Woodlands
Glenore Grove	Nathan	Woolshed
Goolman	New Beith	Woongoolba
Graceville	Norman Park	Yarrabilba
Grandchester	North Ipswich	Yatala
Gumdale	Norwell	Yeerongpilly
Haigslea	Ormeau	Yeronga
Harrisville		

Fire ant biosecurity zone 3

Brisbane Airport	Nudgee	Port Of Brisbane
Eagle Farm	Nudgee Beach	
Lytton	Pinkenba	

National Red Imported Fire Ant Eradication Program: Fire ant biosecurity zones

Fire ant carrier movement restrictions

Fire ant biosecurity zone 1	Fire ant biosecurity zone 2	Fire ant biosecurity zone 3
Moving soil*? To move soil from a property within biosecurity zone 1 you must have a biosecurity instrument permit unless: - the soil remains within zone 1; or - the soil is moved to a waste facility within zone 1 or zone 2.	**Moving soil*?** To move soil from a property within biosecurity zone 2 you must have a biosecurity instrument permit unless: - the soil remains within zone 2 or is moved to zone 1; or - the soil is moved to a waste facility within zone 1 or 2.	**Moving soil*?** To move soil from a property within biosecurity zone 3 you must have a biosecurity instrument permit unless: - the soil remains within zone 3; or - the soil is moved to a waste facility within zone 3.
Moving mulch, manure, baled hay or straw, potted plants or turf? To move these fire ant carriers from a property within biosecurity zone 1 you must either : - follow procedures outlined in the Biosecurity Regulation 2016; or - move the material to a waste facility within zone 1 or 2; or - move the material within 24 hours of being on the property. If you are unable to fulfil the above conditions then you must request a biosecurity instrument permit from an inspector.	**Moving mulch, manure, baled hay or straw, potted plants or turf?** To move these fire ant carriers from a property within biosecurity zone 2 you must either : - follow procedures outlined in the Biosecurity Regulation 2016; or - move the material to a waste facility within zone 1 or 2; or - move the material within 24 hours of being on the property. If you are unable to fulfil the above conditions then you must request a biosecurity instrument permit from an inspector.	**Moving mulch, manure, baled hay or straw, potted plants or turf?** To move these fire ant carriers from a property within biosecurity zone 3 you must either : - follow procedures outlined in the Biosecurity Regulation 2016; or - move the material to a waste facility within zone 3; or - move the material within 24 hours of being on the property. If you are unable to fulfil the above conditions then you must request a biosecurity instrument permit from an inspector.
Moving other fire ant carriers i.e. mining/quarrying products or by-products; compost? To move these fire ant carriers from a property within biosecurity zone 1 you must either: - move the material to a waste facility within zone 1 or 2; or - move the material within 24 hours of being on the property; or - obtain a biosecurity instrument permit from an inspector.	**Moving other fire ant carriers** i.e. mining/quarrying products or by-products; compost? To move these fire ant carriers from a property within biosecurity zone 2 you must either: - move the material to a waste facility within zone 1 or 2; or - move the material within 24 hours of being on the property; or - obtain a biosecurity instrument permit from an inspector.	**Moving other fire ant carriers** i.e. mining/quarrying products or by-products; compost? To move these fire ant carriers from a property within biosecurity zone 3 you must either: - move the material to a waste facility within zone 3; or - move the material within 24 hours of being on the property; or - obtain a biosecurity instrument permit from an inspector.

For soil* movement within the zones you must meet the General Biosecurity Obligation, see www.daf.qld.gov.au/fireants for more information.
*soil includes fill, clay, scrapings and any material removed from the ground at a site where earthworks are being carried out

Fire Ant Biosecurity Zone Map – RIFA02
15 June 2018

- Fire ant biosecurity zone 1
- Fire ant biosecurity zone 2
- Fire ant biosecurity zone 3
- Suburb
- Local Government Area

N
0 5 10
km

Contact the Department of Agriculture and Fisheries for more information or request a biosecurity instrument permit at www.daf.qld.gov.au/fireants or call 13 25 23

Queensland Government

Appendix 9: Significant Detections (July 2017 to December 2018)

