



MPI Passenger Compliance Monitoring Report

Auckland, Christchurch and Wellington International
Airports, May to June 2013

MPI Technical Paper No: 2013/29

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ISBN No: 978-0-478-42034-0 (online)
ISSN No: 2253-3923 (online)

September 2013

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1 Executive Summary

The number of overseas air passengers arriving into New Zealand is steadily increasing and this trend is expected to continue upward. In the 2012-13 financial year, the Ministry for Primary Industries (MPI) processed over 4.9 million passengers. The three major airports (Auckland, Christchurch and Wellington) processed 96% of all arriving passengers.

The MPI airport processing model involves two passenger segments: relatively low-risk New Zealand and Australia (NZ/AU) passport holders, and higher-risk Rest of World (RoW) passport holders. NZ/AU passport holders are risk assessed and can potentially exit the airport without having their baggage x-ray screened or inspected.

To support this targeted approach, MPI must demonstrate that 98.5% of passengers comply with biosecurity requirements by the time they exit the airport. Measuring whether or not the passenger compliance target is achieved requires a full inspection of baggage of randomly selected passengers at the end of the clearance process.

To determine whether or not the compliance target was achieved for the 2012-13 financial year, a survey was conducted at Auckland, Christchurch and Wellington airports from 6 May to 21 June 2013. The survey was carried out by a small, dedicated team of Quarantine Inspectors (QIs) supported by external contractors. Non-personal passenger information, information about any non-compliant risk goods found and the number of passengers using each airport exit were recorded.

The results of this survey have shown that MPI has not met the compliance target. However, there has been improvement in the national compliance rate since the 2012 survey. The compliance rate for 2013 survey is 96.9%, compared with the lower rate of 95.3% in 2012. There has been an improvement also in the Christchurch International Airport compliance rate, from 90.1% in 2012 to 96.4% this year.

The improvement is, in part, due to actions taken in response to the 2012 survey recommendations. The actions included refresher and risk assessment training delivered to QIs in Christchurch. In addition a new process for risk assessment and treatment of footwear was implemented, along with the strengthening of management systems to ensure processes have clear ownership and are performing to required standards.

An independent review of the survey methodology, survey delivery, survey design and analysis was carried out by Colmar Brunton. They concluded that the survey methodology and results were robust.

Evidence in this survey indicated that passenger segmentation and profiling activities were broadly correct for Green Lane. Recommendations have been made to continue existing work that is focused on improving inspection and x-ray screening processes.

2 Recommendations

MPI should:

1. Leverage the replacement of x-ray machines and new software to increase the identification of detectable risk goods.
2. Continue to focus on the deployment of a national approach for inspection and implement measures to ensure ongoing consistent application.
3. Review import health standard requirements and undertake risk analysis for those goods identified as being potentially negligible risk.
4. Review and update the Ministry's compliance strategy for passengers utilising Green Lane and/or carrying used equipment. The review should consider opportunities to increase voluntary compliance through changes at all stages of a passenger's journey to New Zealand.

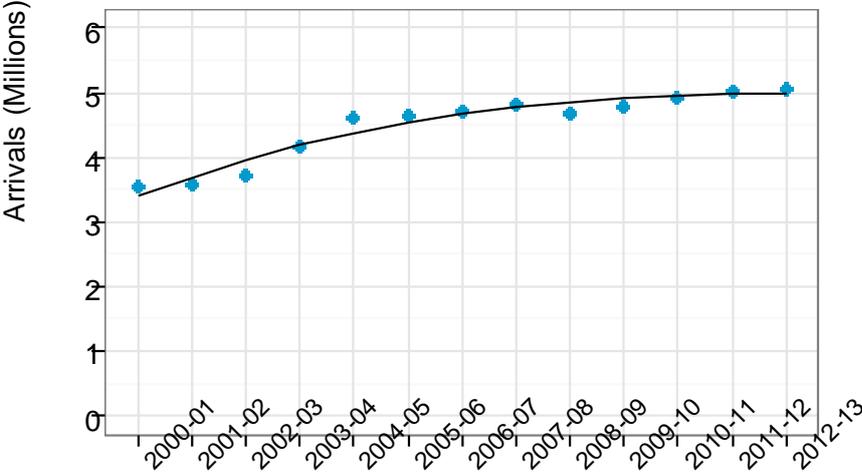
3 Introduction

The Ministry for Primary Industries (MPI) manages biosecurity risk to mitigate impacts on New Zealand’s economy, environment and social and cultural values from harmful organisms that may establish here. A variety of different risk goods are assessed for biosecurity risk on the passenger pathway, including food of various kinds, used sporting equipment, animal equipment, and gifts and souvenirs. The biosecurity risks associated with these items are diverse, and include a broad range of pests and pathogens.

MPI manages both declared and undeclared risk in the passenger pathway. A range of interventions are deployed to achieve this goal, with a overall focus on increasing voluntary compliance. These include communication of requirements, deployment of tools at the border to detect risk goods, and penalties for non-compliance. In addition to these border activities, biosecurity surveillance for risk organisms is conducted at a range of sites, including areas surrounding ports and airports.

In 2012-13, over 4.9 million passengers arrived, were risk assessed and processed through MPI’s risk management and verification systems: an average of over 400,000 passengers per month. The long-term trend with respect to air passenger arrival numbers is upwards (Figure 1) and is forecast to continuing increasing at an average rate of 2.5% per annum between 2011 and 2016 (Ministry of Economic Development).

Figure 1 Number of overseas air passengers and crew arriving into New Zealand between 2000-01 and 2012-13.



In August 2009¹, there was a directive from the Prime Ministers of New Zealand and Australia to facilitate the transit of low-risk trans-Tasman passengers. To support this more targeted approach, Cabinet agreed that MPI could remove the requirement to inspect or x-ray screen the baggage of eligible arriving Australian and New Zealand passengers. This requirement was replaced with the use of a range of biosecurity risk management tools and a compliance output standard: MPI must demonstrate that 98.5% of all passengers are compliant with biosecurity requirements by the time they depart the airport.

¹ <http://www.johnkey.co.nz/archives/788-JOINT-STATEMENT-BY-PRIME-MINISTERS-RUDD-AND-KEY.html>

