



First Quarter Report 2019–20

National Red Imported Fire Ant Eradication Program
South East Queensland

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Table 1: Annual Deliverables and Performance

#	Deliverable	Q1 Performance	Traffic Light
	Eradication Treatment		
1	<ul style="list-style-type: none"> One round of IGR bait applied throughout the area known as Area 1—approximately 87,600 ha 	Area 1 is on track to commence 14 October 2019.	
	<ul style="list-style-type: none"> Up to three rounds of IGR bait applied throughout the area identified as the Western Boundary area—approximately 77,700 ha (233,100 ha in total) 	Western Boundary Area commenced 16 September completing 22,472 ha (28.92%).	
	<ul style="list-style-type: none"> Up to two rounds of IGR bait applied throughout the area defined as Area 1 Overlap 	Area 1 Overlap is on track to commence at the completion of Area 1.	
2	The provision of targeted treatment information, including property access and the general biosecurity obligation, to all the residents in the treatment areas before and during the treatment season.	<ul style="list-style-type: none"> Unaddressed mail-outs to 17,000 residents 8 radio and television items to an audience of 119,000 Advertorials published in two regional newspapers Two paid Facebook advertising campaigns 	
3	The investigation, analysis and destruction of every new detection found in Area 1 and Western Boundary area as a priority.	There was one detection of fire ants in Area 1 during the first quarter in Rosevale. Two mounds found on 1 August 2019 (as a result of a public report) were destroyed on 21 August 2019 and four mounds found as a result of delineation surveillance on 23 August were destroyed on 27 August 2019.	
4	Surveillance activities <ul style="list-style-type: none"> community surveillance monitoring surveillance post-treatment validation surveillance. 	<ul style="list-style-type: none"> Landholders asked to participate in surveillance of their property between July and August 2019 Surveillance undertaken at thirteen separate locations in Area 1 Odour detection dogs conducted validation surveillance on various locations within the Lockyer Valley. 	
5	Odour detection dog clearance of colony points in the eradication areas.	Validation surveillance completed for treatment efficacy in Blenheim, Forest Hill, Glen Cairn, Hatton Vale and Plainland with no fire ants detected.	
6	The provision of targeted information about movement controls and the general biosecurity obligation to high risk businesses and local government.	This activity is not scheduled until late October 2019.	
7	A compliance strategy addressing the highest risk activities.	A compliance strategy for the eradication area is currently being developed.	
	Planned suppression treatment		
8	<ul style="list-style-type: none"> up to two rounds of IGR bait applied throughout the area defined as the Western Suppression area—approximately 26,800 ha per round 	Treatment to commence 2 December.	
	<ul style="list-style-type: none"> two rounds of IGR bait applied to areas identified as having high-density or polygyne infestation—approximately 22,000 ha per round 	Treatment of the high density areas in the eastern part of the operational area was conducted over 47 ha (0.23%) coinciding with trials of the mobility project.	

#	Deliverable	Q1 Performance	Traffic Light
	<ul style="list-style-type: none"> two rounds of treatment on waste facilities amounting to around 1,600 ha. 	Treatment yet to occur.	Green
9	Analysis and destruction of all new boundary detections and significant detections.	There was one significant detection in Gleneagle that was destroyed on 11 July 2019. All boundary detections found have been destroyed except for the Kagaru sites that were part of the remote sensing trials.	Green
10	Surveillance activities <ul style="list-style-type: none"> sentinel surveillance boundary detection surveillance significant detection surveillance. 	<ul style="list-style-type: none"> Sentinel surveillance was completed across 2,952 ha on 325 sites Boundary detection surveillance was completed on 1479 hectares One significant detection in Gleneagle 	Green
11	Community self-management arrangements endorsed by the Steering Committee and implemented.	The Steering Committee endorsed the Community Self-Management program in August 2019.	Yellow
12	All newly infested sites assessed as a high risk of product movement, high-density or polygyne infestation checked for compliance with the legislated movement controls within five business days.	All such sites were checked for compliance within 5 business days.	Green
13	Compliance checks undertaken for half of all biosecurity instrument permits in effect during 2019–20.	At 1 July 2019 there were 175 active BIPs. At the end of September 23 BIP checks had been undertaken (26%).	Green
14	Preparation of compliance strategies that address high risk industries and locations.	A compliance section plan has been developed that addresses high risk industries and locations. A major focus will be on areas on the outer edge of the biosecurity zones but within the operational area.	Green
15	Penalty infringement notices issued for minor non-compliance with movement controls.	No penalty infringement notices have been issued as yet, however there are a number of investigations currently underway which are likely to result in the issuance of penalty infringement notices.	Green
16	A digital data capture capability for operational field staff implemented before the start of the treatment season.	The Systems and Intelligence Team delivered a proof-of-concept (PoC) enabling field staff to capture live data for planned ground treatment jobs in the field on a digital mobile device. Implementation is dependent on funding and resources.	Red
17	A Proof-of-Freedom plan for endorsement by the Steering Committee.	A Proof-of-Freedom framework has been drafted and will be discussed at the next Scientific Advisory Group meeting on 29–31 October 2019.	Green
18	Completed field trials of an RSS prototype by the end of 2019.	Field trials to capture local imagery of infested areas were completed in early September 2019.	Green
19	A management of detections of importance protocol.	The management of detections of importance protocol has been finalised and submitted to the GM for approval.	Green
20	A business improvement plan endorsed by the Steering Committee.	The Program has developed and now maintains a Business Improvement Plan (BIP) in order to identify efficiencies, track improvement strategies and report on progress.	Green
21	Biosecurity zones realigned with operational areas	Realignment of the biosecurity zones to support the Ten Year Eradication Plan's treatment activities is underway.	Green
22	A Program business plan endorsed by the Steering Committee	The Program business plan is being developed. The initial focus on defining Area 2 is being progressed through consultation with relevant business areas and	Green

#	Deliverable	Q1 Performance	Traffic Light
		the preparation of maps showing land uses, topography and satellite imagery.	
23	A tool for self-assessment of risk and application of risk mitigation measures.	A nursery self-assessment tool is being drafted and will be reviewed by the program's National Exotic Invasive Ant Scientific Advisory Group (SAG) before being provided to the Nursery and Garden Industry Queensland for their comment.	

Summary

The National Red Imported Fire Ant Eradication Program quarterly report outlines the program's progress towards achieving the deliverables defined within the [2019–20 Work Plan](#) for the period 1 July 2019 to 30 September 2019 (the first quarter).

The program focused on three key activities in this quarter:

- Implementation of the program's winter 2019 surveillance plan
- Preparation for treatment season
- Finalising budgets.

Surveillance

During the winter months, the program performed surveillance to obtain data on the presence, absence, density and condition of fire ant infestations at locations throughout South East Queensland (SEQ). This includes sentinel surveillance on approximately 300 sites located over 2952 hectares (ha) outside the operational boundary. Through this surveillance no new nests were found which indicates that the operational boundary remains consistent with the delineation of the pest.

Further surveillance was undertaken around previous significant detections at Bromelton, Fernvale and at selected risk areas inside the operational boundary. The Fernvale detection revealed no new nests, however additional nests were found at Bromelton. These nests have been prioritised for immediate destruction and the affected area will receive two rounds of treatment during 2019-20.

A single significant detection was made in Gleneagle in July and was treated in line with the program protocol i.e. the destruction of mounds using DNI and also conducting an analysis for genetic and compliance activities. Further validation surveillance will be undertaken after all treatment activities are completed (See [Significant Detection](#)).

Preparation for treatment

Pre-treatment season preparations impacted all areas of the program, to ensure treatment season commenced as expected in September. The emphasis was on planning and organisation to ensure there were sufficient personnel, vehicles and bait to deliver treatment within scheduled timeframes. This resulted in the recruitment of 72 new personnel. Training materials were also updated to aid induction and operational communication.

The program's achievements against the schedule of work included:

- Planning and communication with residents for the treatment season.
- Vigilant planning enabling the treatment season to begin on 16 September 2019.
- Commencing round one of the planned treatment, specifically in the Western Boundary Area, completing Insect Growth Regulator (IGR) treatment across 22 472 ha (28.92 per cent) of the required 77 700 ha.

- 
- Conducting a community surveillance campaign in Area 1 to encourage the public to report fire ants remaining within their properties post-treatment.
 - Commencing a trial on a new and improved process applying a fast-acting toxicant bait instead of direct nest injection to a number of sites.
 - Sentinel surveillance across 2 952 ha, with no fire ants detected.
 - Targeted communication and engagement activity to pre-empt the treatment season.

A Business Improvement Plan was developed in order to identify efficiencies, track improvement strategies and report on the program's progress.

In addition, the self-management project introduced a number of activities including training of pest management technicians in identifying and treating fire ants using baits and direct nest injection, surveillance and reporting their work to the program.

Two significant meetings were held during the quarter. The National Red Imported Fire Ant Eradication Program Steering Committee met in August 2019 and was provided with information on the program's operational strategy, progress in the eradication area and risk controls pertaining to compliance activities. The Risk Management Sub-committee met in July with the program achieving its first risk reporting milestone, with Management reviewing risks and discussions held on a regular basis.

Budget

As at 30 September 2019, the program's financial expenditure was below the projected budget by \$3.3 million. The variance is attributed mainly to treatment activities being delayed when compared with the original start date of 1 September 2019. The timing of the program's treatment budget will be adjusted to reflect the program's revised treatment plan in the next quarter.



Eradication

Treatment this year will continue the previous year's eradication treatment in the Lockyer Valley, western Scenic Rim and portions of the Ipswich City Council areas. Specifically, treatment will comprise:

- one round of insect growth regulator (IGR) bait applied throughout Area 1—approximately 87 600 ha
- up to three rounds of IGR bait applied throughout the Western Boundary— approximately 77 700 ha (233 100 ha in total)
- up to two rounds of IGR bait applied throughout the Area 1 Overlap—a two km buffer within the eastern edge of Area 1—16 000 ha. This means that this area will receive up to seven rounds of treatment by the end of 2019–20.