Location		Discovery		Infestation			Distance (km)		Treatment	Surveillance			Carrier movement		Genetics	Notification
Suburb	Priority Area	Detected	Source	Mounds	Alates	Brood	Op. Boundary	Nearest nest	DNI	Delineation	Targeted*	Validation	Inbound	Outbound	Social form	Steering Committee
Lowood	1	3/08/2017	Sentinel	9	Yes	No	5	10	10/08/2017	Yes	Yes	Clear	Unconfirmed	Unconfirmed	Monogyne	4/08/2017
Beaudesert	2,3,4	20/09/2017	Sentinel	5	Yes	Yes	6	11	21/09/2017	Yes	Yes	Clear	Yes	No	Monogyne	25/09/2017
Bridgeman Downs	2,3,4	5/01/2018	Public	1	No	No	1.4	4	5/01/2018	Yes	Yes	Clear	Yes	No	Monogyne	9/01/2018
Thornton	1	4/04/2018	Targeted	7	Yes	No	1.1	1.45	6/04/2018	Yes	Yes	Clear	No	Yes	Monogyne	6/04/2018
Blenheim	1	5/04/2018	Public	1	Yes	Yes	0.37	1.7	24/04/2018	Yes	Yes	Clear	No	No	Monogyne	10/05/2018
Thornton	1	11/05/2018	Targeted	1	No	No	2.4	1.45	18/05/2018	Yes	Yes	Clear	Yes	No	Monogyne	18/05/2018
Thornton	1	11/06/2018	Public	5	Yes	No	1.7	3	12/06/2018	Yes	Yes	Not Required	No	No	Monogyne	15/06/2018
Labrador	Gold Coast	28/06/2018	Public	1	Yes	No	7.5	8.6	29/06/2018	Yes	Yes	Clear	No	No	Monogyne	2/07/2018
Townson	1	29/06/2018	Targeted	5	Yes	No	3.6	3.8	4/07/2018	Yes	Yes	Not Required	Yes	No	Monogyne	5/07/2018
Helensvale	Gold Coast	4/07/2018	Targeted	19	TBC	TBC	0.47	1.9	6/07/2018	Yes	Yes	Results to come	No	Yes	Monogyne	6/07/2018
Brisbane Airport	2,3,4	24/07/2018	Public	5	Yes	Yes	0.73	3.4	26/07/2018	Yes	Yes	Results to come	Yes	No	Monogyne	27/07/2018
Helensvale	Gold Coast	30/07/2018	Targeted	7	TBC	TBC	1.3	5.6	2/08/2018	No	No	Results to come	Yes	No	Monogyne	2/08/2018
Southport	Gold Coast	8/08/2018	Targeted	6	Yes	Yes	6.8	3.2	11/08/2018	Yes	No	Results to come	No	No	Monogyne	10/08/2018
Brendale	2,3,4	22/08/2018	Targeted	3	Yes	No	2.8	5.3	28/08/2018	Yes	No	Results to come	No	No	Monogyne	12/09/2018
Boyland	2,3,4	29/08/2018	Sentinel	2	No	No	0.84	6	7/09/2018	Yes	Yes	Results to come	Yes	Yes	Monogyne	12/09/2018
Fernvale	2,3,4	22/10/2018	Targeted	1	No	No	3.8	8.9	25/10/2018	Results to come	No	Results to come	Yes	No	Monogyne	26/10/2018

Attachment 2 – second quarter report 2018–19

Appendix 10: National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets

National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets						
#	**Activity**	**Output target**	**Result – Q1**		**Result – Q2**	
Area 1 Eradication Treatment Area, Western Boundary Area and Western Suppression Area						
1.	Planned treatment	100% of suitable habitat within Area 1 receives up to two rounds of treatment in the 2018–19 treatment season.	Not applicable*		Area 1 Round 3 – 83%	
2.	Planned treatment	Eradication treatment applied over approximately 14 235 sites and 87–583 ha during 2018–19.	Not applicable*		Area 1 Round 3 – 72 895 ha # Sites – 12, 527	
3.	Planned treatment	100% of suitable habitat within the Western Boundary area receives up to two rounds of treatment in the 2018–19 treatment season.	Not applicable*		Western Boundary Round 1 – <1%	
4.	Planned treatment	Eradication treatment applied over approximately 10 022 sites and 77 713 ha during 2018–19.	Not applicable*		Western Boundary Round 1 – 6 ha # Sites – 73	
5.	Planned treatment	100% of suitable habitat within the area receives up to two rounds of treatment in the 2018–19 treatment season.	Not applicable*		Western Suppression Round 2 – 0%	
6.	Planned treatment	Suppression treatment applied over approximately 2765 sites and 19 181 ha during 2018–19.	Not applicable*		Western Suppression Round 2 – <1 ha # Sites – 5	
7.	Treatment communication and stakeholder engagement	41 000 residents within Area 1 Eradication Treatment, Western Boundary and Western Suppression areas are provided with targeted treatment information, including property access and their general biosecurity obligations, via various channels prior to and during the treatment season.	222 500 residents		574 764 residents	
8.	Treatment communication and stakeholder engagement	100% of instances of denial of access resolved and access achieved by the end of the current treatment round.	Not applicable*		N/A None of the treatment rounds were completed during the period	
9.	Responding to new detections	100% of new detections posing a high risk to public safety are treated by direct nest injection within 2 business days of positive identification.	Detection 1	Percentage 100%**	Detection Nil	Percentage Nil**
10.	Responding to new detections	100% of new high-risk detections are treated within 10 business days of positive identification.	Detections 4	Percentage 50%**	Detection 2	Percentage 50%**
11.	Responding to new detections	100% of new detections are treated within 15 business days of positive identification.	Detections 43	Percentage 33%**	Detection 24	Percentage 33%**
12.	Responding to new detections	100% of reports or sample submissions from the public that are positively identified as fire ant result in a communication outlining treatment expectations within 10 days of the date of positive identification.	Currently unavailable***		Currently unavailable***	
13.	Boundary management	A minimum of 5500 ha of planned surveillance completed.	1864 ha # Sites – 344		269 ha # Sites – 176	