3.1 MPI PASSENGER PROCESSING MODEL

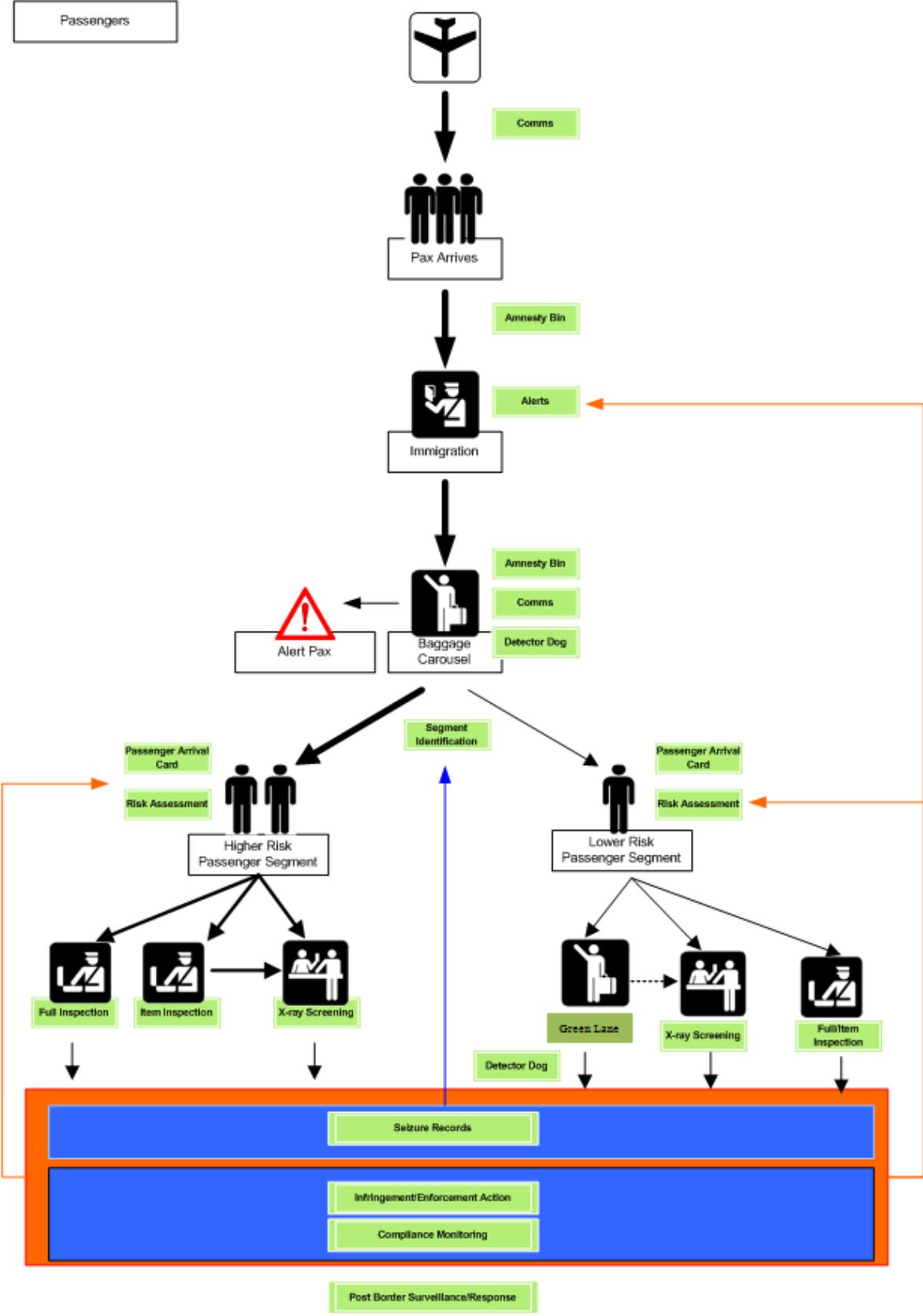
MPI applies interventions at a range of points in the passenger arrival process to manage biosecurity risk. Figure 2 provides an overview of the interventions currently applied in the passenger pathway. Prior to arrival, alerts are placed on known offenders or passengers who have infringed previously, and, after immigration processing, these passengers may be directed to the full search area. All passengers are exposed to communications describing biosecurity requirements. All passengers are required to fill in the Passenger Arrivals Card (PAC) before arriving.

Upon arrival all passengers pass through immigration and collect their baggage from the carousel. During this process, passengers can dispose of risk goods in Amnesty Bins and may be screened by detector dogs. All passengers are then assessed by a Quarantine Inspector and will either be referred to full inspection, x-ray, item inspection or, if eligible, may be cleared to use the Green Lane exit.

Where items are inspected, the passenger is able to retain the item if it meets the requirements in the relevant Import Health Standard, or items may be treated or destroyed. Items may also be held at the airport for the passenger to retrieve on their departure.

Since late October 2010, passengers have been processed in two segments: relatively low-risk New Zealand and Australian (NZ/AU) passport holders, and higher-risk Rest of World (Row) passport holders. The NZ/AU passenger segment is risk assessed, and if these passengers are deemed to be low-risk they may be allowed to exit the airport without their baggage being x-ray screened (via Green Lane). Detector dogs also screen passengers in Green Lane at Auckland, Wellington and Christchurch International Airports.

Figure 2 Current MPI passenger processing model



3.2 PASSENGER COMPLIANCE MONITORING APPROACH

The last stage in the airport clearance process is compliance measurement. Measuring passenger compliance requires a full inspection of baggage of randomly selected passengers at the end of the biosecurity clearance process. Full inspection is the most effective method of detecting all risk goods in passenger baggage. Other intervention tools, such as x-ray and detector dog screening, cannot be used to determine if all risk goods in a passenger's baggage have been managed because they are effective on a subset of risk goods only.

The compliance target of 98.5% is a national target. However, it is not practical to sample at the smaller airports and so the survey included only the three major airports; Auckland, Christchurch and Wellington, which together account for 96% of arrivals.

To measure passenger compliance, surveys have been regularly conducted by qualified MPI staff. Prior to 2012 a dedicated survey team conducted surveys at Auckland in January and February each year. In 2012, a survey was conducted at Auckland, Wellington and Christchurch airports during May and June 2012.

The compliance rate for the 2012 survey was considerably lower than the compliance rates for the 2007-2011 surveys (Table 1). The lower compliance result in 2012 relative to past surveys may have been due to changes in the survey delivery along with the different time of year at which the survey was undertaken. The types of goods arriving, flight origin, and other factors can vary on a seasonal basis.

The overall compliance rate does not account for the different levels of risk posed by different types of risk goods. When low-risk goods are excluded, the high/medium compliance rate for 2012 was comparable to rates from earlier surveys.

Table 1 Compliance Monitoring Results from 2007 – 2012 (from the 2012 compliance monitoring report)

| | 2007 | 2009 | 2010 | 2011 | 2012 |
|---|---------------|--------------|--------------|---------------|---------------|
| Compliance rate | 98.4% | 98.6% | 98.1% | 98.6% | 95.33% |
| 95% confidence interval | 98.1% – 98.6% | 98.1 – 98.9% | 97.5 – 98.5% | 98.2% - 98.9% | 94.7% - 95.7% |
| High/medium- risk good compliance rate | 99.2% | 99.2% | 99.5% | 99.5% | 98.94% |
| 95% confidence interval | 98.9 - 99.3% | 98.9 – 99.4% | 99.3 – 99.7% | 99.3% - 99.7% | 98.6% - 99.1% |

Eight recommendations were made from the 2012 Passenger Compliance Monitoring survey and action was undertaken to address all recommendations. These actions are outlined in the Appendices Section 8.2.

Recommendation 3 from the 2012 survey was to determine how MPI would design future monitoring activities that deliver national results and ensure a planned and considered approach. This recommendation was completed and the following changes were implemented for the 2013 survey:

- A small dedicated team of QIs (known as Performance Assurance Quarantine Inspectors - PA QIs) was established for carrying out surveys. The team was trained on survey methodology and inspection procedures. In order to reduce potential bias, PA QIs generally did not conduct compliance monitoring surveys at their home site.

- Existing moderation processes were formalised with the additional of a more rigorous review including risk analysis and regulatory experts to ensure that non-compliance was determined correctly against the relevant Import Health Standard (IHS) and to ensure PA QIs made consistent decisions about which goods were non-compliant².
- An independent review of the survey methodology, survey delivery, survey design and analysis was carried out by Colmar Brunton.

The 2013 survey was conducted at Auckland, Christchurch and Wellington airports between 6 May and 21 June. Information about passengers, potential slipped goods and the numbers of passengers using each airport exit was recorded.

4 Objectives

This survey was carried out:

- To determine whether the air passenger pathway meets the 98.5% compliance standard.
- To identify areas for improvement.
- To enable comparisons with previous survey results.

² Moderation for Border Compliance Monitoring Surveys. docx

4.1 NUMBER OF PASSENGER ARRIVALS AND NUMBER OF PASSENGERS SURVEYED

Over the survey period 155,124 passengers and crew arrived at the three largest airports (Table 2). Nationwide, 4.4% of the total passengers arriving (6,816 passengers) were surveyed.

Table 2 Number of passengers arriving and number of passengers surveyed at Auckland, Christchurch and Wellington International Airports

| | Auckland | Christchurch | Wellington | Total |
|------------------------|----------|--------------|------------|---------|
| Passenger arrivals | 115,178 | 25,834 | 14,112 | 155,124 |
| % of arrivals | 74% | 17% | 9% | 100% |
| Number surveyed | 3271 | 2536 | 1009 | 6816 |
| % of arrivals surveyed | 2.8% | 9.8% | 7.2% | 4.4% |

The proportion of passengers processed at each exit is consistent with the demographic of passengers arriving at each airport. Flights into Wellington are predominantly trans-Tasman and have a higher proportion (56%) of New Zealand and Australian passport holders who are eligible for Green Lane when compared to Christchurch and Wellington (Table 3).