Planned treatment

While broadscale IGR treatment does not generally occur in the cooler months due to the decreased ant foraging activity, the program is busy planning for the upcoming treatment season. Detailed planning is undertaken to organise the logistics of treatment application including the most efficient application method for the different types of land use in the area. Regardless of forward planning, effective treatment application is dependent on actual conditions at the time of treatment including: the weather, ground temperatures and bait uptake. The proposed timing of treatment is adapted throughout the treatment season in response to changed conditions. For this reason, a six-week contingency has been built into the plan timeline.

In preparation for the 2019–20 treatment season, the program engaged 72 additional field staff under contract and acquired other additional resources (e.g. 19 utes, four trailers, forklifts, shipping containers and portable toilets etc.) to facilitate the program's planned eradication and surveillance activities. This was in addition to finalising contracts to engage an external provider to provide up to five helicopters to undertake the program's aerial treatment activities and other minor purchases needed to support program operations.

During this period the community were also informed of the upcoming treatment season through a number of communication and engagement activities, such as the distribution of an information flyer to more than 15 000 homes in the eradication area, print and radio advertising and through digital media. This helps build community support for the program and aids property access.

Residents in the areas that will receive aerial treatment are also personally notified by program staff. This allows the program to address any issues before they become an impediment to the application of aerial treatment. In particular, greater efficiencies can be made if consent is given for the helicopters to fly closer than 100 m to occupied dwellings.

Eradication treatment can commence once temperatures increase to a point where ant foraging activity returns to an optimal level, usually at the beginning of spring. This is regularly monitored by the program to determine when treatment can commence. While treatment would have ideally commenced on 1 September 2019, climate and other conditions meant this year's treatment season began on 16 September 2019. This is the earliest the treatment season has been able to commence in five years.

IGR treatment was applied in the Western Boundary Area across 22 472 ha (28.92 per cent) of the planned 77 700 ha (refer to [Appendix 2: Map of planned treatment Q1 2019–20 – Round 1](#)). The first round of treatment is expected to be completed in the second quarter and two additional rounds of treatment applied to the Western Boundary in 2020.

Responsive treatment

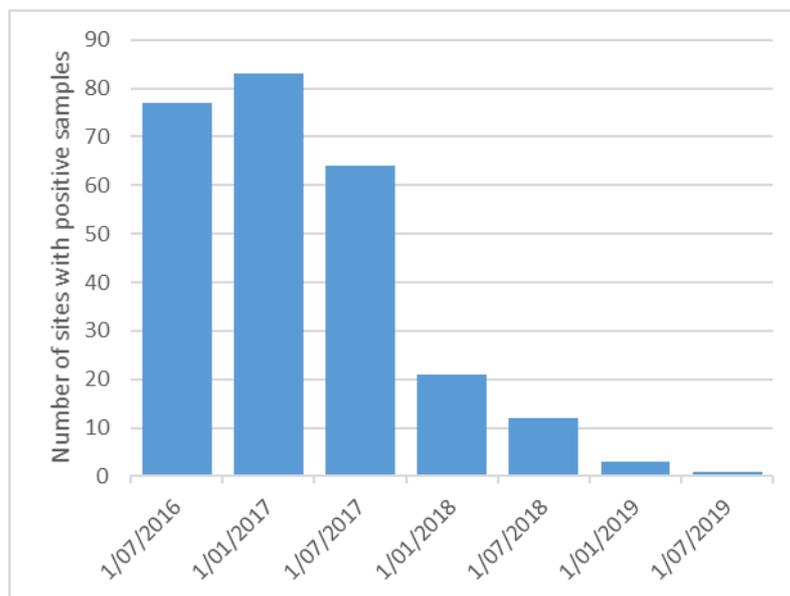
During the first quarter, a public report of a single fire ant nest was found in Rosevale which is located in the Scenic Rim Regional Council local government area and situated in Area 1 (Refer to [Appendix 3: Map of responsive treatment Q1 2019–20](#)). Immediate responsive treatment was carried out, destroying the nest, with further destruction activities deployed upon identification of four mounds during delineation surveillance.

Due to the infestation being within an eradication treatment area which already should have received four treatment rounds, further investigation was warranted. It was found that a small area of the property had not received any bait treatment due to the client's concerns for the wellbeing of their exotic birds. Treatment data showed that the remainder of the property (12 ha) had received four rounds of treatment in previous years. The efficacy of the treatment was confirmed after this area was surveyed with no further infestation found.

The property is due to receive a fifth round of treatment in the 2019–20 treatment season which will commence in the second quarter (October 2019). The program will closely monitor baiting to ensure the infested area is covered adequately. Post treatment validation of the infestation will occur in February 2020, 24 weeks after the nests were destroyed.

Samples have been submitted for further genetic analysis to determine whether the nests are related to other known infestations. Tracing investigations found that although the mounds were located in a cultivation area, no cultivation had occurred in the previous year due to drought conditions. It was also noted that no fire ant carriers were moved from the site.

Figure 1: Reports (public and program) of sites in Area 1 with positive samples of fire ants over time



In the past four years, three years since the commencement of the Ten Year Planthere has been a steady decrease in the number of sites with reported infestation in Area 1. The only known positive site for fire ants within Area 1 during the first quarter (covering the first three months of the six month period commencing 1/07/19) was the infestation at Rosevale mentioned above.

Surveillance

Community Surveillance

A community surveillance campaign was conducted in the eradication area (Area 1 and Western Boundary) to ascertain whether reports of fire ants made by the public were an effective means of surveillance. The campaign had two parts; a broad community engagement campaign, and a targeted engagement campaign.

Broad community engagement

The first phase involved broad communication with all residents in the eradication area inviting them to check for fire ants on their property and report their findings to the program. Unaddressed mail was delivered to 17 605 residents over 74 suburbs during the week commencing 29 July 2019.

Landholders were asked to participate in surveillance of the 'Top 5 spots to check' on their property between July and August 2019 and report back to the program by 31 August, whether they did or did not find suspected fire ant nests. In total 80 people contacted the program as part of this campaign strategy (see Table 1).

Table 2: Number of Suspected Ant Reports (SAR) between 1 July 2019–30 September 2019

Number of Reports	Checked yard and found nothing	Confirmed negative	Confirmed positive	Status not yet determined*	TOTAL
Area 1	57	9	3	2	71
Western Boundary Area	7	0	0	2	9
TOTAL	64	9	3	4	80

*At the time of reporting, the confirmation of these reports as positive for fire ants had not yet been determined. Contacts not relevant to the surveillance campaign are not included.

To support the campaign, promotional activities included media releases, unaddressed mail to residents, newspaper advertorials, social media and direct outbound calls to residents.

Media releases secured eight unpaid news items across radio and television. The coverage reached an estimated audience of 119 700 and achieved an estimated advertising equivalent value (based on content, tone, message and size of coverage) of \$23 406.

Paid advertorials were published in two regional newspapers with an estimated 20 700 people exposed to the advertisement through the Gatton Star on 14 August 2019 and a further 3 500 reached through the Fassifern Guardian on 15 August 2019.

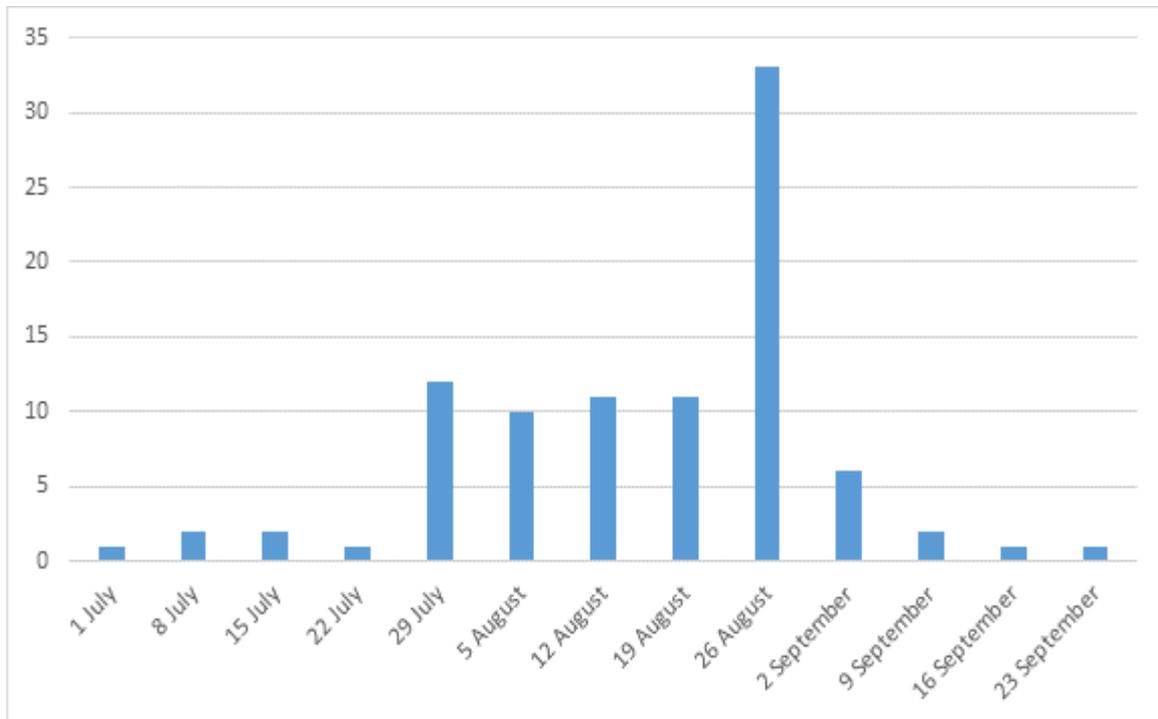
Two paid Facebook advertising campaigns, targeted by suburb, were undertaken between 1-7 August 2019 and 23-30 August 2019. The combined reach was 37 376 resulting in 11 842 clicks-through to the program's website, image or service. The relevance of the subject matter of the social posts to the targeted audience and their organic interactions in this campaign can be seen in their rate of clicks-through, as well as high levels of reach and engagement across the posts. For example, the click-through rate of this campaign was 32 per cent, well above the industry average of 0.90 per cent.¹

The feedback received via informal methods such as outbound calls and through reported analytics from the Department of Agriculture and Fisheries (DAF) website and Biosecurity Queensland's Facebook page provided evidence of the campaign's key messages reaching the target audience. There was also evidence that these stakeholders were well educated about fire ant identification, reporting and the importance of eradication efforts.