National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets						
#	**Activity**	**Output target**	**Result – Q1**		**Result – Q2**	
14.	Boundary management	A pilot program launched to recruit, train and support a limited number of landholders in undertaking surveillance on their own property as part of the planned surveillance program.	Not yet commenced		Not yet commenced	
15.	Boundary management	100% of all significant detections treated in accordance with the relevant protocol.	100%		100%	
16.	Boundary management	100% of significant detections cleared as eradicated 12 weeks after treatment.	100%		100%	
Areas 2–4						
17.	Responding to new detections	100% of new detections posing a high risk to public safety are treated by direct nest injection within 2 business days of positive identification.	Detections 46	Percentage 26%**	Detections 55	Percentage 44%**
18.	Responding to new detections	100% of new high-risk detections are treated within 10 business days of positive identification.	Detections 191	Percentage 51%**	Detections 182	Percentage 65%**
19.	Responding to new detections	100% of reports or sample submissions from the public that are positively identified result in a communication to the submitting entity outlining treatment expectations within 10 days of the date of positive identification.	Currently unavailable***		Currently unavailable***	
20.	Development corridors	Suppression treatment applied over approximately 3800 ha of development corridors during 2018–19.	Not applicable*		Treatment has not commenced	
21.	High-density infestation	Suppression treatment applied over approximately 3000 ha of high-density infestation during 2018–19.	Not applicable		Treatment has not commenced	
22.	Polygyne colonies	Three rounds of treatment applied over approximately 1470 ha infested by polygyne colonies during 2018–19.	Not applicable		Treatment has not commenced	
23.	Boundary management	Suppression treatment applied over approximately 24 250 ha near the operational boundary.	Not applicable*		Treatment has not commenced	
24.	Boundary management	A minimum of 4750 ha of planned surveillance completed.	2950 ha # Sites – 1873		164 ha # Sites – 57	
25.	Boundary management	100% of all significant detections treated in accordance with the relevant protocol.	100%		100%	
26.	Boundary management	100% of significant detections cleared as eradicated 12 weeks after treatment.	100%		100%	
Gold Coast Development Corridor						
27.	Eastern suppression	100% of designated planned suppression treatment areas within the Gold Coast local government area receive up to two rounds of treatment.	Not applicable*		Eastern Suppression Area Round 2 - 81%	
28.	Eastern suppression	Suppression treatment applied over approximately 15 583 sites and 13 643 ha during 2018–19.	Not applicable*		Eastern Suppression Area Round 2 – 11 095 ha # Sites – 12 359	
29.	Eastern suppression	35 800 residents within Eastern Suppression Area are provided targeted treatment information, including property access and their General Biosecurity Obligations, via various channels prior to and during the treatment season.	120 000		61 800	
30.	Eastern suppression	100% of instances of denial of access resolved and access achieved by the end of the current treatment round.	Not applicable*		N/A None of the treatment rounds were completed during the period	
31.	Industry engagement	Eight of the largest residential development and civil construction companies directly engaged on at least 4 occasions throughout 2018–19.	8 engaged		5 engaged	
32.	Development treatment	100% of designated planned suppression treatment areas within the Gold Coast local government area receive up to two rounds of treatment.	Not applicable*		Treatment has not commenced	