In comparison to the 2012 survey when Christchurch had a significantly higher percentage of passengers being sent to 'item inspection then exit' and 'full inspection', this year the proportions are broadly consistent.

Table 3 Number and percentage of passengers using each airport exit at Auckland, Christchurch and Wellington during the survey period.

| | Auckland | Christchurch | Wellington | Total |
|---|----------|--------------|------------|---------|
| Pax in green lane | 49,804 | 10,189 | 7,949 | 67,942 |
| Pax x-ray screened | 48,191 | 12,269 | 5,413 | 65,873 |
| Item Inspect then exit ³ | 5,166 | 852 | 359 | 6,377 |
| Item Inspection then x-ray ⁴ | 10,216 | 1,950 | 247 | 12,413 |
| Full inspection | 1,392 | 432 | 64 | 1,888 |
| Referred to NZCS ⁵ & undetermined ⁶ | 409 | 142 | 80 | 631 |
| Total | 115,178 | 25,834 | 14,112 | 155,124 |
| % in green lane | 43.2% | 39.4% | 56.3% | 43.8% |
| % x-ray screened | 41.8% | 47.5% | 38.4% | 42.5% |
| % item Inspection then exit | 4.5% | 3.3% | 2.5% | 4.1% |
| % Item Inspection then x-ray | 8.9% | 7.5% | 1.8% | 8.0% |
| % in full inspection | 1.2% | 1.7% | 0.5% | 1.2% |
| % referred to NZCS & undetermined | 0.4% | 0.5% | 0.6% | 0.4% |

³ Known as NZ AU item inspection in the 2012 monitoring survey

⁴ Passengers through this exit was included in the x-ray screening exit in the 2012 monitoring survey

⁵ NZCS is New Zealand Customs Service

⁶ Code notation on the PACs did not clearly define exit type.

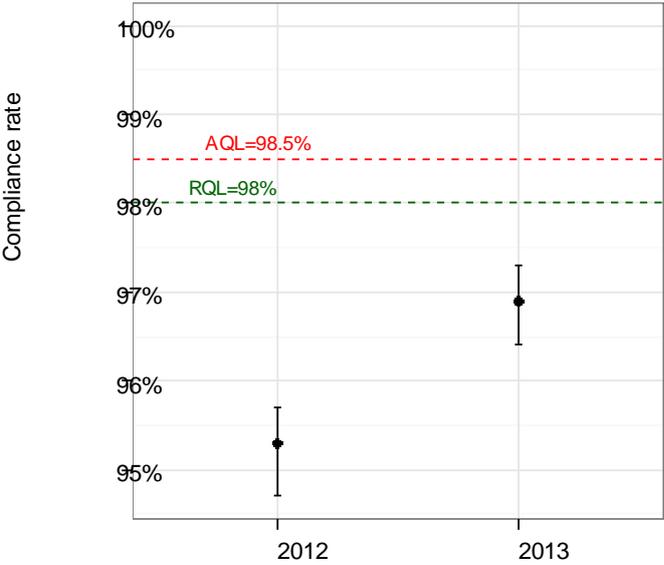
5 Results

5.1 OVERALL COMPLIANCE RATE

In 2013 the overall compliance rate across the three major airports combined was 96.9% (CI 96.4% – 97.3%⁷). This, and the compliance target of 98.5%, is shown in Figure 3. MPI has not met the compliance target. For MPI to have achieved the target the lower confidence limit would have needed to be on or above the RQL (98%) and the overall compliance rate would have needed to be on or above the AQL (98.5%). (See Appendix 8.4.2 for an explanation of RQL and AQL.)

When compared to the 2012 survey results, there has been an improvement in the compliance rate from 95.3% (2012) to 96.9% (2013). Some of this improvement is due to actions taken as a result of recommendations from the 2012 survey, in particular the implementation of a new process for the risk assessment and treatment of footwear. Christchurch International Airport had a particularly poor result in 2012 and some of the implemented recommendations, including refresher and risk assessment training for QIs, were specific to Christchurch. The improvement at Christchurch has been large relative to the other airports and this will have contributed to the improvement in the overall compliance rate.

Figure 3: Overall compliance rates in 2012 and 2013.



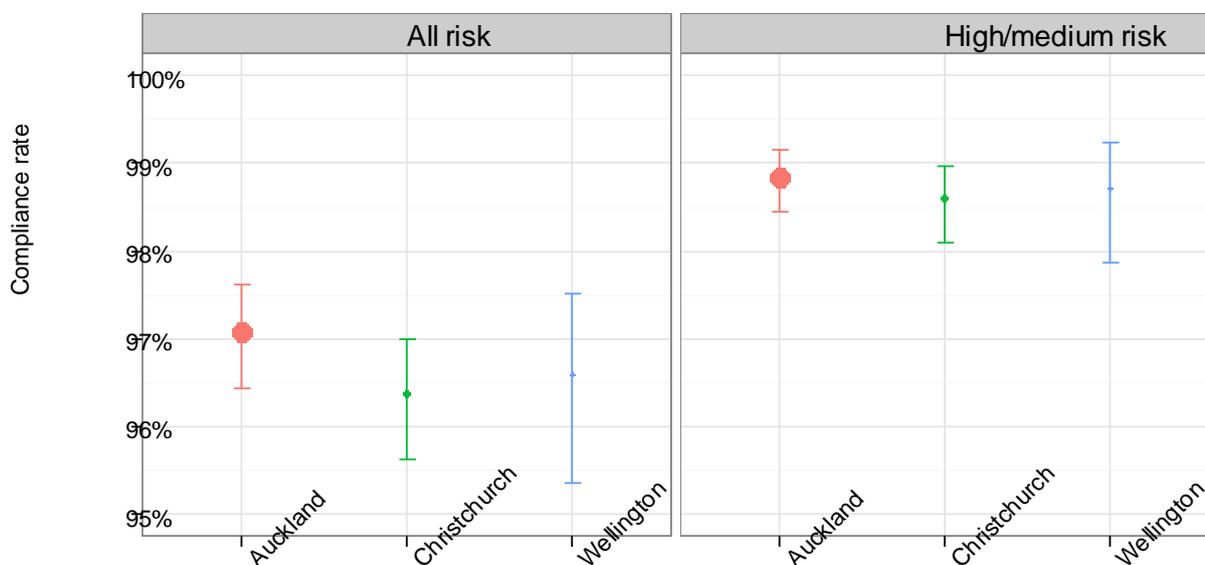
When low-risk goods are excluded, the compliance rate for passengers carrying risk goods classified as medium to high risk was 98.8% (CI 98.5% - 99.0%); many of the passengers processed through the system are carrying risk goods classified as low risk. This result is broadly consistent with 2012 (98.9%) and earlier results.

⁷ For the purposes of this survey, statistical significance is at the standard level of 5%, and so all confidence intervals are 95% confidence intervals.

5.2 COMPLIANCE RATE BY AIRPORT

There was no statistically significant difference between the compliance rates at the individual airports⁸ (see Figure 4). This is in contrast to 2012 where Christchurch had a significantly lower compliance rate (90.1%) compared to Auckland and Wellington. This improvement for Christchurch (to 96.4%) is, in part, due to actions taken in response to the 2012 survey recommendations. These actions included refresher training and risk assessment training being delivered to Christchurch QIs, the new national process for risk assessment and treatment of contaminated footwear, and the strengthening of management systems to ensure processes have clear ownership and are performing to required standards.

Figure 4 Compliance rates at individual airports⁹



When low-risk goods are excluded, the compliance rate for passengers carrying medium to high risk goods is consistently high for each airport and is broadly consistent with the 2012 survey results.