¹ Irvine, Mark 2019, 'Facebook Ad Benchmarks for YOUR Industry [Data]', WordStream, viewed 23 January 2020 <<https://www.wordstream.com/blog/ws/2017/02/28/facebook-advertising-benchmarks>>

General reporting of suspect ants from Area 1 and the Western Boundary area peaked during the period of the campaign, although the overall number of reports was low (see Figure 2). Given comments made by landowners in the targeted phase of the campaign (see Targeted engagement), it is possible that those without evidence of ant activity on their properties did not respond because they did not see the value in doing so.

Figure 2: Number of Suspect Ant Reports from Area 1 and Western Boundary



Targeted engagement

The second phase of this campaign was designed to test the effectiveness of recruiting a limited number of landholders in undertaking surveillance on their own properties as part of the planned surveillance program.

A total of 98 landholders on both previously infested properties and properties with ideal fire ant habitat were contacted, with 57 (58 per cent) agreeing to participate. Unfortunately, of these 57, only four actually submitted a report. Many of these landholders advised that they frequently check their property for fire ants but that they were not able to lodge a report, preferring instead that the program submit a report on their behalf.

Once these were included, a total 22 reports were made by or on behalf of 'previously infested properties' landholders, with two reports for landholders deemed to be 'ideal habitat'.

Landowners were not inclined to submit a suspect ant report (SAR) unless they found a nest or ants that they believed could be fire ants. Asking landholders to submit a SAR when they had found nothing was not well received by landholders i.e. they did not appear to see the value in sending in a report unless fire ant treatment was needed.

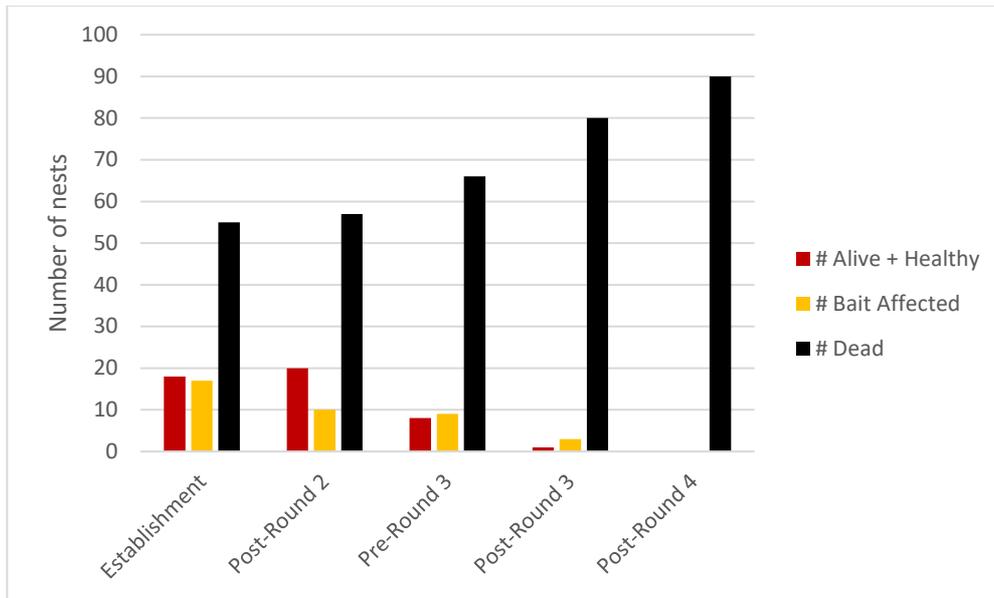
As this is the first time the program has undertaken a campaign of this nature, this feedback has been acknowledged and will be taken into account when implementation into future surveillance campaigns.

Monitoring surveillance

In July 2018, 13 separate locations in Area 1 that were known to be infested were established as monitoring sites to check the efficacy of the eradication treatment. The 13 monitoring locations closely reflect the habitat types and land-uses within Area 1, that is, 69.37 per cent of land use type in Area 1 is 'Grazing on native vegetation', and the majority of the monitoring sites incorporate this land-use.

Surveillance was conducted at these sites (409 ha) for the fourth time with no fire ants found. Figure 3 shows the increasing mortality over time of these 90 nests.

Figure 3: Treatment monitoring sites in Area 1 – Nest mortality observations



Boundary detection surveillance

Surveillance of previous infestations five km within the program's operational boundary and close to the eradication area is a high priority during the winter season. Whilst these infestations likely received delimitation surveillance at the time of detection, often this occurs during suboptimal times for surveillance (i.e. during summer, when nests are less visible). Therefore, it is imperative to revisit detections during the cooler months to ensure all nests have been found and treated. A buffer of 500 m in radius around each detection was surveyed (2 139 ha). From this surveillance, a further 14 nests/infestations were detected and treated promptly by DNI.

Whilst detection of further nests during winter (the optimal surveillance period) is expected, the number found during the first quarter prompted a review of the current delimitation procedure. It was found that several of the detections had not undergone the recommended surveillance regime due to resourcing restraints during the treatment season. There was also not a common understanding of the required procedures to be followed for detections found in the boundary areas. To remedy these issues, the relevant procedure has been revised, updated and approved by the program. Additionally, team resourcing has been reviewed and a provisional year-round surveillance team will be established.

Post-treatment validation surveillance

The program's odour detection dogs conducted validation surveillance on previous detections in Blenheim, Forest Hill, Glen Cairn, Hatton Vale and Plainland. These suburbs are situated within the Lockyer Valley Regional Council. DNI treatment was applied with no fire ants detected during surveillance activities.



Containment

The program's containment actions comprise on-the-ground suppression of fire ant activity through treatment and carrier movement controls with sanctions to reduce the human-assisted spread of fire ants from one location to another.

In addition to suppression treatment on the eastern border of Area 1 to protect the investment in eradication, high-density and polygyne infestations within Areas 2–4 will also be targeted for suppression treatment.

Fire ants will be contained within the Operational Area boundary as much as possible with prompt destruction of any infestations detected within five km of the boundary.

Suppression Treatment

The intent of suppression treatment is to mitigate spread from and within areas that have not yet undergone eradication activity. This may be in the form of planned suppression (one or two bait treatments per year) or responsive treatment.

Areas 2-4, while outside the eradication area, receive planned suppression treatment in areas showing high density of fire ant infestation in order to suppress the ant populations in these areas. Responsive treatment is triggered by reports from the public.

Planned suppression treatment

During the first quarter, in late September, high density suppression treatment commenced in suburbs located within the Gold Coast region. The first round is expected to be completed in the third quarter, with a final round of suppression treatment to be completed before the end of the 2019-20 treatment season.

Responsive treatment

The program typically undertakes planned visual surveillance activities in the cooler months when fire ant mounds are more visible. Weather factors such as rain also contribute to mound visibility and usually result in increased reporting.

During the first quarter approximately 12 761 mounds over 2 796 sites received DNI treatment. A total of 1 738 of these sites also received IGR bait treatment over 624 ha (Refer to [Appendix 4: Map of new detections](#)).

The program also achieved considerable media coverage during this period. As a consequence of the increased reporting of fire ants by the public? the program experienced difficulty responding promptly to all treatment requests. On 11 September 2019, the program started trialling a new process for responding to public reports, with the intention of improving response rates and resolving the direct nest injection backlog. The new process involved applying a fast-acting toxicant bait instead of individually injecting each nest with fipronil. Approximately 6 907 nests were treated with toxicant baits during the period. The toxicant bait can take up to five weeks to take effect. The program is monitoring the effectiveness of the new process, and will report on this in the next quarter.

This change resulted in the need to adjust the program's information systems and processes, and included re-writing all communication that were auto generated through the program's information technology systems.

There are also plans to implement a process whereby the fast-acting toxicant bait will be applied at the point of sample collection. This process will aid in expediting treatment of new fire ant detections and mitigate any further direct nest injection backlog from occurring, which in turn should also lead to a reduction in customer complaints around program response times. The plan is to have these changes implemented in the second quarter of 2019-20.

Surveillance

Sentinel Surveillance

To help defend the operational area boundary, planned sentinel surveillance is undertaken at sites outside of the boundary in high risk fire ant habitat. A network of 334 sentinel sites has been established beyond the operational boundary to act as early warning of spread further afield. Surveillance at these sites is aimed at giving confidence that the program has accurately delineated the area infested by fire ants for eradication activities. Sites are surveyed at least once during the surveillance season, with additional surveillance outside the surveillance season if permitted (e.g. wet weather work for field staff).

Sentinel surveillance was completed across 2 952 ha on 325 sites, with no fire ants found (Refer to [Appendix 5: Map of planned surveillance](#)).

Boundary detection surveillance

Further surveillance is also conducted around detections that have been made in close proximity to the Operational Area boundary during the winter season. A 500 m radius buffer around each detection towards the Operational Area boundary (e.g. half of a circle) is the minimum area surveyed.

During the first quarter, boundary detection surveillance was completed on 1 479 ha. This figure includes additional surveillance performed as a result of new boundary detections. Compliance activities were undertaken with visits to 31 boundary detections¹. Program surveillance and compliance activities in the southern area of the zones led to multiple sites in Kagaru (located in between the Scenic Rim Region and the Logan City Council) that were found to be heavily infested.

All boundary detections found within this quarter have been destroyed except for the Kagaru sites. These sites were recommended suitable for the remote sensing project which occurred at the same time. This area was then added to the suppression treatment area.

Significant detection surveillance

During the first quarter, a single significant detection² of fire ant was made on 3 July 2019, in Gleneagle, located in the central north of the Scenic Rim Regional Council local government area. The detection was located approximately 50 m south-west of the 2018–19 operational boundary, so was defined as a significant detection, however, it is now located within the boundary management area since the updated 2019–20 operational area came into effect. The nearest known infestation lies 1.9 km south at Bromelton, and the detection is 300 m east of fire ant biosecurity zone 2.