National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets						
#	**Activity**	**Output target**	**Result – Q1**		**Result – Q2**	
33.	Development treatment	Suppression treatment applied over approximately 700 ha during 2018–19.	Not applicable*		78 ha	
34.	Boundary management	100% of designated suppression treatment areas within the Gold Coast local government area receive up to two rounds of treatment.	Not applicable		Treatment has not commenced	
35.	Boundary management	Suppression treatment applied over approximately 1500 ha during 2018–19.	Not applicable		Treatment has not commenced	
36.	Targeted surveillance	A minimum of 750 ha of planned surveillance completed during 2018–19.	816 ha # Sites – 393		76 ha # Sites – 31	
37.	Compliance monitoring	100% of large-scale development sites undergo compliance monitoring at least once.	100% (currently six)		100%	
38.	Responding to new detections	100% of new detections posing a high risk to public safety are treated by direct nest injection within 2 business days of positive identification.	Detections 8	Percentage 63%**	Detections 3	Percentage 67%**
39.	Responding to new detections	100% of new high-risk detections are treated within 10 business days of positive identification.	Detections 34	Percentage 56%**	Detections 14	Percentage 79%**
40.	Responding to new detections	100% of reports or sample submissions from the public that are positively identified result in a communication to the submitting entity outlining treatment expectations within 10 days of the date of positive identification.	Currently unavailable***		Currently unavailable***	
Compliance						
41.	Preventing human-assisted spread	100% of sites assessed as at risk in relation to product movement, high-density or polygyne infestation will undergo compliance monitoring within 5 days of notification.	Due Q2		100%	
42.	Preventing human-assisted spread	Compliance checks conducted for half of biosecurity instrument permits in effect during 2018–19.	Annual target – 87 21 BIP checks conducted = 24%		Annual target – 87 30 BIP checks conducted = 34%	
43.	Preventing human-assisted spread	100% of cases of non-compliance are resolved within 1 month except where a formal investigation is required.	100%		87% 20 of 23 cases of non-compliance resolved within a month 1 other potentially subject to formal investigation 2 nurseries required scientific advice about health and environmental impact of chemicals	
44.	Preventing human-assisted spread	A compliance strategy is developed for major development corridors including Brisbane to Gold Coast and Brisbane Airport.	Gold Coast strategy developed and ongoing implementation Brisbane Airport strategy under development		Brisbane Airport strategy still under development. Will be completed in Q3.	
45.	Preventing human-assisted spread	The risk of human-assisted spread posed by at least 6 high-risk industries is reduced as a result of targeted engagement and compliance activities.	Annual target		Annual target	
46.	Preventing human-assisted spread	A total of 500 high-risk businesses visited to communicate movement restrictions, assess compliance levels and identify barriers to compliance.	190 checks		232 checks	
47.	Preventing human-assisted spread	A total of 2000 communication activities, including correspondence sent to industry groups, regarding movement restrictions are undertaken with high-risk businesses.	Nil		488 communication activities	

National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets				
#	**Activity**	**Output target**	**Result – Q1**	**Result – Q2**
48.	Biosecurity zones	100% of new detections made outside biosecurity zones will undergo compliance monitoring within 5 business days of notification.	92%	93%
Continuous Improvement				
49.	Eradication planning	The 2019–20 Work Plan is completed by the end of May 2019 and the Surveillance Plan completed by the end of April 2019.	Due Q4	Due Q4
50.	Information systems	Treatment and surveillance undertaken by the Program will be recorded through a mobile, digital solution by end of 2018–19.	Underway	Underway
51.	Information systems	All systems are fully functional for 95% of business hours.	99%	99.9%
52.	Information systems	Future state systems solution based on recommendations of ICT systems review decided by the end of 2018–19.	Annual target	Annual target
53.	Remote sensing surveillance	Field trials of a remote sensing surveillance prototype are complete by the end of 2018–19.	Annual target	Annual target
54.	Remote sensing surveillance	A remote sensing solution that identifies red imported fire ant mounds, with a confirmed true positive detection rate of at least 50%.	Annual target	Annual target
Science				
55.	Diagnostic Services	All suspect fire ant samples submitted to the Program diagnosed and results communicated internally within 2 business days.	92%	100%
56.	Diagnostic Services	100% of ant samples are accurately identified and results reported.	99.9%	99.6%
57.	Genetic testing	Social form testing to determine whether a colony is monogyne or polygyne undertaken within 30 working days of sample submission to the lab.	91%	94.5%
58.	Genetic testing	100% of significant detection reports include sub-population assignment[****], social form assessment, and where relevant, outcomes of relationship testing.	100%	100%[****]
59.	Genetic testing	No increase in the proportion of the fire ant population confirmed as polygyne.	Nil	No increase
60.	Genetic testing	No increase in the genetic fitness within the South East Queensland infestation, as measured by the number of sub-populations.	Biennial target	Biennial target
61.	Genetic testing	No new, previously unknown populations identified.	Annual target	Annual target
62.	Genetic testing	No decrease in the percentage of males identified as sterile.	Annual target	Annual target
63.	Odour detection dog surveillance	All dogs demonstrate detection of more than 80% of fire ant nests in defined search areas.	Annual target	Annual target
64.	New product testing	Results of trials of new products for the eradication of fire ant, due to be completed by the end of 2018, are incorporated into treatment plans if successful.	Due Q3	Due Q3
65.	Treatment efficacy monitoring	100% of bait randomly sampled for chemical residue testing, from 10% of bait supplied, meets minimum standards.	Due Q2	100%
66.	Treatment efficacy monitoring	A total of 100 nests, from between 10 and 15 sites, monitored through the 2018–19 treatment season.	Due Q2	40–50 sites identified in Q2 for ground truthing with monitoring to be established in Q3.
67.	Treatment efficacy monitoring	Nests observed as in decline, with visible bait effects, at all treatment efficacy sample sites.	Due Q2	6 sites – 23% of the original nests were still healthy after 2 rounds of treatment.
68.	Science planning	Sites for planned surveillance have been selected by the end of December 2018.	Due Q2	>300 sites selected