⁸ See Table 4 for compliance figures and confidence intervals

⁹ The size of the points is proportional to the number of passenger arrivals at each airport

5.3 COMPLIANCE RATE BY EXIT TYPE

Green Lane Exit

The compliance rate for the Green Lane exit is nominally higher than the compliance rate for the x-ray exit (Figure 5), although this difference is not statistically significant¹⁰. For high/medium risk goods, the compliance rate for Green Lane is higher than for x-ray and this difference is statistically significant. More detailed analysis of the Green Lane survey seizures indicates that 78% (CI 64% - 87%) of non-compliant passengers have seizures which are not detectable by x-ray.

Combined, these results indicate that the current passenger segmentation approach that allows eligible NZ/AU passport holders to use Green Lane following a risk assessment is broadly correct. Improvement in the compliance result for Green Lane will require consideration of opportunities to increase voluntary compliance at all stages of a passenger's journey to NZ. Simply increasing the use of the x-ray lane is unlikely to provide a significant improvement.

X-Ray Exit

The compliance rate for the x-ray exit is 96.9% (CI 96.2% - 97.6%). More detailed analysis of survey seizures after x-ray screening indicates that 52% (CI 41% - 63%) of non-compliant passengers were carrying x-ray detectable risk goods.

A number of these x-ray detectable risk goods are of a type where further risk assessment, and responses from the passenger are used before a decision is made to perform a baggage inspection. These are risk goods where the relatively common shape of the good is the only indicator available to the x-ray operator, such as jars, or footwear.

There are also other factors such as baggage orientation, and the density, size and positioning of the passengers belongings within the baggage, which can all affect the ability of the x-ray machine to show all potential risk goods. New x-ray machines are due to replace the old machines from October 2013. These machines will have improved image quality and enhanced functionality, and it is anticipated that this will improve the detection of risk items.

The x-ray replacement programme also includes the introduction of new software that allows MPI to monitor x-ray operator competency in a far more sophisticated and timely way than the current x-ray machines allow.

Recommendation – Leverage the replacement of x-ray machines and new software to increase the identification of detectable risk goods.

Inspection Exits

The remaining three exits all involve inspection to varying degrees. Of some concern is the apparently lower compliance rate for all three exits:

- Item inspection then exit 93.3% (CI 86.7% - 96.7%)
- Item inspection then x-ray 94.4% (CI 92.4% - 95.9%)
- Full inspection 93.9% (CI 89.5 – 96.6)

¹⁰ See Table 5 for compliance figures and confidence intervals

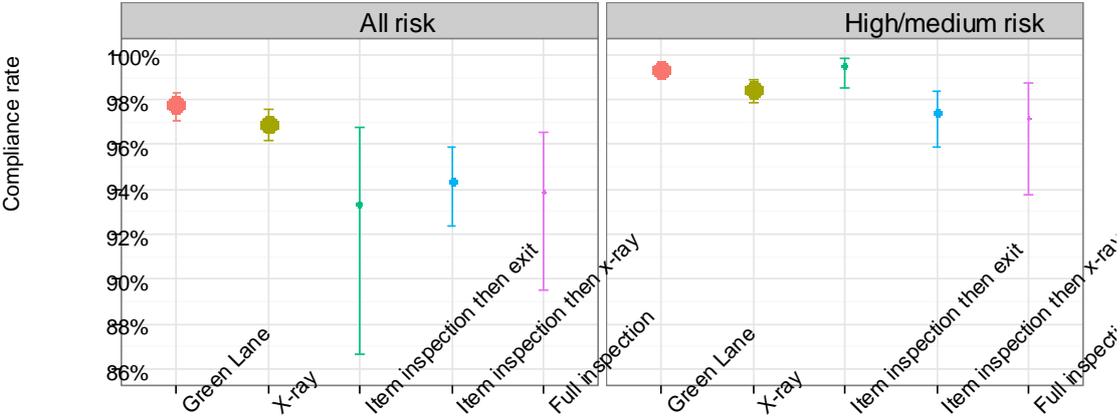
While these results do have broad confidence intervals due to the smaller sample sizes for these exits (reflecting the proportion of passengers using these exits) it is reasonable to have expected higher compliance rates because of the more intensive level of inspection at these exits.

Further analysis of survey seizures from the three inspection exits showed that the inspectors missed contaminants in otherwise conforming risk goods e.g. beetles in dried mushrooms, insects in an umu box, psocids in flax baskets. In some cases, declared risk goods were incorrectly cleared, e.g. fresh betel nuts from Papua New Guinea.

It is likely a number of factors are driving this result including current risk assessment processes, inconsistent search techniques and variable questioning of passengers. These factors are consistent with those identified through investigations completed following the 2012 survey. As a result of these investigations changes were made to strengthen management systems that ensure processes have clear ownership and are performing to required standards. These changes are still being embedded with the full benefit yet to be demonstrated in the results.

Recommendation – Continue to focus on the deployment of a national approach for inspection and implement measures to ensure ongoing consistent application.

Figure 5: Compliance rates by exit type.¹¹



5.4 RISK GOOD ANALYSIS

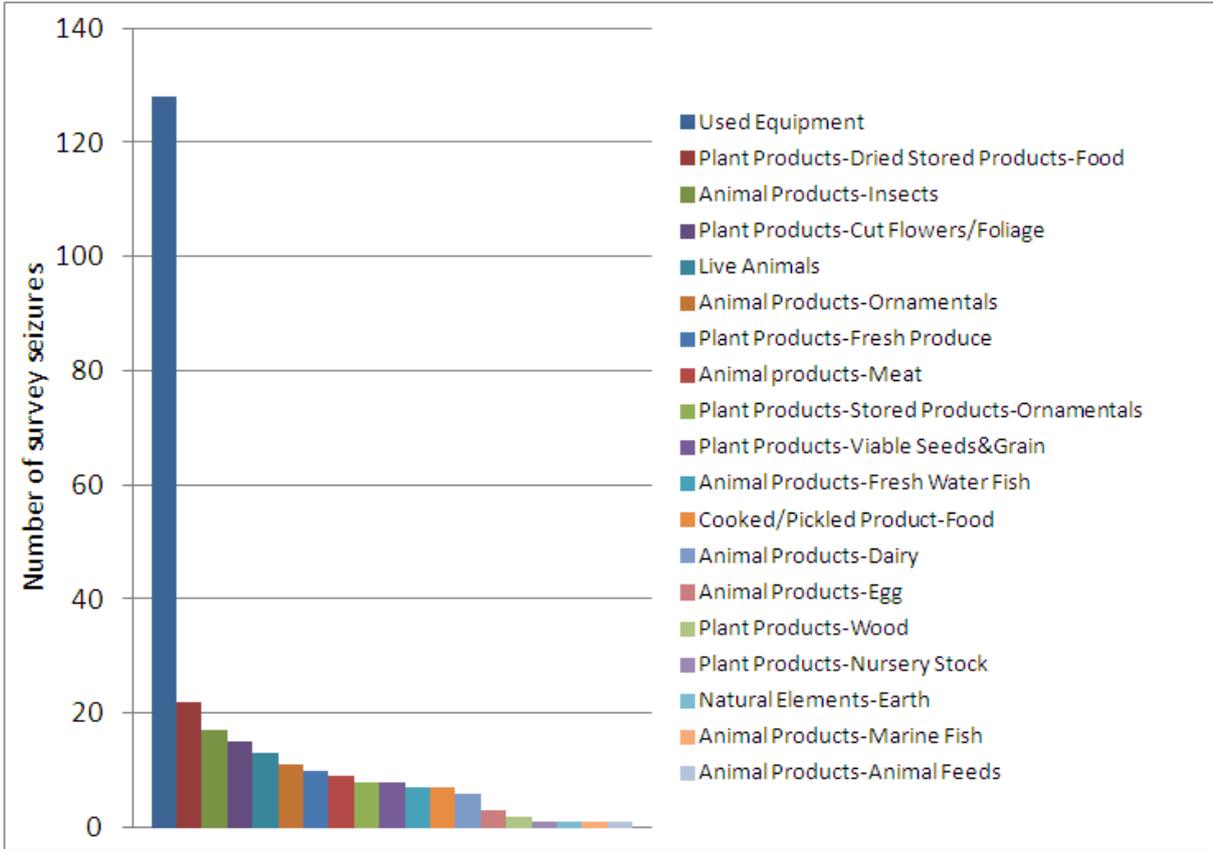
Risk goods are assigned to segments based primarily on their biological nature and their association with risk organisms and disease. Different segments require different approaches given some risk goods are more difficult to detect than others due to the limitations of detection technology.