A single fire ant mound was found on a poultry farm during planned targeted surveillance activities to determine the extent of the infestation for a detection made 1.9 km south in Bromelton. The nest was baited with an IGR to 10 m, as per the winter protocol, and was subsequently destroyed using DNI on 11 July 2019. No further nests were detected within the immediate vicinity of the initial detection. The program assessed the movement related risk and determined that there are no carriers inbound or outbound from the property. All chicken manure produced at the farm remains on-site. This property has been included in the planned suppression treatment scope for 2019–20 and, as such, it will receive two rounds of IGR baiting. Post treatment validation will occur once treatment activities have been completed.

Genetic analysis of the samples from the nest showed that it was monogyne social form. Relatedness testing is underway and expected to be reported in the second quarter.

Further investigations determined that no inbound or outbound carriers were brought on or taken off the site. All chicken manure is dispersed over the farmer's land. There was a small amount of work completed to fill in a dam approximately one year prior to the infestation date, but existing fill was used.

In accordance with program protocols, the operational boundary is reviewed each September and the boundary is redrawn to five km around all detections occurring in the past five years. The previous significant detections at Fernvale and Bromelton now fall within the 2019–20 operational boundary (Refer to [Appendix 6: Map of significant detection Q1 2019–20](#)).

¹ Detections inside the operating area within 5km of the boundary.

² Fire ants found outside of the Program's operational boundary.

Surveillance has been undertaken over 2 122 ha around the Bromelton and Fernvale detections. There were no further detections in Fernvale post-treatment validation surveillance. Additional nests were detected at Bromelton and were immediately destroyed via DNI. This area will receive up to two rounds of broadscale treatment in the 2019–20 treatment season.

Communication and engagement plans were prepared for Bromelton, Gleneagle and Upper Kedron in anticipation of the need to interact with affected residents and businesses. General awareness training was delivered to businesses in the Bromelton and Gleneagle area, hosted by a local business in the area.

The incursion at Upper Kedron was within a development site and contact was made through program compliance to the developer and businesses in the area.

The program engaged with the local retirement village to inform them of the new detection and provided identification and reporting information. An interactive display was also set up at Bunning's in Arundel to further spread the information to residents in the area.

Table 3: Significant detections Q1 2019–20

Suburb	Date of detection	Date of destruction	Distance to nearest known infestation	Distance from operational boundary	Mounds	Social form
Gleneagle	03/07/2019	11/07/2019	1.9 km	53 m	1	Monogyne

Self-management

Self-management is defined as a landholder (land owners and lessees) carrying out their own fire ant surveillance, treatment (suppression activity through the application of bait and DNI) and reporting activities (collectively 'self-management'). In some circumstances, self-management can provide the bridge between a landholder's General Biosecurity Obligation and the program as it provides the structure for many to take action and address their responsibility to manage fire ants.

The program introduced a number of self-management activities during the quarter. Training of Pest Management Technicians (PMTs) commenced in May 2019 but only gathered momentum in August once the label on the insecticide fipronil was amended to allow PMTs to use it for fire ants. At the end of September, around 160 PMTs had received training in direct nest injection, bait application, reporting to the program and fire ant identification. The courses also provide additional information on the history of the incursion, genetics, the ant's life cycle and health and safety issues related to ant stings and the use of the baits and chemicals. Courses are fully booked to the end of 2019 to train additional PMTs.

Training is also provided to people in industries that are high risk of human-induced spread of fire ants. People from turf farms, nurseries, landscapers, construction and earthmoving industries undertook training on bait application with subsequent purchase of bait from wholesale outlets to manage fire ants within their businesses.

Another focus of the self-management program is training people from businesses that are both high risk and difficult for the program to treat for reasons such as site hazards, safety and security concerns or access and induction issues. These industries include electricity supply, distribution and transmission companies, freeway and motorway operators and contractors, water utilities, airports, and organisations participating in major infrastructure projects. People from organisations operating in each of these industry sectors attended training during the quarter to gain knowledge and an understanding on applying bait to treat fire ants.

Two industry forums were held during July and August that introduced self-management to a range of industries, with a particular focus on the building and development industry. These forums invited discussion and feedback on the concept which informed further development of the initiative. Self-management for industry was officially launched in August once sufficient pest managers were trained in the program's treatment regime. A communication campaign through industry peak bodies is underway to inform industry of the option of engaging a pest manager to treat fire ant infestations.



Prevention of human-assisted spread

The most significant risk of human-assisted spread lies both in the activities of certain industries and where high risk activities are being carried out. For instance, the areas on the outer edge of the biosecurity zones and out to the operational boundary are a priority when trying to contain the pest to the current operational area. A schedule of compliance activities has been developed that includes regular suburb monitoring of new and expanding residential and industrial development and sites at high risk of moving or receiving fire ant carriers. The schedule also includes a focus on individual industries that have been identified as high risk in relation to their potential movement of fire ant carriers.

In the first quarter, the industry focus was on landscape supply yards. Firstly, a risk assessment of the industry was undertaken to assess the level of perceived risk. Compliance checks were then conducted at all 34 landscape yards known to operate within the operational area. Eight of these landscape supply yards (or 24 per cent) were found to be non-compliant with the biosecurity legislation. Six were carrying out effective risk mitigation practices as part of their standard business operations and Biosecurity Instrument Permits (BIPs) were issued to ensure compliance with this administrative requirement. Two had little or no risk mitigation in place and were issued with biosecurity orders. These orders required remedial action to be taken before fire ant carriers could leave the site. Although these actions came at a cost to both businesses, they were taken promptly and effectively and allowed the businesses to resume trading in a matter of days. By the end of the compliance activity, all known landscaping supply yards within the zones were compliant.

Toward the end of the first quarter, suburb monitoring commenced in northern Gold Coast region and will extend into the second quarter. This activity aims to identify high risk sites outside the zones that are at risk of receiving fire ant carriers, to ensure operators are aware of their general biosecurity obligations and to monitor these sites over the course of the year.

Suburb monitoring in this area targets smaller operators that are often moving soil on a daily basis, who are often subcontracted to larger companies. These operators may have limited awareness of the movement controls and little or no engagement with the program. A number of new operators were identified in the first quarter and will be contacted throughout the year.

A compliance strategy to identify and monitor highest risk activities and sites in the eradication area is currently being developed. Compliance activity in this area will occur in tandem with a broader communications campaign.

Stakeholder Forums

The second Stakeholder Forum was held in August 2019. Peak bodies, local government and key stakeholders from a range of industries met to discuss the program and its impact on stakeholders, including movement controls and compliance.

A second Industry Collaboration Forum was run with the Building and Development Industry who called for more cost-effective risk mitigation options for soil, identified as one of the highest risk fire ant carriers. Clarification on the general biosecurity responsibility (GBO) was also requested.

The program met with the turf industry for the fifth time in August 2019 to discuss the alternative treatment option, bifenthrin, which requires a different treatment regime to chlorpyrifos. Turf industry representatives highlighted the potential negative impacts this change would have on turf farm production. Based on industry feedback, the program is currently negotiating with APVMA on considerable changes in the application of this chemical.

The program also continued engagement with the nursery industry to develop a guideline for how nurseries can minimise the risk of spreading fire ants.

Recent engagement with councils sought to provide an update on the successes of the eradication efforts in the west of the Operating Area and reinforce the Ten-Year Eradication Plan. Presentations focused on introducing pest management training, self-management and clarifying the important role councils play in treating fire ants and preventing human-assisted spread.



Non-compliance

During the quarter there were 203 compliance verification checks undertaken of the following industries:

- Earthmoving – 68 checks
- Building and construction – 46 checks
- Landscaping suppliers – 32 checks
- Hay producers – 19 checks
- Waste management – 7 checks
- Turf – 6 checks
- Government suppliers/utilities – 9 checks
- Quarries – 4 checks
- Landscaping businesses – 3 checks
- Nurseries – 2 checks
- Machinery and equipment – 2 checks
- Tree services – 1 check
- Poultry – 1 check
- Stockfeed – 1 check
- Transport – 1 check
- Woodchip – 1 check

Of these compliance checks, 11 (five percent) were found to be non-compliant. Most instances of non-compliance were minor, for example, risk mitigation measures were in place but a Biosecurity Instrument Permit had not been obtained, with remedial action being taken immediately by the businesses. The two more serious matters were at Landscape Supply Yards mentioned above and both were adequately addressed with Biosecurity Orders.

Ninety biosecurity instrument permits were issued by the program to facilitate the movement of carriers in the July to September 2019 period. The program is currently pursuing changes to the regulations to reduce the regulatory burden associated with applying for such permits in future years.

No penalty infringement notices have been issued to date, however there are a number of investigations currently underway with the potential for enforcement action.

Communication and Engagement

Community and stakeholder planning commenced this quarter to review the outcomes expected under the Ten-Year Eradication Plan and to consider the priorities for the period 2019–2021.

During this quarter, the program experienced substantial negative media attention driven by a vocal minority within the community. This drew significantly on resources as the program attempted to defend false claims about the program’s performance.

In response to concerns by the Office of the Minister for Agriculture and Fisheries (Qld), a communications plan was developed to combat misconceptions that the program is failing. The program has implemented changes to communication messaging and activity to present factual information about the program to the staff and the community, with particular focus on the promising results in the western eradication area.

A number of media releases were distributed throughout this quarter providing accurate information about the success in the eradication area, clearance at the port and airport incursions, and the treatment season.

Suspect Ant Reports (SARs)

Analysis of the 1828 SARs for the quarter show the following statistics of interest:

- The majority (56 per cent) of suspect ants being reported were found in residential properties (Figure 4)
- 314 (29 per cent) people actively went looking for fire ants (Figure 6)
- 184 people found suspect ants while conducting an inspection for their business (Figure 6)
- 64 per cent of people are reporting via the call centre
- 79 people reported because they, or someone they knew, was stung (Figure 6).

As Figure 5 demonstrates, the top five ways that people are hearing about the program are via:

1. Website (28 per cent)
2. General awareness training about fire ants (15 per cent)
3. Word of mouth (12 per cent)
4. Brochure (11 per cent)
5. Television (5 per cent)

In 1096 out of the 1828 suspect ant reports, the person reporting either did not identify a channel or selected more than one channel.