National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets				
#	**Activity**	**Output target**	**Result – Q1**	**Result – Q2**
69.	Science strategy	The Program Science Plan 2019–2023 is completed by the end of 2018–19.	Annual target	Annual target
Engagement				
70.	New systems and approaches	Customer relationship management (CRM) software and processes successfully integrated within the Program by end of 2018–19.	Annual target	Annual target
71.	New systems and approaches	30% of the total suspect ant reports for 2018–19 submitted via the CRM online portal.	Result from Q2 onwards	35%
72.	New systems and approaches	25% of training requests are self-booked by attendees via the CRM online portal.	Result from Q2 onwards	24%
73.	Encouraging community surveillance	30 000 people directly engaged through one-on-one conversation and provision of supporting information during 2018–19.	16 437 people engaged	3064 people engaged
74.	Encouraging community surveillance	4 million people exposed to key messages through indirect methods such as broadcast or mass media methods during 2018–19.	over 2.6 million people	more than 3 million
75.	Encouraging community surveillance	5000 total suspect ant reports received from the public in 2018–19.	1276 total suspect ant reports received from the public	2518 total suspect ant reports received from the public
76.	Encouraging community surveillance	100% of suspect ant reports from the public receive an acknowledgement of receipt within 2 business days.	Currently unavailable ***	Currently unavailable ***
77.	Encouraging community surveillance	50% of suspect ant samples submitted by the public positively identified as fire ant.	79%	56%
78.	Industry engagement	2000 industry and local council personnel targeted through attendance at fire ant awareness training sessions.	515 personnel attended training	542 personnel attended training
Performance management				
79.	Strategic policy and Program performance	A policy for self-treatment for fire ants by landowners, businesses and general pest management technicians is developed by April 2019.	On track	On track
80.	Strategic policy and Program performance	An update to the Fire Ant Biosecurity Zones is completed by July 2019.	On track	On track
81.	Strategic policy and Program performance	A protocol for dealing with detections of importance and to define the operational boundary is completed by December 2018.	On track	Completed
82.	Strategic policy and Program performance	A policy for treatment will be completed by January 2019.	On track	To be completed in March 2019
83.	Strategic policy and Program performance	The Ten Year Eradication Plan is reviewed and updated by June 2019 for approval by the Steering Committee.	On track	On track
84.	Strategic policy and Program performance	The Program Risk Management Plan is reviewed and updated by June 2019.	On track	On track
85.	Strategic policy and Program performance	Quarterly reports are submitted to the Steering Committee for approval within 2 months at the end of each quarter.	Q1 report delayed. Expected delivery February 2019	Q2 delivered March 2019
86.	Budget and finance	Program expenditure does not exceed approved budget for 2018–19.	$0.7M below YTD budget	$0.3M above YTD budget
87.	Budget and finance	All outstanding financial audit issues identified in the Chief Financial Officer assurance statement are actioned within 45 days of the internal controls self-assessment survey being signed off.	Not applicable	Due Q4
88.	Budget and finance	Capital expenditure proposals for 2019–20 submitted to the Steering Committee for endorsement by 31 January 2019.	Due Q3	Due Q3
89.	Quality management	A plan for quality management is developed by the end of December 2018.	Due Q2	Under development

National Red Imported Fire Ant Eradication Program South East Queensland 2018–19 targets				
#	**Activity**	**Output target**	**Result – Q1**	**Result – Q2**
90.	Quality management	External auditors appointed to undertake reviews of Program finances and efficiency by the end of June 2019.	Annual target	Annual target
91.	Quality management	All surveillance tools in use, demonstrate detection of more than 80% of fire ant nests in defined search areas.	Annual target	Annual target
92.	Quality management	80% of all assessments of field staff adherence with Program Protocols result in verification of compliance.	Annual target	Annual target
93.	Quality management	Desktop analysis of a statistically significant area per treatment round demonstrates bait coverage is consistent with the relevant protocol.	Annual target	Annual target
94.	Quality management	Field assessments of a statistically significant area per treatment round demonstrates 100% of bait application is consistent with the relevant protocol.	Annual target	Annual target
95.	Quality management	75% of high risk sites undergo verification checks to ensure non-disturbance of bait applications and compliance with the treatment GBO.	Not applicable*	47% 46 treatment GBO checks of 97 high-risk sites
96.	Quality management	100% of sites in each treatment round are completely treated within 12 weeks.	Not applicable	Due Q3
97.	Quality management	Subsequent treatment rounds are completed within 10-14 week period from initial treatment round (only applicable in second round of 2018–19 treatment).	Not applicable	Not applicable
98.	Accommodation	A plan for securing accommodation needs in 2019–20 complete by the end of April 2019.	Due Q4	Due Q4
99.	Accommodation	100% of Program accommodation requirements secured 60 days prior to occupation.	100%	Not applicable
100.	Procurement	100% of major purchases (over $5000) are in full compliance with relevant procurement policies and procedures.	100%	100%
101.	Procurement	100% of Program staff undertaking procurement activities receive professional advice or training to ensure their full compliance with policies and procedures.	100% of relevant Program staff	100%
102.	Human Resources	At any point during 2018–19, the number of positions vacant in excess of 12 consecutive weeks be less than 5% of the current establishment.	Due Q2	11%
103.	Human Resources	60% of staff express a sense of positive engagement with the Program.	Annual target	Due Q3
104.	Human Resources	20% reduction in time lost to incidents.	Due Q2	33% reduction since last quarter (Q2 total – 1)
105.	Human Resources	5% reduction in workplace health and safety incidents.	10% increase since the last quarter (Q1 total - 64)	21% decrease since last quarter (Q2 total - 54)