As shown by Figure 6, the majority of the survey seizure is contaminated used equipment and therefore should continue to be a focus area for improvement.

¹¹ The size of the points is proportional to the number of passengers leaving by each exit.

Note that the survey seizures classified to the 'Live Animals' segment type were all hitchhikers, and either spiders or insects e.g. a live silverfish insect found in the packaging of a new bicycle.

Figure 6: Proportion of survey seizures made up of each segment type



Contaminated used equipment is difficult to detect through existing processes (page 10, Allison et al 2010). While the goods themselves are visible to the x-ray operator, it is impossible to determine whether or not they are contaminated without a physical examination. As with Green Lane, improvement in the compliance result for the used equipment segment will require consideration of opportunities to increase voluntary compliance at all stages of a passenger’s journey to New Zealand.

Recommendation – Review and update the Ministry’s compliance strategy for passengers utilising Green Lane and/or carrying used equipment. The review should consider opportunities to increase voluntary compliance at all stages of a passenger’s journey to New Zealand.

5.5 GOODS OF POTENTIALLY NEGLIGIBLE BIOSECURITY RISK

The moderation process¹² identified a number of survey seizures that could be considered to be of negligible biosecurity risk, resulting in goods being needlessly seized under existing IHS requirements. This can occur when the relevant IHS requires documentation that passengers (as private importers) could not be reasonably expected to provide, or where seizures may represent negligible biosecurity risk, but that are currently non-compliant under the Biosecurity Act 1993.

¹² See Section 8.4.6 for description of the moderation process

Examples include:

- Commercially prepared food such as small amounts of cheese and butter that passengers may have received in flight.
- Small amounts of dried grass, leaves and twigs found on footwear and in baggage-non-propagatable and showing no signs and symptoms of disease e.g. half a leaf in a suitcase, 5 grams of dried grass in a bag.
- Dried leaves as decoration on blocks of soap.
- Jewellery (necklaces and bracelets) made from drilled seeds

These survey seizures were included in the 2013 compliance result calculations and the passengers from whom these items were seized were counted as non-compliant passengers. There is an opportunity to review IHS requirements for private importers in relation to some goods along with undertaking further investigation into the real biosecurity risk posed by some items. Clarifying these requirements should free up resource to focus on areas of higher risk.

Recommendation – Review IHS requirements and undertake risk analysis for those goods identified as being potentially negligible risk

6 Conclusion

There has been improvement in the 2013 compliance rate since 2012, although the 98.5% compliance target was not met. The compliance rate for Christchurch has also shown a marked increase from 90.1% (2012) to 96.4% (2013).

Passenger compliance for goods classified as medium to high risk was high, achieving 98.8%. This is comparable to rates found in 2012 (98.9%) and earlier survey results. Passengers are either leaving these kinds of goods behind, declaring them on arrival, or they are detected by MPI interventions at the border

The increase in compliance rate for overall and for Christchurch is, in part, due to actions taken in response to the 2012 survey recommendations. These actions included refresher training and risk assessment training being delivered to QIs in Christchurch, a new process for risk assessment and treatment of contaminated footwear, and the strengthening of management systems to ensure processes have clear ownership and are performing to required standards.

Other actions included a review of the survey methodology, survey delivery, survey design and analysis carried out by Colmar Brunton. Their overall view was that the 2013 compliance estimates were robust.

The 2013 survey indicates that there is room for further operational improvements. For Green Lane, there is evidence that the current passenger segmentation approach, followed by QI risk assessment decisions to direct passengers to the Green Lane exit, are correct. Survey seizures found from this exit were mostly x-ray undetectable seizures. Any improvement in the compliance result for Green Lane will need to consider opportunities to increase voluntary compliance at all stages of a passenger's journey to NZ.

The new x-ray machines will provide the foundation to improve future compliance results for the x-ray exit lane, both from improved image functionality, and from the way these machines can be used develop and maintain operator competency.

Compliance rates for the inspection exits were less than expected. Higher compliance rates were expected from each exit due to the intensive level of inspections. The most common survey seizures were contaminants in conforming risk goods (e.g. beetle in dried mushroom, insects in umu box). There also cases of declared risk goods that were incorrectly cleared (e.g. fresh betel nuts).

Recommendations have been made to continue existing work that is focused on improving inspection and x-ray screening processes along with a further recommendation to investigate IHS requirements for a limited number of survey seizures that pose negligible risk but are technically non compliant.

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8 Appendices

8.1 COMPLIANCE RATES

Table 4 Compliance rates at individual airports

| | All risk | | High/medium risk | |
|--------------|---------------------|-------------|---------------------|-------------|
| | Compliance rate (%) | 95% CI (%) | Compliance rate (%) | 95% CI (%) |
| Auckland | 97.1 | 96.4 – 97.6 | 98.9 | 98.5 – 99.2 |
| Christchurch | 96.4 | 95.6 – 97.0 | 98.6 | 98.1 – 99.0 |
| Wellington | 96.6 | 95.4 – 97.5 | 98.7 | 97.9 – 99.2 |
| Overall | 96.9 | 96.4 – 97.3 | 98.8 | 98.5 – 99.0 |

Table 5 Compliance rates by exit type

| | All risk | | High/medium risk | |
|----------------------------|---------------------|-------------|---------------------|-------------|
| | Compliance rate (%) | 95% CI (%) | Compliance rate (%) | 95% CI (%) |
| Green Lane | 97.8 | 97.1 – 98.3 | 99.4 | 99.0 – 99.6 |
| X-ray | 96.9 | 96.2 – 97.6 | 98.5 | 97.9 – 98.9 |
| Item inspection then exit | 93.3 | 86.7 – 96.7 | 99.5 | 98.5 – 99.8 |
| Item inspection then x-ray | 94.4 | 92.4 – 95.9 | 97.4 | 95.9 – 98.4 |
| Full inspection | 93.9 | 89.5 – 96.6 | 97.2 | 93.8 – 98.8 |

8.2 2012 SURVEY RECOMMENDATIONS AND FOLLOW-UP ACTIONS

The 2012 passenger compliance monitoring report identified the following key recommendations;

- Immediately investigate reasons for the poor compliance results at Christchurch.
- Conduct a competency review and/or refresher training at Christchurch on requirements and how to conduct a full search.
- Determine how MPI should conduct compliance monitoring activities to ensure a planned and considered approach is taken that delivers national results.
- Investigate reasons for compliance results at all airports and instigate corrective actions where necessary.
- Determine reasons for greater inspection bench usage at Christchurch airport.
- Measure contaminants on used equipment seizures, and use to improve national consistency when reporting on passenger compliance.
- Review current requirements (including contaminant thresholds) based on the risk of goods seized on the passenger pathway.
- Use information about survey seizures to develop targeted messaging to specific audiences (travellers, airports etc) to improve management of risks.

In the past 12 months the MPI has developed pathway assurance groups whose role is to ensure processes have clear ownership and are performing to the required standards and to provide a mechanism of continuous improvement. The Passenger Process Assurance Group (PPAG) was tasked with responsibility for the ongoing monitoring and effectiveness of changes made in relation to a number of the above recommendations. The status of the 2012 recommendations and the corresponding actions are summarised in Table 6.