Figure 4: Property type of where suspect ant reports were found

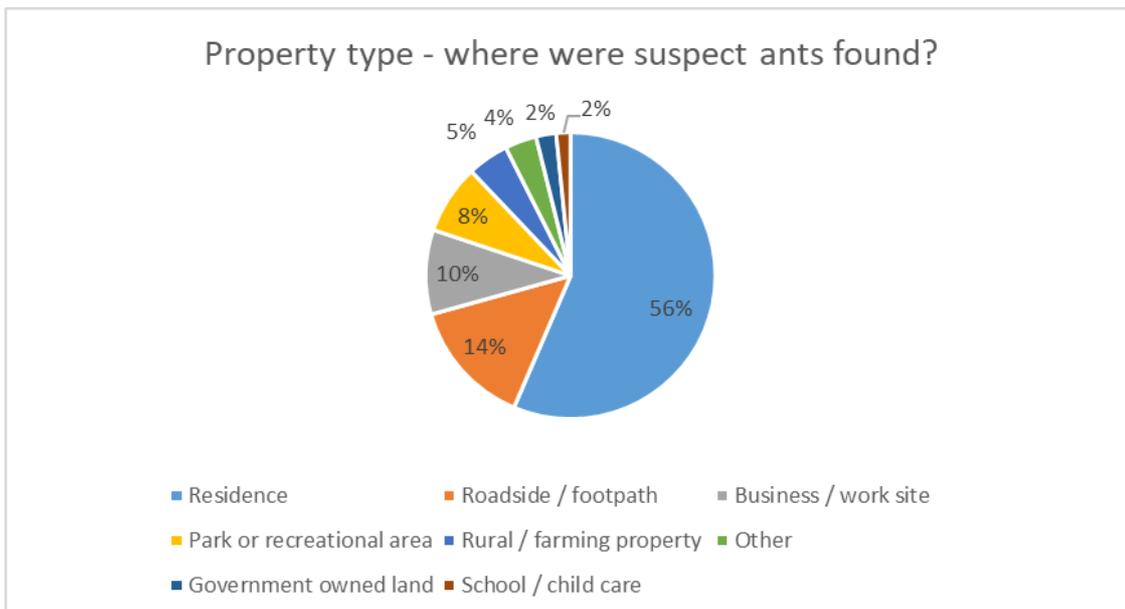


Figure 5: How did people hear about the program

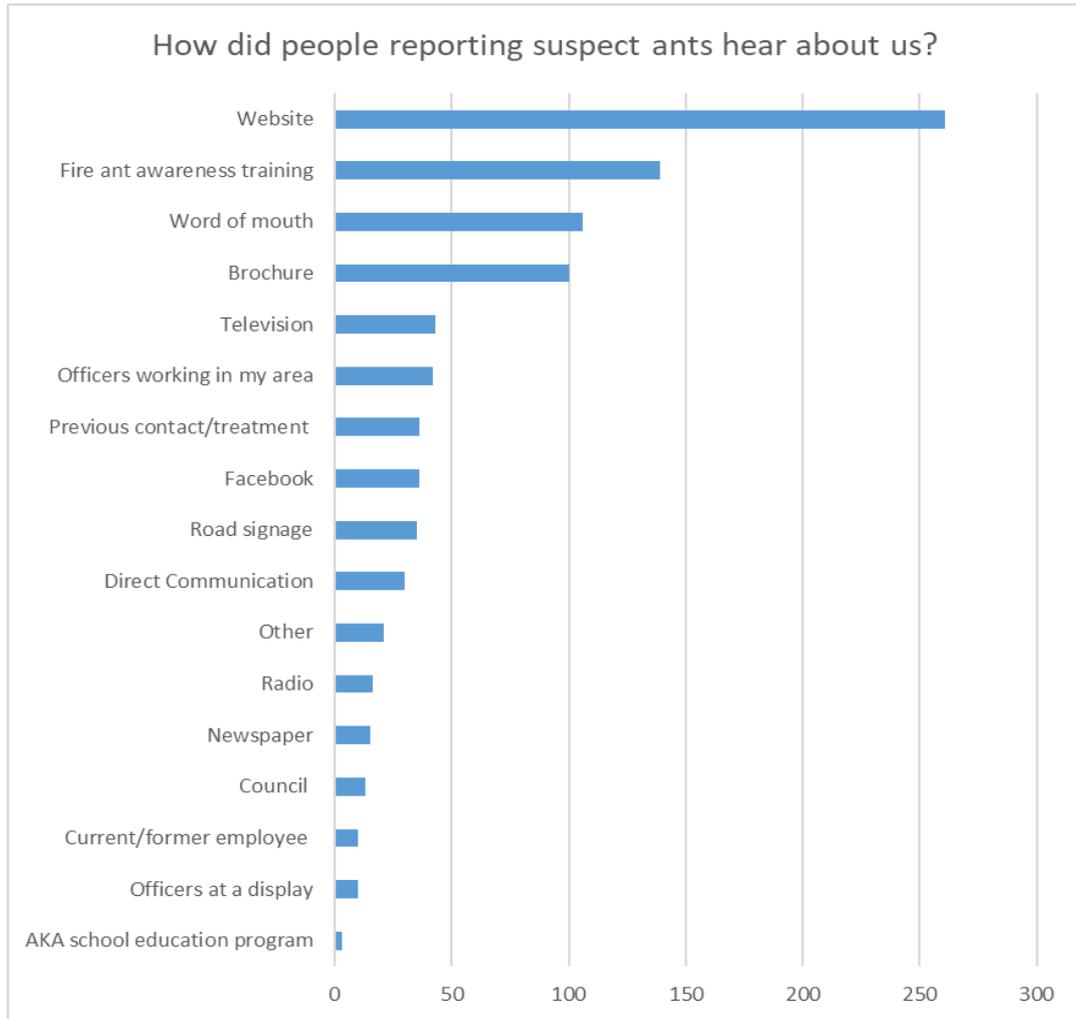
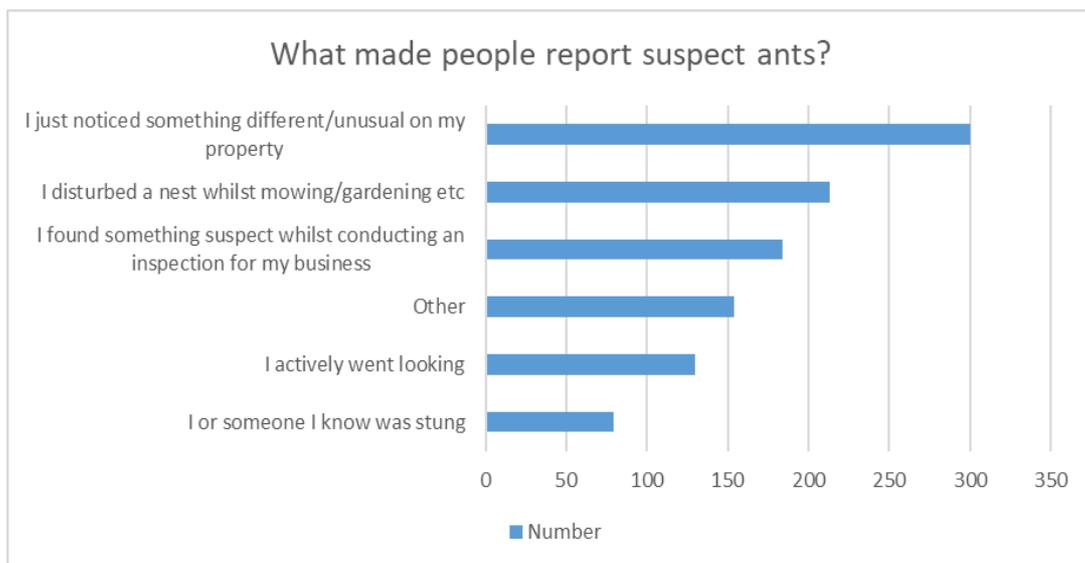


Figure 6: What made people report suspect ants to the program





Continuous Improvement

The program will continue to pursue opportunities to improve operational practices through deployment of improved information management tools, research and analysis, review of operating protocols and the provision of advice and support to the Steering Committee and senior program managers to ensure the program continues to meet the objectives of the Ten-Year Eradication Plan.

Information systems

In the first quarter, the program's Fire Ant Management System (FAMS) and Client and Stakeholder Engagement Solution (CaSES) systems³ performed at 100 per cent functionality.

To improve operational practices, the program delivered a proof-of-concept (PoC) using a mobile device, which enabled field staff to capture live data for planned ground treatment jobs. The current practice is laborious and requires manual printing, manual data capture and entry of paperwork.

Surveillance and eradication activities are evolving with increased complexities, for example a single job has at least 15 touch points⁴ across multiple teams for the purpose of planning, completing the activity and final reporting.

The touch points include, but are not limited to:

- Timeliness of information, for planning and operational purposes
- Information quality to create job scheduling for ground and aerial jobs
- Program staff accessing relevant information
- Data entry.

Selected staff have trialed the mobile device, with the PoC showing positive results. Information previously captured on a hand written document can now be recorded digitally.

The desired long-term outcome is to enable field staff to view, validate and capture live data while office staff have visibility of the same data in FAMS via live dashboards. The mobile application has been developed to enhance digital collaboration between the field and the office to improve effective two-way business intelligence.

Further development and deployment of this capability is dependent on the allocation of resources.

Research and analysis

A Proof of Freedom framework has been drafted and will be discussed at the next Scientific Advisory Group meeting on 29-31 October 2019. There has also been preliminary discussions with the Arthur Rylah Institute, Monash University and the University of Melbourne for modelling assistance on various aspects that will contribute to Proof of Freedom strategy and eradication activities.

To ensure the efficacy of IGR bait treatment, the program undertakes monitoring of identified nests in either eradication treatment (Area 1) or in non-eradication treatment areas (Area 2-4). In Area 1, 90 live or recently inactive nests were identified in July 2018 over 13 sites for subsequent monitoring. In monitoring that occurred in the first quarter, after four rounds of treatment, no nests showed signs of ant activity. However, it was observed that fire ant nests in surrounding areas were relatively inactive due to the drought conditions, which can make detection of fire ants difficult. Additional monitoring of these sites will occur following rain, when fire ants tend to recreate nests above ground and become more active.