* Not applicable - This target relates to treatment season which will commence in the second quarter (October to December 2018).

** The Program is working to recalibrate work practices to meet these targets, it is expected that progress against this target will be incremental.

*** Currently unavailable – CaSES reporting system not operational as yet.

****Sub-population assignment only happens once per year.

Attachment 3 – Second quarter report 2018-19

Appendix 11: Program's high-risks

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
Strategic	Environmental Program delivery Reputation Compliance	Risk to containment: Industry and the general public do not fulfil their General Biosecurity Obligation or Biosecurity Instrument Permit requirements.	High	• Biosecurity legislation. • Program Communication and Engagement Strategy – market research to reassess best methods of encouraging public to search and report suspected fire ants in target areas and promotion of legislated requirements in regards to preventing spread of fire ants. Maintain profile and promote messages through media campaigns, community engagement projects, and collaboration with other agencies and levels of government, industries and communities. • NRIFAEP Compliance Strategy • Increase industry collaboration. The National Program also undertakes risk assessments for businesses wishing to move a fire ant carrier that cannot comply with legislated requirements and is seeking a biosecurity instrument permit. • Communication strategy to be implemented with high-risk industry stakeholders.	Ongoing monitoring	• Increase engagement with industries with fire ant carriers • Increase community engagement	1 July 2019

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
Strategic	Environmental Program delivery Reputation	Risk to containment: Extreme climate events (e.g. flood, heavy rainfall and drought) assist fire ant colonies to disperse over a greater geographical area.	High	Research and development into wettable bait treatments	Ongoing monitoring	• Research into wettable baits and other eradication products and technologies • Contingency planning will be undertaken to ensure appropriate targeted surveillance/treatment is undertaken following a significant climatic event • Pre-planning including infestation assessment, genetic tracing and spatial analysis of spread through flight and flood mapping. Planning forecasting probable infestation spread.	1 July 2019
Strategic	Program delivery	Risk to eradication, treatment and capability: Detailed annual Treatment Plan and Work Plan not developed and approved outlining actions, targets, timeframes, and key performance indicators prior to the commencement of the subsequent year.	High	Budget (based on annual Work Plan) is developed with agreement by all Program areas before the start of the new financial year.	The 2018-19 Work Plan was approved by the Steering Committee, however the execution of all activities relies on some funding being brought forward (this is not	Work Plan submitted to General Manager and Steering Committee for approval by May each year. The high risk is partially mitigated as a draft Work Plan was used to guide operations since the August Steering Committee workshop. The draft Work Plan incorporated strategies agreed by the Steering Committee, but with formal approval pending Steering	May 2019

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
					additional funding overall).	Committee approval of the final Work Plan.	
Strategic	Finance Reputation Program delivery	Risk to eradication/Risk to clearance: Extent of fire ant infestation exceeds the Program's capacity such that eradication is technically unfeasible given current resource limitations.	High	Systems and processes in place to rapidly respond to outlying detections. Additional surveillance will be undertaken as a part of the Ten Year Plan. Communication strategy to be implemented with high-risk industry stakeholders such as mining companies	Ongoing monitoring	Regular reporting to the Steering Committee including scientific performance monitoring and the development and implementation of contingency plans.	Ongoing
Strategic	Finance Program delivery	Risk to eradication: The timing of national cost-sharing funding does not align to the treatment strategy.	High	Establishment of collaborative funding agreements with states and territories and National Partnership Agreement with Commonwealth.	Additional budget is required. Proposal currently being negotiated to fund on extension of treatment to the west.	Forward budget to be developed for Program activities out to four years. Approach QLD Treasury to secure drawdown of additional funds required in the early years. Ensure funding partners have a full understanding of the success, activities and concerns of the program. Regular reporting arrangements.	End of December 2018
Strategic	Reputation	Risk to eradication: Community becomes less supportive and motivated to act.	High	Maintain profile through media stories and engagement projects. Look for opportunities to promote messages through collaboration with all levels of government, industry and community.	Ongoing monitoring	Conduct periodic communication campaigns to further reduce possibility of community apathy.	Ongoing