Table 6 Status of the 2012 recommendations

| | Recommendation | Recommendation status and completed actions |
|---|--|--|
| 1 | Immediately investigate reasons for the poor compliance results at Christchurch. | Investigation completed November 2012 <ul style="list-style-type: none"> • The investigation identified inconsistent risk assessment practices which were addressed through the delivery of refresher training as per recommendation 2 |
| 2 | Conduct a competency review and/or refresher training at Christchurch on requirements and how to conduct a full search. | Competency review completed March 2013 <ul style="list-style-type: none"> • Worked with an external provider (Competency International Limited) to develop key technical competencies and a assessment approach • Individuals and teams were assessed against the identified competencies • Individual and team professional development plans were developed • Training was prioritised across Christchurch |
| 3 | Determine how MPI should conduct compliance monitoring activities to ensure a planned and considered approach is taken that delivers national results. | Determination completed November 2012 <ul style="list-style-type: none"> • The PPAG was assigned responsibility for planning and delivery of the survey • Survey design captures statistical needs and operational feasibility and included some changes to improve the overall process • Pool of Performance Assurance Quarantine Inspectors (PA QI's) selected and trained to undertake survey activities • Colmar Brunton completed a review of the full survey methodology and were contracted to provide an ongoing independent review of the process and results |

| | Recommendation | Recommendation status and completed actions |
|---|--|--|
| 4 | Investigate reasons for compliance results at all airports and instigate corrective actions where necessary. | Investigation completed November 2012 and corrective actions are ongoing <ul style="list-style-type: none"> • The PPAG (as noted above) was established to establish national ownership of passenger clearance processes and to provide ongoing assurance that these processes are performing • The 2013/14 work plan for the PPAG will deliver further actions to improve compliance |
| 5 | Determine reasons for greater inspection bench usage at Christchurch airport. | Investigation completed November 2012 <ul style="list-style-type: none"> • The investigation identified inconsistent risk assessment activities that were resulting in greater inspection bench usage • As per recommendation 2, refresher training was delivered to address |
| 6 | Measure contaminants on used equipment seizures, and use to improve national consistency when reporting on passenger compliance. | Investigation completed April 2013 <ul style="list-style-type: none"> • Investigation revealed that the majority of used equipment seizures related to soil contamination of footwear Further analysis considering the risk posed by the range of contamination experiences resulted in a Chief Technical Officer (CTO) Direction being issued March 2013 • New operational process for the risk assessment and treatment of footwear was implemented via the PPAG in April 2013 |
| 7 | Review current requirements (including contaminant thresholds) based on the risk of goods seized on the passenger pathway. | Review is ongoing <ul style="list-style-type: none"> • A standing operational and regulatory working group has been working through issues on a case by case basis • This represents a large area of work and requires sufficient information to understand risk and compliance by commodity, the survey moderation process is designed in part to provide information to inform this. |
| 8 | Use information about survey seizures to develop targeted messaging to specific audiences (travellers, airports etc) to improve management of risks. | Development of targeted messaging is ongoing <ul style="list-style-type: none"> • Colmar Brunton completed research on the effectiveness of the Border Compliance Social Marketing Programme in June 2013. • This research has identified a number of areas where the programme will be adjusted to better target those passengers who are unaware they are carrying risk goods. • A project focused on improving voluntary compliance for Chinese passengers arriving at Airports has delivered a number of proposed improvements which are currently being assessed for feasibility and implementation. |

8.3 COLMAR BRUNTON REVIEW

Our overall view of the 2013 passenger compliance survey

Our overall view is that MPI has put considerable effort into designing a survey methodology that attempts to maximise the reliability of compliance measurement and the representativeness of the final sample of passengers. We have no hesitation in giving our independent view that the compliance estimates based on this year's methodology are robust.

It is important to keep in mind that a survey is a measurement tool, and all measurement tools contain an element of error. Within this review we provide a number of suggestions for further refining the survey methodology. We would make suggestions of this nature for any survey we review. Our general perspective is that the reduction of survey error should be a continual process, and reviews should be on-going.

METHODOLOGY

Survey teams operated at each of the three largest international airports and covered most of the flights arriving during the survey period (see Table 7). The shift patterns for each team were based on the arrival schedules and varied from airport to airport.

Table 7 Survey dates at each airport

| Airport | Survey dates |
|--------------|---------------------------------|
| Christchurch | 6 to 19 May, 14 to 20 June 2013 |
| Wellington | 6 to 20 May, 19 to 21 June 2013 |
| Auckland | 20 to 31 May 2013 |

All passengers and crew arriving on commercial flights were potential passengers for random selection and survey inspection. The passengers excluded from the survey were those fully inspected by the NZCS, passengers carrying diplomatic passports and conducting consular business, passengers exiting through special airport lounges (e.g. VIPs), passengers with alerts raised by the Intelligence and Targeting staff, and passengers suffering from genuine illness or exhibiting genuine signs of distress unrelated to the normal airport processes (e.g. suffered a death in the family). Baggage that had been mishandled by airline carriers was also excluded.

8.3.1 Survey Sampling

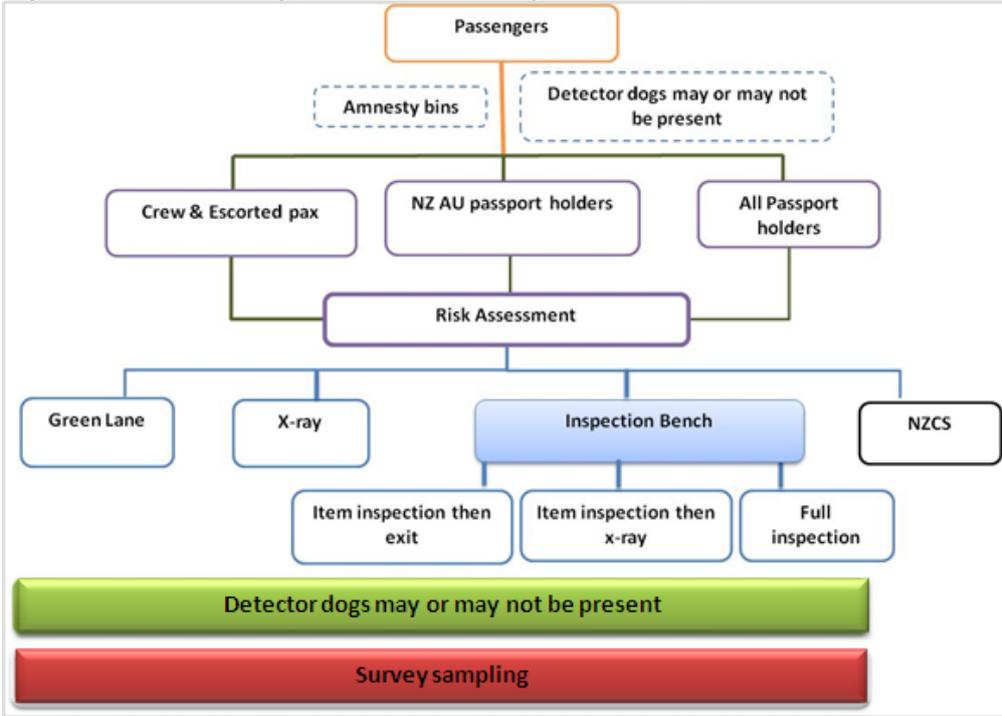
Before reaching a biosecurity risk assessment point, all passengers have had the opportunity to dispose of risk items in amnesty bins, and some may have been subjected to detector dog screening at the carousels¹³ (Figure 7). Passengers self-select the lanes “NZ/AU passport holders”, “All passport holders” or use lanes dedicated to crew or assisted passengers. At the risk assessment points, the passengers are risk assessed by MPI, and directed to a suitable biosecurity intervention exit point; Green Lane, x-ray, inspection area for ‘item’ or ‘full’ inspection and NZCS. Detector dogs may be present at Green Lane or other biosecurity exit points.

Survey sampling occurred immediately after the last point of biosecurity intervention. If the detector dog was present at the last point of biosecurity intervention, survey sampling took place after the detector dog. There are minor differences between airports, but in general survey inspections were conducted at Green Lane, x-ray screening area, the inspection areas for ‘item inspection then exit’, ‘item inspection then x-ray’ and ‘full inspection’ (red box indicates survey inspection locations Figure 7).

The passenger selection methodology was designed to randomly select passengers and cycle through all the different exit lanes used in the normal biosecurity processes. The random selection technique was tested by the PA QIs prior to the commencement of the survey. At each airport the methodology was adapted slightly to account for variances in airport layouts, but the core process remained unchanged. Colmar Brunton undertook observations of random selection activity during the survey. These observations are included in their independent review.