For the established 104 monitoring nests in Area 2-4, preliminary data analysis is still ongoing and will be reported in the second quarter.

³ The Program's IT systems used to manage clients, record the details of fire ant detections and manage their treatment.

⁴ Touch points are activities where a customer and business exchange information including engagement, provision of a service or a transactions made.



In July 2019, a field trial was established at Tanah Merah, situated within the Logan City council local government area, to examine the efficacy of three different toxicant baits against fire ants when applied as individual mound (nest) treatments at a range of doses. The products tested include Amdro (hydamethylnon), Advion FAB (indoxacarb) and Synergy Pro (hydamethylnon + pyriproxyfen), and an untreated control treatment was also included. Data collection was undertaken until the end of September, with preliminary results indicating that nest mortality ranged from 48-91 per cent across the various bait treatments. Results from this trial will be used to guide the use of toxicant baits by the program, as well as for self-management activities. Final findings will be available in the second quarter.

In other research, an experimental trial into the chemical treatment of growing turf began in late September. This is aimed at collecting efficacy data on various chemicals for quarantine treatment of turf, including rates of chemical degradation in soil, which will be used to review current turf treatment requirements to mitigate fire ant spread and amend chemical permits, if required. Preliminary results should be available in the second quarter.

Remote sensing surveillance (RSS)

Field trials to capture local imagery of infested areas were completed in early September 2019. Almost 900 ha was surveyed by the image capture system, with more than 4 500 points of interest (nests, rocks, logs, manure, bare soil, etc.) also photographed. GPS (high accuracy differential GPS) data was collected at ground level for evaluating the aerial image. Preliminary examination of the imagery shows very high resolution data and positive detection of fire ant nests by a combination of the sensors. Further preliminary analysis will be provided in the second quarter report. The data will now be used to develop a suitable algorithm for fire ant nest detection, including an inbuilt machine learning function.

Quality management

During this quarter the program developed and implemented its quality management framework. A protocol for the management of significant boundary, polygyne, eradication area and other high-risk detections has been developed. Following this, training will be provided to program officers in November 2019.

A surveillance protocol will be developed in line with the 2020–21 surveillance plan by May 2020. A treatment plan was developed and approved ahead of the treatment season. A treatment policy and protocol were also developed, but are pending approval subject to edits to include information about toxicant baits.

Field staff induction training was reviewed prior to the commencement of the treatment season. Training will be delivered to new contract field staff in October 2019. A series of in-depth refresher training modules will also be delivered to all field staff to ensure treatment and surveillance implementation occurs in accordance with the approved program treatment plan, schedules, policy, protocols and procedures.

With treatment activities commencing on 16 September 2019 treatment coverage has been closely monitored to quickly identify and address gaps. Thus far, 22 472 ha of the Western Boundary Area has been treated and 1400 ha has been identified as gaps that require attention. The majority of the gaps are due to bait permit restrictions that prevent the use of bait in cropping areas. Options for managing affected properties are being investigated.

Clients who have refused treatment on their properties are also being managed and an action plan, which may involve enforcing powers of entry, is being developed. There have been a small number of process errors identified that are contributing to the gaps. Measures are being implemented to prevent them occurring throughout the treatment season.



Program administration

Biosecurity Queensland will continue to administer the program efficiently and in accordance with public sector administration best practice. Program administration activities will continue to enable resources and capabilities to be utilised effectively and contribute to realisation of the Ten-Year Eradication Plan.

Efficiency and effectiveness audit

The efficiency and effectiveness audit review is still being undertaken and is expected to be finalised by the end of December 2019.

Governance and operational planning and procurement audit

During this quarter, staff were introduced to a new program, 'Agile Wall', to support the development and monitoring aspects of strategic and operational planning. This method has been positive with adoption by various sections within the program.

An ongoing review is occurring for business processes and data to ensure relevant data is captured for reporting purposes. This is currently being evaluated and will inform and improve planning outcomes. A Project Board was established to govern the self-management project and a Planning Review Group will focus on ongoing planning throughout the treatment season.

Business improvement plan

The program has developed and now maintains a Business Improvement Plan in order to identify efficiencies, track improvement strategies and report on progress. This document is a standing agenda item in the monthly management meetings. Internal auditors have been working with the management team to define a suite of key performance indicators that will be used as the basis for monitoring the progress and effectiveness of the program.

The Business Improvement Plan highlights and addresses:

- recommendations from internal audits
- improvements identified in the program risk and issues registers
- improvements identified in the program internal control reviews
- improvements identified in the program Work Plan, Treatment Plan and Business Plan, once finalised
- improvement and innovative opportunities identified during business-as-usual tasks
- issues and improvement opportunities raised through complaints management
- ongoing proactive approach to activity-based costing in order to improve budget development activities.

The Business Improvement Plan will continue to be reviewed and revised over the life of the program.

Procurement

During this quarter, consistency across processes has been improved and corrective actions applied. A Contract Management Framework is being implemented within the program which is aligned to ongoing education to managers and staff regarding compliance and key processes. The following is also being implemented:

- Contract Management Plans for >\$150 000 and non-routine contracts drafted.
- Contract Management Plans identify key responsibilities and separation of duties operations in relation to contract management.
- Contract Management checklists being implemented for all procurement activities <\$150 000.
- Risk assessments are being completed for all activities this includes contract risk assessment developed as part of the contract management framework and contract management plan.
- Contract risk assessment managed through the contract lifecycle as part of the contract management framework and contract management plan.



Human resources

Human resources is a vital component to the program's functionality. In 2018–19, change management workshops were completed by a number of staff including the management team. Subsequent workshops were delivered during this quarter with participation from all program managers. There was also a focus on the alignment with the 2019-20 Work Plan and Section Plans (currently under development) to reflect performance and development agreements.

Managers have been visiting all the depots and monthly field Team Leaders meetings have been reinstated to enable the sharing of information and experience relating to the operational environment between geographically dispersed operational field teams. The monthly manager's meetings will also occur at various depots.

The staff breakfasts will continue this financial year on a regular basis. This provides additional opportunities for Executive and Senior management to inform staff about program progress and to address staff queries and concerns.

Workplace Health and Safety

In the first quarter four incidents were reported—two minor incidents with only one requiring first aid, one near hit miss and one major incident which resulted in lost time. This is a significant reduction of incidents in comparison to the 64 incidents that occurred in 2018–19 during the first quarter. This is directly related to the increase in training that occurred in the last financial year.

Program policy

Biosecurity zones realignment

Realignment of the fire ant biosecurity zones to support the Ten-Year Eradication Plan's treatment activities is underway. A policy proposal to support the regulation amendment to change the current zone boundaries and improve movement controls will be considered by the program Steering Committee in late 2019.

Program business plan

The program business plan is being developed. The initial focus on re-defining Area 2 is being progressed through consultation with relevant business areas and the preparation of maps showing land uses, topography and satellite imagery. It is anticipated that Area 2 will be defined by March 2020 to enable planning for the 2020–21 treatment season. Further detail will be provided to the Steering Committee for consideration as the process progresses.

Risk mitigation self-assessment tool

A nursery self-assessment tool is being drafted to mitigate risk and will be reviewed by the program's National Exotic Invasive Ant Scientific Advisory Group (SAG) before being provided to the Nursery and Garden Industry Queensland for their comment.

Program governance

The program provides funding and administrative support to several advisory bodies that assist in achieving the Ten-Year Eradication Plan's objectives through providing guidance on program operations.

Steering Committee

The program's Steering Committee held its ninth meeting on 22 August 2019, in Brisbane. The program informed the Steering Committee of its west to east strategy, operational strategy, progress in the eradication area and risk controls pertaining to compliance activities. A presentation was delivered by a member of the Australian Environmental Pest Managers Association on behalf of the pest management industry, including a narrative on their ability to assist the program with pest management.



The Steering Committee noted the program's financial performance report as at 30 June 2019, with the final expenditure amount below the projected year-to-date figure. It was agreed that the underspend funds from 2018–19 of \$5.226 million would be carried forward to facilitate treatment during 2019–20.

Risk Management Sub-committee

At the Risk Management Sub-Committee meeting on 17 July, the revised Risk Management Plan (RMP) was presented and feedback was provided. Final endorsement was obtained from the Sub-committee out-of-session and approved by the Steering Committee at their August 2019 meeting.

The first risk management reporting milestone (reviewing risks) was achieved. This has been met by Management reviewing risks and discussions held at their meetings on a regular basis.

The report will be submitted to the Steering Committee at their next meeting in November 2019. Since new management has commenced, the RMP, risk and issues register have been reviewed and developed. The program is now meeting reporting requirements consistently.

Finance

As at 30 September 2019 the program financial expenditure was below its projected figure by \$3.3 million. Material program variances include underspends relating to treatment costs including \$1.533 million in bait, \$970 000 in labour hire contractors and \$628 000 in aircraft hire (total \$3.131 million) (See Table 2).

Variance in the treatment costs reflect a delay in the commencement of treatment by two weeks. The budget to 30 September aligns with the program's original treatment planning which anticipated 54 000 ha of treatment completed. Actual reporting from FAMS shows completion of 32 554 ha - a gap of 21 446 ha. The timing of the program's treatment budget will be adjusted to reflect the program's treatment plan in the next quarter. The revised timing of treatment factors in the two week delay in commencement, with no changes to overall treatment areas or total ha.

The program has initiated fortnightly treatment season meetings to plan, review and monitor progress as well as determine the effectiveness of the activities outlined in the 2019–20 treatment plan to ensure the overall objectives are met.