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
Operational	Environmental compliance Reputation Finance	Risk to eradication: National cost-share partners withdraw funding due to factors other than the early achievement of Program objectives.	High	Program risk management framework, which includes the Risk Management Sub-Committee, is appropriate for managing the Program's risk exposure. Commonwealth Partnership Agreement – a long-term funding agreement will mitigate this risk. The National Program will provide full and complete information to funding partners to ensure full understanding of the activities and progress, and any issues impeding the success of the National Program.	Ongoing monitoring	Collaborative financial agreement developed and executed.	February 2019
Operational	Finance Reputation Program delivery	Risk to eradication: Desired sensitivity and effectiveness of surveillance techniques (including remote sensing surveillance (RSS)) are not achieved within approved project budget and timeframe.	High	Research program and routine testing to ensure the technology and surveillance resources maintain effectiveness.	Under review	RSS processes to be continually refined to ensure optimal outcomes. Modelling based on previous sensitivity; preliminary research indicates likelihood of reaching improved sensitivities.	Ongoing
Operational	Program delivery	Risk to capability: The RSS solution does not realise forecast benefits and savings.	High		Under review	RSS processes to be continually refined to ensure optimal outcomes. Modelling based on previous sensitivity; preliminary research indicates likelihood of reaching improved sensitivities.	
Operational	Finance Program delivery	Risk to capability: Information systems are ineffective at supporting increased scope of National Program and demand for timely and accurate performance data, which can arise from poor functionality or	Extreme	Resources dedicated to developing the Program's existing information systems to improve efficiency and accuracy of data entry and reporting. 1. Server performance monitoring. 2. Ability to upgrade if required.	Requires attention	Information systems to undergo continual improvement. Review of existing systems technology and current business processes to ensure best fit solutions are implemented.	Ongoing

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
		data integrity due to data entry, programming, configuration errors, viruses or incorrect business logic.				Continually review performance and recommend upgrades accordingly. Additional resources will be recruited to address information systems issues.	
Operational	Finance Program delivery	Risk to treatment: Insufficient inventory or supply of bait leads to a delay or interruption of treatment.	High	1. Bait requirements planned in advance. 2. Alternative baits being trialled. 3. Bait levels monitored & reported monthly.	Ongoing monitoring	Order supplies well in advance when requirements for each season are known. Existing major supplier can source alternative products from overseas if local manufacture becomes unavailable.	Prior to 2019–20 treatment season.
Operational	Program delivery	Risk to treatment: Lack of clearly defined procedures, protocols and policies, and documentation contributes to the likelihood of eradication activities not being undertaken effectively.	High	Documentation undergoing review process.	Under review	Annual review process to be implemented.	1 July 2019
Operational	Program delivery	Risk to eradication: Properties have not received the required amount of treatment in a given period of time.	High	Develop and implement Program Treatment Policy, Treatment Protocol and Treatment Standard Operating Procedure.	Ongoing monitoring	1. Operations to generate report of properties that have not received required amount of treatments. 2. Operational processes implemented to ensure properties are scheduled for treatment. 3. Specific strategy implemented to monitor high-risk sites to ensure all	Ongoing

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
						treatments applied to high-risk sites as a priority.	
Operational	Program delivery Compliance Reputation	Risk to treatment: Owner or occupier of property denial of entry to treat, conduct surveillance or undertake compliance checks (even though authorised officers have power to enter properties under the Biosecurity Act).	High	1. Training to ensure all staff understand that all authorised officers have the power to enter properties to undertake biosecurity activities. 2. Procedures in regards to entering properties are executed in accordance with Program Standard Operating Procedures. 3. Proactive communications in advance of Program operations.	Ongoing monitoring	Improved messaging and staff implementation of procedures.	Ongoing
Operational	Program delivery Reputation	Risk to eradication: Planning and delivery of activities becomes reactive rather than informed by science and risk, e.g. due to political influence.	High	Maintain proactive engagement with elected representatives from all levels of government, including appropriate level of detail on substantive issues. Ensure contact details are up to date and representatives receive regular updates. Community engagement activities work closely with officials, keeping them informed and working in partnership with Program.	Ongoing monitoring	Provide advice using risk management and cognitive decision-making principles.	Ongoing
Operational	Program delivery	Risk to treatment: Helicopter contractors are unavailable to deliver for a sustained period that results in targets not being met and program activities unable to be achieved.	High	Effective supply negotiations in place and appropriate planning and monitoring of activity in progress to ensure resource activity variation supply to meet program needs and deadlines. This might result in the use of additional casual resources to complete 100% of areas that were scheduled, to fly during the time the helicopters are not able to fly. Resource requirements should be determined for an	In control	Annual review process to be implemented.	1 July 2019