¹³Detector dogs operate mainly on the Green Lane and x-ray screening exits. Detector dogs working at the carousel are those in-training or in order to maintain skills as in the case of experienced detector dogs.

Figure 7 MPI screening process and survey inspection points.



8.3.2 Sample sizes

An acceptance sampling approach (C Kingston, 2013) was used to estimate adequate sample sizes for compliance monitoring in the air passenger pathway in 2013. Previously, compliance monitoring involved comparing the estimated compliance rate with the compliance target of 98.5% and, if the estimated rate was greater, it was stated that the compliance target was met (as in 2011). It is not possible to estimate appropriate sample sizes without setting probabilities for success or failure with respect to the compliance target.

The acceptance sampling method requires the setting of a Rejection Quality Level (RQL). Sample sizes are set so that for every twenty surveys where it is determined that the real compliance rate is greater than the RQL, only one will be wrong about that. Ideally, the sample size will also be large enough so that false alarms will be minimised. This is achieved by setting an Acceptance Quality Level (AQL). The sample size is then set so that if the true compliance rate is greater than or equal to the AQL then it will be determined in only one out of twenty surveys that the compliance rate is less than the RQL. For the purposes of air passenger compliance monitoring the AQL has been set at the compliance target of 98.5% and the RQL has been set at 98%, based on confidence interval sizes from previous surveys. This formalises what was previously informal and enables the setting of sample sizes.

The 98% RQL required a total annual sample size of around 10,000 passengers nationally. To account for seasonality MPI plan to achieve this annual sample size target by performing several shorter periods of surveying per year.

The table below (Table 8) summarises the number of survey inspections proposed to be carried out at each location and across each exit for the May-June 2013 survey period.

Table 8 Target sample sizes by airport and exit

| | Green Lane | Full inspection | Item inspection then exit ¹⁴ | X-ray then exit ¹⁵ | X-ray screened | Total |
|--------------|------------|-----------------|---|-------------------------------|----------------|-------|
| Auckland | 1430 | 66 | 162 | 162 | 1430 | 3250 |
| Christchurch | 1100 | 50 | 125 | 125 | 1100 | 2500 |
| Wellington | 440 | 20 | 50 | 50 | 440 | 1000 |

8.3.3 Survey inspection

Prior to the survey commencing three days were committed to the development of Standard Operating Procedures by the PA QIs. In order to support the random selection methodology and ensure that the results of the survey were robust the inspection technique employed had to meet two key criteria. Each inspection conducted had to be repeatable and reproducible.

Repeatable: If a PA QI was to repeat an inspection again they would achieve the same result.
Reproducible: If another PA QI repeated an inspection that one of their peers had completed, the second PA QI would achieve the same result as the first.

The level of the inspection was slightly more rigorous than the standard full inspection conducted by QIs in airports. This was a deliberate decision as it was determined it would be the most effective way to ensure that we were conducting a robust assurance process. It also allows us to identify potential issues with the techniques currently employed by QIs.

The Standard Operating Procedure will be employed in future surveys. This supports MPI's ability to use the survey results as a benchmark and compare results from survey to survey.

Survey inspections were conducted in after passengers had passed through all airport clearance processes but while they are still within the Biosecurity Control Area. Sampling occurred immediately after the last point of biosecurity intervention. Non personal information was captured about every survey inspection regardless of the presence of risk goods.

8.3.4 Biosecurity Decision Detection and Treatment of Risk Goods

PA QIs inspected risk goods and/or risk documentation and made biosecurity decisions to seize risk goods as they would during the course of their normal work. Compliant risk goods were given clearance, while non-compliant goods were seized and the risk managed by treatment, destruction, reshipment, or held in an MPI transitional facility until the passenger departs NZ. Passengers of interest to other border agencies were referred to the appropriate authority.

Items that could be treated on site (e.g. contaminated used equipment) were treated by the Adecco staff. Items which needed to be sent to a treatment facility were referred to an airport QI who created a goods tracking record in the MPIPax database. Any passengers with undeclared risk items were referred to an MPI QI for processing of infringements.

¹⁴ Previously know as NZ/Au item inspection

¹⁵ This was known as RoW item inspection in the 2012 survey.

8.3.5 Data Recording

A survey record was created for each passenger. Information was recorded about the passenger (e.g. passport country and baggage items), the survey location/area, whether a non-compliant item was found and detailed descriptions of the non-compliant item. This included the relevant IHS or Chief Technical Officer (CTO) Direction, why the PA QI considered the goods to be non-compliant and any other information the PA QI deemed relevant. This information was then used during the moderation process. See Section 8.4.6 for an explanation of the moderation process. Data was collected on field datasheets and entered into a database created for each airport.

In addition to survey records, the number of passengers using each airport exit was recorded. This data was required to weight survey results for each airport exit by the number of passengers using each exit. To determine numbers using each exit, passenger arrival cards were counted throughout the day by local QIs and Team Leaders or contract staff at each airport. Passenger counts were entered into spreadsheets.

8.3.6 Moderation

During the moderation process, all survey seizures are reviewed and a determination is made as to whether each item actually qualifies as non-compliant under its relevant Import Health Standard. The process is concluded by a Moderation Board which consists of representatives from Standards and Border Clearance Services and also some PA QI's. The decision that an item is compliant must be unanimous. If not, it remains as a survey seizure.

8.3.7 Data Analysis

The Detection Technology Team (DTT) further analysed the survey data to determine whether or not seizures could have been detected by x-ray or detector dogs.

Determination of whether seizure would have been detectable by x-ray or dog were based on information recorded by the PA QIs and presented to the DTT. Additional information captured by the PA QIs included how the baggage was packed, other items found in the baggage and photographs of the item involved.

It is important to note that other factors (not available to the DTT) may have contributed to risk goods not being detected by x-ray or dog. For x-ray screening, the orientation of the baggage on the x-ray bench and the shape and size of items, and their density and positioning within the baggage may have had an effect on the image and ability to detect.

In the case of detector dogs, proximity to the target odour would have been required (in some operating scenarios the detector dog may not have been close enough to the baggage to identify odour). Target odour may also have been minimal due to packaging and positioning within baggage. Target odours can also be masked by non-target odours, e.g. perfume

8.3.8 Risk analysed in terms of slippage rate and compliance rates

Slipped items are risk items not detected by the normal screening processes. The slippage rate is estimated as the proportion of surveyed passengers with seizures, and the compliance rate is the complement of the slippage rate.

The survey design was a stratified and clustered one. Stratification was by airport (three airports) and exit (five exits), and clustering was by passenger group (e.g. family group). The primary sampling unit was a cluster, and once a cluster was selected, all the passengers within the cluster were surveyed. Unfortunately, the number of clusters arriving over the survey period was unknown, and only the number of passengers arriving was known. In practice, the survey sample was analysed as a stratified design, without clustering, with the primary sampling unit being a passenger. This has resulted in the sample size being overstated (because the dependence between the passengers within groups has been ignored). This means that the estimated confidence intervals around compliance rates will be a little smaller than they should really be. Also, differences between compliance rates may manifest as significantly different when the differences are not quite significant.

Dr Thomas Lumley's survey package in R was used to analyse the survey data (for more information, see the Reference section of this report). This package weights the data appropriately and calculates suitable confidence intervals (which must also take into account the stratified survey design.)

8.4 CLASSIFICATION OF GOODS AS HIGH, MEDIUM OR LOW RISK

As described in the Border Direction Statement¹⁶, MPI preferentially directs resources to greater levels of risk. Within the Border Clearance Services Directorate, achieving this goal relies on the increased use of profiling, with low-risk passenger groups exposed to fewer interventions than higher risk passengers. The determination of whether passengers are high or low risk is based on use of a number of risk assessment tools and information, including information about both seizure rates and the type of risk goods these passengers carry.

The main measure of performance of the system is the Passenger Compliance Rate: at least 98.5% of arriving passengers are required to be compliant with all biosecurity requirements when they exit the airport. This target was agreed as part of the introduction of a range of risk management processes, and prior to the withdrawal of compulsory x-ray screening for all arriving passengers.