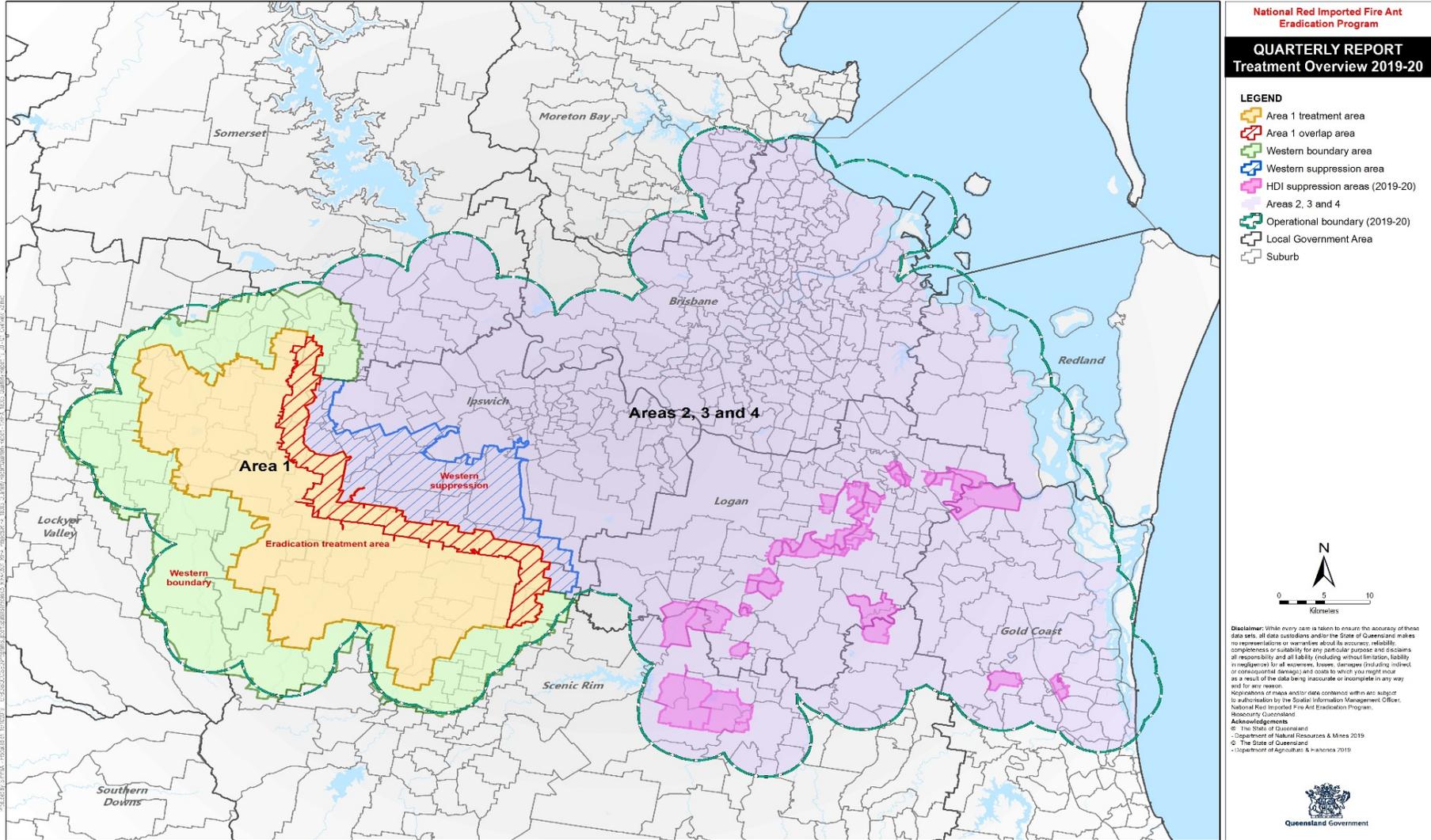
The 2019–20 original budget consists of \$39.305 million in accordance with the approved Ten-Year Eradication Plan's budget. An additional \$13.039 million in funds was brought forward from later years for treatment of the western boundary and \$5.229 million in unspent funds was from 2018–19. The requested funds for all program activity is \$70.2 million and is awaiting Steering Committee approval.

Table 4: Budget and Finance First Quarter 2019–20

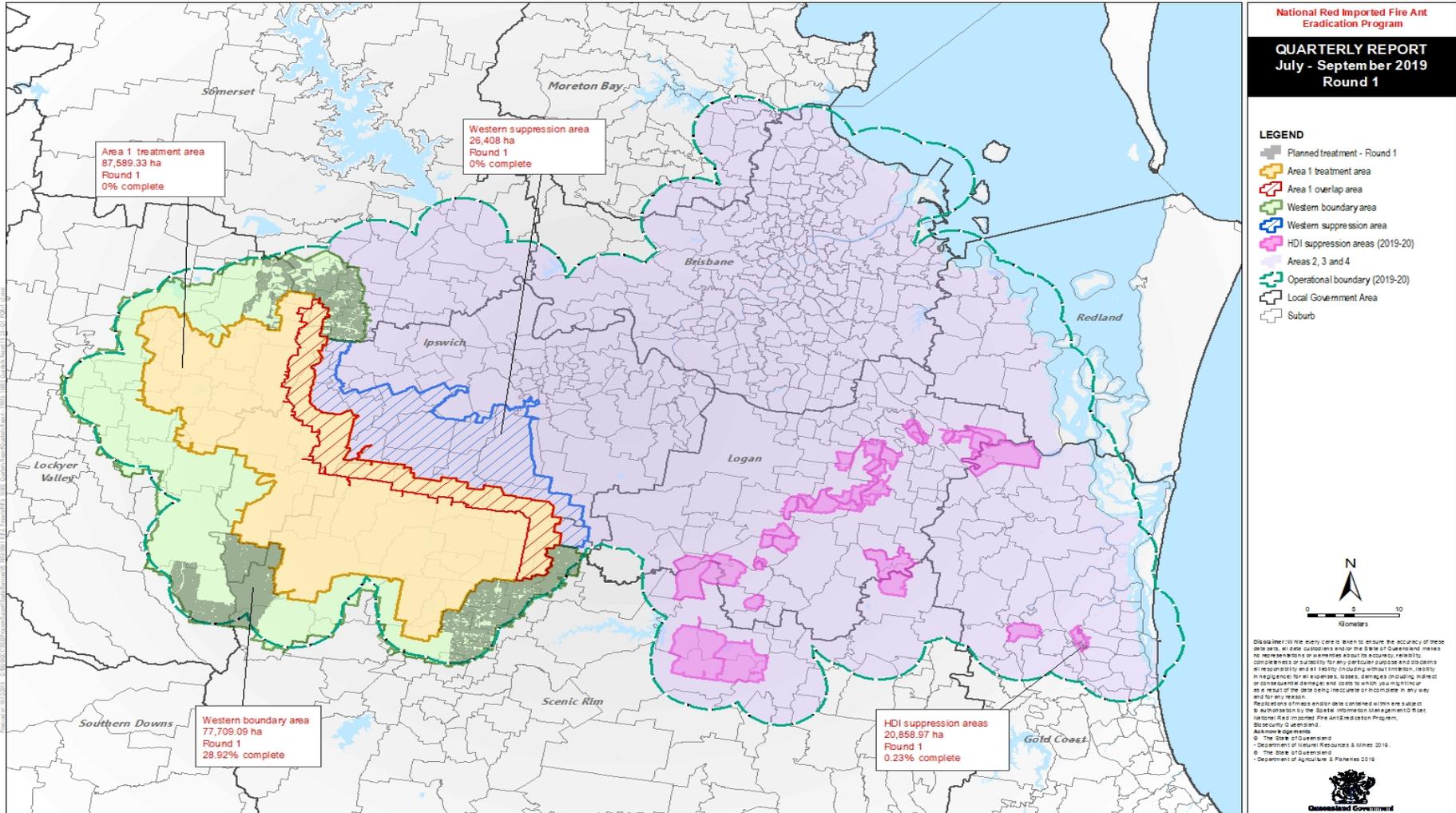
Program Area	2019–20 Requested budget *	2019–20 Current Budget	YTD Budget	YTD Actual	Variance
Program Logistics & Business Support	4 242 886	4 013 997	822 985	814 761	8 223
Remote Sensing Surveillance R&D	1 217 189	1 217 189	373 752	300 072	73 680
Systems & Technology Innovation	3 404 353	2 251 158	410 242	522 106	-111 863
Community & Stakeholder Engagement	1 932 503	1 952 503	410 200	357 311	52 889
Science Services & Eradication Assessment	2 137 997	2 137 998	480 525	440 516	40 009
Operations	52 548 009	41 222 960	8 725 669	5 454 925	3 270 743
Directorate	879 943	864 998	196 490	194 628	1 863
Self-Management	1 459 961	1 459 961	119 524	116 670	2 854
Strategic Policy, Performance & Compliance	2 381 140	2 452 235	512 931	473 711	39 221
Total	70 203 982	57 573 001	12 052 318	8 674 699	3 377 618

*2019–20 Budget has not yet been approved by the program's National Steering Committee.