Risk type	Risk category	Risk description	Level of risk	Risk control	Current status	Treatment	Due by
				effective operation. Regular communication between Program and the helicopter company should be implemented to identify potential flight issues in advance.			
Operational	Program delivery	Risk to capability: Risk of industrial dispute if the Program does not maintain appropriate conditions, or convert temporary employees to permanent status where required performance has been proven.	High	1. Temporary employment directive. 2. Manage permanent staff appointments within QDAF Workforce Strategy.	In control	Work with QDAF Human Resources to manage long-term risk.	Ongoing

Department of Agriculture and Fisheries

Risk Assessment Matrix

CONSEQUENCE			LIKELIHOOD				
			RARE	UNLIKELY	POSSIBLE	LIKELY	ALMOST CERTAIN
			Will happen less than once in 10-20 years	Will occur at some time in next 5-10 years	Will occur at some time in next 1-5 years	Will happen at least once in next 12 months	Expected to occur several times in next 12 months
	Severe	**Financial:** >5% deviation from departmental annual budget (approximately $20M) or extreme audit findings. **Service Delivery**: Disruption to multiple critical functions, regulated activities and services or programs causing acute and prolonged issues for clients & key stakeholders. **People:** Multiple deaths and permanent disabilities. Reduced workforce capability (technical expertise, skills) and capacity with a long-term impact on service delivery. **Reputation:** Widespread loss of public confidence and credibility with clients and stakeholders leading to political consequences - resignations, Parliamentary enquires or sustained external scrutiny. **Environment / Cultural Heritage:** Permanent and extensive damage to environment, ecosystems, cultural & heritage sites.	Medium	High	High	Extreme	Extreme
	Major	**Financial:** 2% to 5% deviation from departmental annual budget (approx. $8M up to $20M) or significant adverse audit findings. **Service delivery:** Disruption of a critical business function, regulated activity or service causing problems for customers and stakeholders in fullfilling their obligations. Strategic project unable to be completed. **People:** Death or permanent disability. Extensive gaps in technical expertise, skills and experience, unable to recruit and retain staff with a long term impact on key services. **Reputation:** Short-term loss of credibility with clients and stakeholders, political consequences - indepedent reviews, short term public scrunity and media attention. **Environmental/Cultural:** Extensive but recoverable damage to the environment, ecosystems, cultural and heritage sites.	Medium	Medium	High	High	Extreme
	Moderate	**Financial:** 1% to 2% deviation from departmental annual budget (approximately $4M up to $8M) or audit findings leading to increased BoM scrutiny **Service delivery:** Interruption to critical support functions and services affecting service targets and/ or program and project deliverables. **People:** Major injuries or work related illness requiring medical treatment . Gaps in technical expertise, skills and experience, unable to recruit and retain staff leads to reduce service quality. **Reputation:** Causes direct customer and stakeholder dissatisfaction, business area credibility and stakeholder relationships affected leadubg to reviews and organisational changes **Environmental/Cultural:** Short-term damage to the environment, ecosystems, cultural and heritage sites.	Low	Medium	Medium	High	High
	Minor	**Financial:** <1% deviation from departmental annual budget (lees than approximately $4M) or audit findings leading to review of internal controls **Service delivery:** Isolated interruptions impacting on specific products, product lines or service recipients. **People:** Minor injury or workplace illness requiring medical treatment. Operational processes affected by gaps in technical expertise, skills and capacity. **Reputation:**Customer and stakeholder complaints requiring addional management. **Environmental/Cultural:** Isolated, short term impact on the environment, ecosystem, cultural and heritage site.	Low	Low	Medium	Medium	Medium
	Insignificant Risk	There are negible adverse or benefical **financial, service delivery, people, reputational or environmental** consequences. These consequences can be managed by existing controls and periodic internal reviews.	Low	Low	Low	Low	Medium

HOW TO USE THIS RISK MATRIX **(Refer to the guidance notes on the back page for more information on completing the risk assessment and the risk management framework)**	**ESCALATION REQUIRED**	
1. Identify what type of risk or opportunity may occur? (Financial, Service Delivery, People,Reputation, and Environment/Cultural Heritage)	Extreme	Immediate BOM attention needed. Review and monitoring by Business Groups and BoM
2. What are the possible consequences of the risk or opportunity? (Minimal, Minor, Moderate, Major and Severe/Outstanding)	High	Identify as Corporate Risk and refer to BoM and Business Groups for review and monitoring
3. What is the likelihood of the occurrence? (Rare, Unlikely, Possible, Likely, Almost Certain)	Medium	Management attention for review of controls and monitoring
4. The rating is where the consequence and likelihood intersect. Record the rating in the risk register.	Low	Accept risk, periodic review in conjunction with review of business/project plans