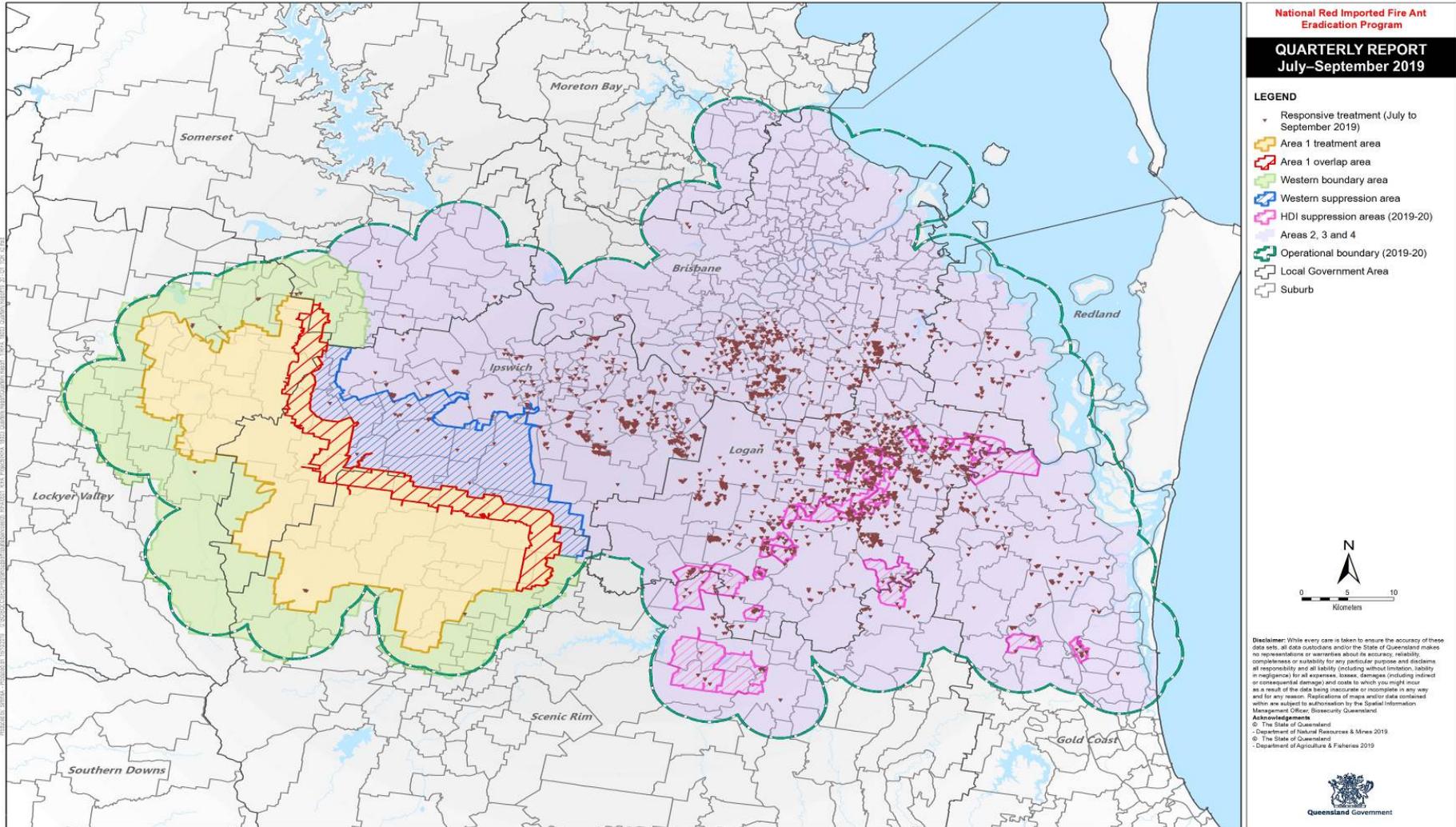
Appendix 1: Overview Map



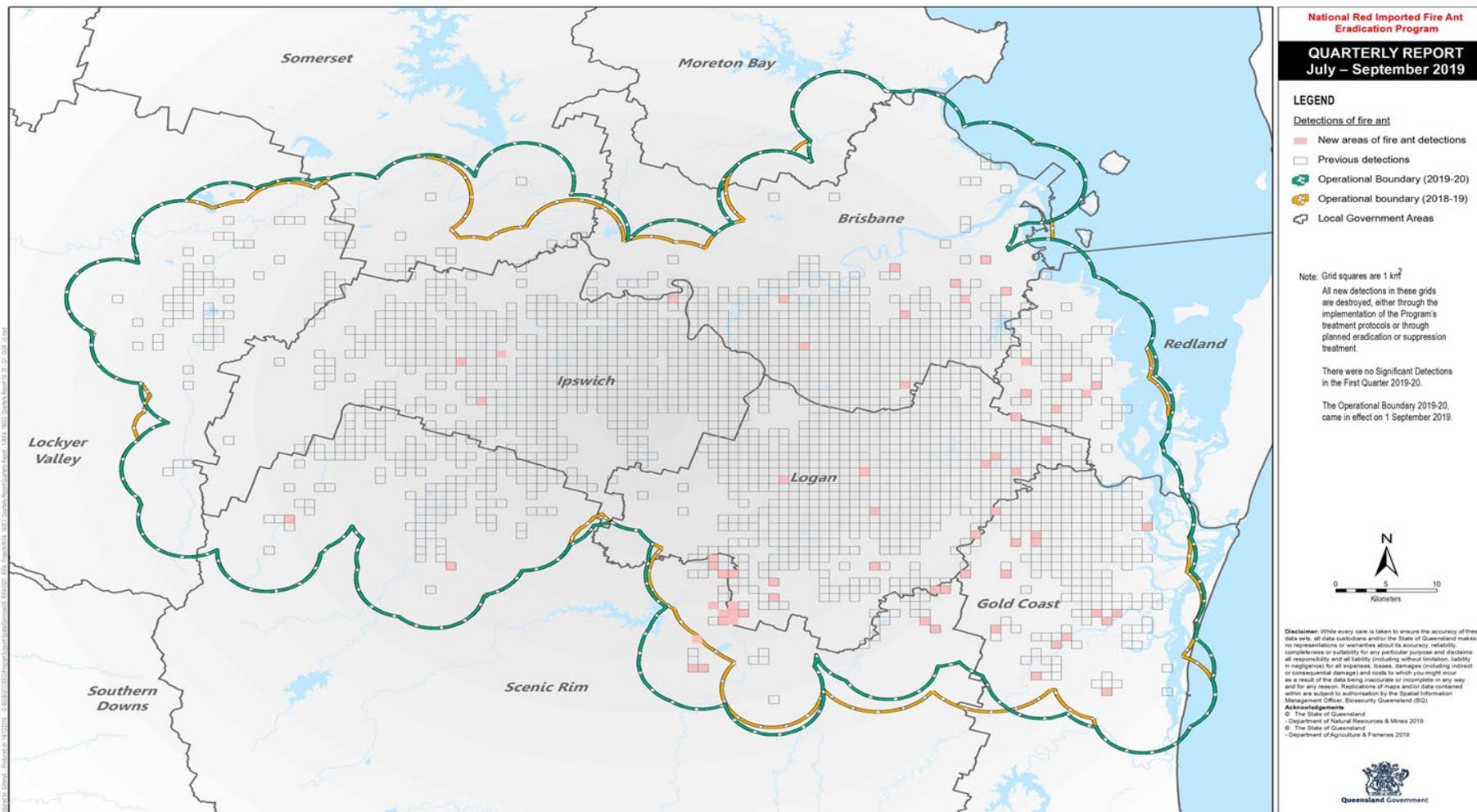
Appendix 2: Map of planned treatment: Q1 2019–20, Round 1



Appendix 3: Map of responsive treatment: Q1 2019–20

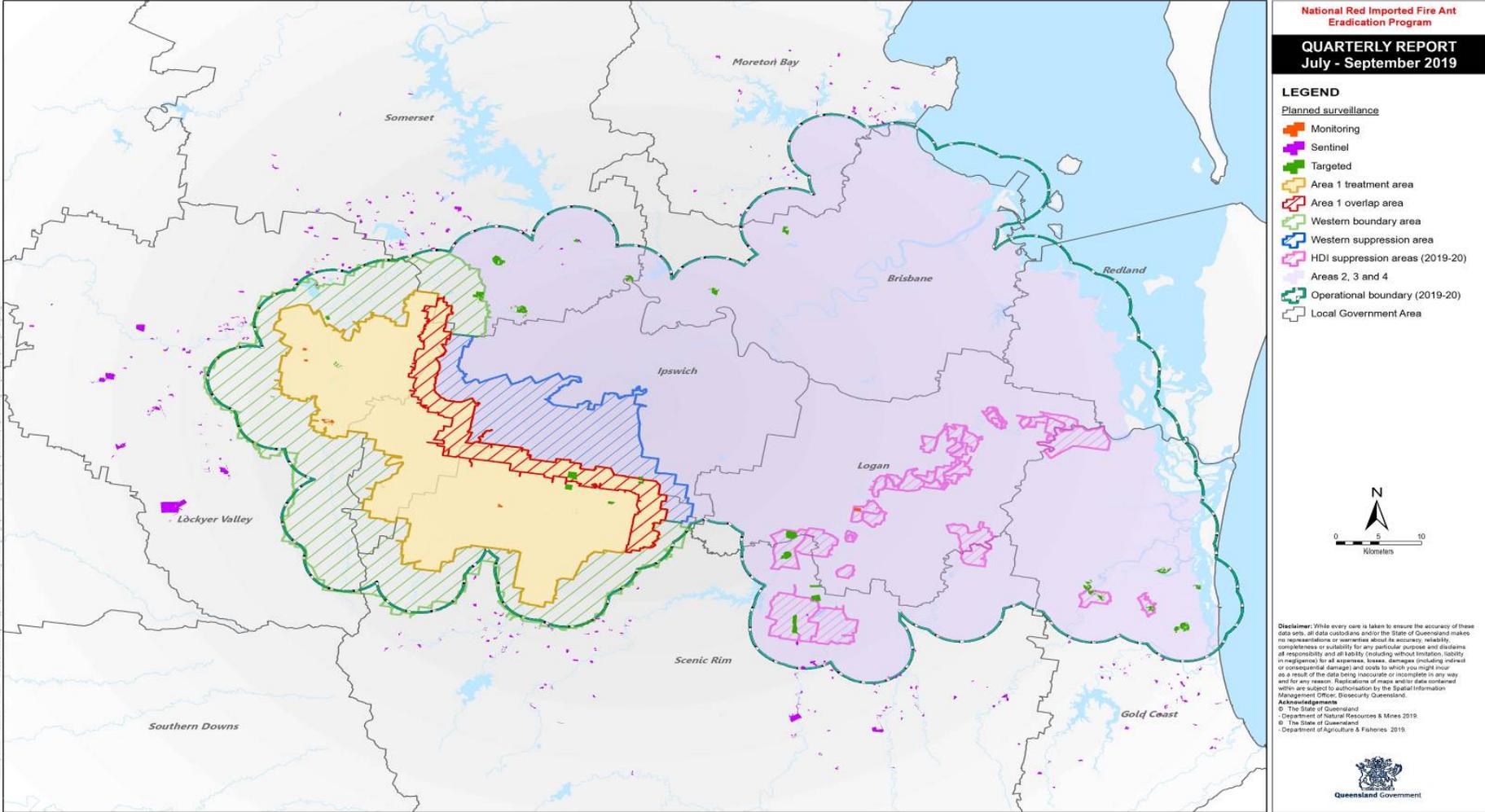


Appendix 4: Map of new detections: Q1 2019–20





Appendix 5: Map of planned surveillance: Q1 2019–20



Appendix 6: Map of significant detection: Q1 2019–20