In addition to the overall measure of compliance, separate compliance rates were estimated for high/medium risk goods. This is because the overall compliance rate may not sufficiently reflect the effectiveness of a system that targets interventions towards passengers likely to carry high-risk goods. In order to calculate a separate compliance rate for high/medium risk goods, seizures were classified into high, medium and low risk groups.

Seizures were classified by aligning the seizure classes with MPI risk good segments, and with the Food and Agricultural Organization of the United Nations [FAO], 2009 paper *'International Standards for Phytosanitary Measures ISPM No. 32 Categorization of commodities according to their pest risk'*. Risk goods are categorised into MPI risk good segments based primarily on their biological nature and their association with risk organisms and diseases. These segments are classified into three major groups: Biological Propagative, Biological Non-Propagative, and Inanimate.

Biosecurity risk goods were also classified into seizure classes (Table 9). In this analysis, seizure classes were formally aligned with appropriate segments. Each of the seizure classes was then assigned to one of three risk categories: low, medium, and high risk.

Seizure classes fitting the criteria for the Biological Propagative segment were all classified as high risk. These are whole organisms that have the potential to act as host pests or diseases for commodities of high economic value.

Seizure classes fitting the criteria for the inanimate segments were all classified as low risk. Risk goods in this category are not biological and are not directly associated with pests or diseases. These risk goods are mostly associated with soil and plant material contaminants. Hitchhikers found in association with inanimate goods were classified as high-risk

Categorisation of risk for the Biological Non-Propagative group was less straightforward than for the other two groups. Some are highly processed (e.g. Agricultural compounds and veterinary medicines) and as a result categorised as low risk. Others (e.g. fresh produce and cut flowers) may harbour pests or diseases of high value crops, and are classified as high risk.

¹⁶ <http://www.biosecurity.govt.nz/files/biosec/sys/border-direction-statement-final.pdf>

Table 9 Risk good segments and risk level

| Segment Group | Segment/Seizure Class | Risk level | Explanation |
|----------------------------|---|------------|---|
| Biological Non-Propagative | Agricultural Compounds & Veterinary Medicines | Low | Compounds or chemicals extracted from plants or animals. Include medicines, pesticides and animal remedies. Risk of bringing diseases via these extracts is low. |
| Biological Non-Propagative | Animal Products-Animal Feeds | Low | Dried/processed food products - made from plants or animals. Pest or diseases associated with these dried/processed food products is low. |
| Biological Non-Propagative | Animal Products-Ornamentals | High | Animal parts such as hair, feathers, nests. These animal products may contain parasite vectors, eggs, even diseases. |
| Biological Non-Propagative | Animal Products-Insects | Medium | Bee products - venom, food containing and medicine containing bee products. Raw honey may harbour unwanted pests. |
| Biological Non-Propagative | Biological Products | Medium | Examples are DNA, enzymes which are low risk. Blood products included in this category. Blood supports the growth of pathogens. Mainly imported as commercial product, so have been tested for diseases |
| Biological Non-Propagative | Plant Products-Cut Flowers/Foliage | High | Potential hosts for pests and diseases, provides a conduit whereby pests and diseases are imported, together with a compatible host. |
| Biological Non-Propagative | Animal Products-Dairy | Low | Mainly processed dairy products. Ideal for growth of micro-organism, but are mostly processed and therefore risk is low. |
| Biological Non-Propagative | Animal Products-Egg | High | Mainly eggs for eating - eggs can be contaminated and may pose a risk from Asian countries with Avian Influenza outbreak. However, it is not know whether eggs are hosts for these viruses. |
| Biological Non-Propagative | Animal Products-Fresh Water Fish | Medium | May carry diseases |
| Biological Non-Propagative | Animal Products-Marine Fish | Medium | May carry diseases |
| Biological Non-Propagative | Plant Products-Fresh Produce | High | Potential hosts for pests and diseases, provides a conduit whereby pests and diseases are imported, together with a compatible host. Fruit fly host material, therefore very high risk |
| Biological Non-Propagative | Plant Products-Frozen Produce | Low | Freezing likely to kill most plant pests |
| Biological Non-Propagative | Animal products-Meat | High | Potential hosts for diseases, very high risk - meat from countries that have or have had a foot and mouth disease outbreak, also other serious animal diseases not present in NZ |
| Biological Non-Propagative | Plant Products-Stored Products-Ornamentals | High | Plant parts either fresh or dry. Usually brought as gifts (e.g. bags made from leaves) or tourist souvenirs. High risk if plant parts are still fresh. |
| Biological Non-Propagative | Plant Products-Dried Stored Products-Food | Low | Mostly dried plants parts, reduced possibility of harbouring pests and diseases |
| Biological Non-Propagative | Plant Products-Wood | Medium | May contain boring insects |

| | | | |
|----------------------------|---|------|---|
| Biological Non-Propagative | | Low | Processed food: cooked meat and pickled non-fruit fly host material, reduced possibility of carrying diseases. |
| Biological Propagative | Cooked/Pickled Product-Food Animal Germplasm | High | Semen, embryos - may carry animal diseases |
| Biological Propagative | Live Animals | High | Potential hosts for diseases, very high risk - animals from countries that have or have had foot and mouth disease outbreak/equine influenza, also other serious animal diseases that are not present in NZ. Hitchhiker organisms are in this category -some of these hitchhiker organisms are pests e.g. red fire ants/snakes/frogs. Some are arthropod vectors of diseases e.g. mosquitoes and ticks. |
| Biological Propagative | Plant Products-Nursery Stock | High | Potential hosts for pests and diseases of plants with high economic value. Nursery stock provides a conduit whereby pests and diseases are imported, together with a compatible host. |
| Biological Propagative | Plant Products-Viable Seeds and Grain | High | Potential hosts for pests and diseases. Pests include invasive weeds |
| Inanimate | Natural Elements-Earth | Low | Soil, clay, mud, peat, compost, potting mix and soil for scientific analysis |
| Inanimate | Natural Elements-Fertilizer | Low | Manufactured solid/liquid – processed, therefore chance of finding live organisms is low |
| Inanimate | Natural Elements-Sand and Rock | Low | rock and sand |
| Inanimate | Natural Elements-Water | Low | Drinking/tap water, water for religious activity, water sample for analysis. May carry bacteria and other tiny aquatic organisms. |
| Inanimate | | Low | Items that are inanimate, usually carry hitchhikers |
| Inanimate | Non Risk Products Used Equipment | Low | Mostly recreational equipment; shoes/boots and used tents. Used equipment seized at the air passenger pathway is mainly contaminated shoes/boots. This equipment may contain soil or dried leaves. |

8.5 TERMINOLOGY

| | |
|-------------------------------------|--|
| Baggage | Any container of accompanied personal effects including boxes, handbags, crates, sports bags and suitcases |
| Biosecurity clearance | A clearance under section 26 of the Biosecurity Act 1993 for the entry of goods into New Zealand. Section 26 states that: <i>‘Subject to sections 27 and 28, any inspector may give clearance for the entry into New Zealand of any goods’.</i> |
| Contaminant | Organic soil (does not include sand, gravel or road splash), fruit, seeds, plant materials, wood fungi, bark, insects and other live organisms (not part of the manifested cargo), animal products, wool, hair, and water, which may introduce pests, disease or unwanted species into New Zealand |
| Compliance rate | Proportion of international air passengers that comply with biosecurity requirements by the time they exit the airport.. |
| Declared (passenger baggage) | Risk goods that have been identified in English verbally, or on the declaration card completed by the passenger |
| Detection Technology Team (DTT) | The Detection Technology Team is responsible for the provision of service and expertise in three key functions: <ul style="list-style-type: none">•X-ray; including operator training, competency assessment, equipment readiness and legislative requirements•Detector Dogs; including all Handler and Dog selection, Auckland area deployment, National training and competency assessment, Dog breeding, kennelling and Dog health and welfare.•Aircraft Disinsection; maintenance of compliance agreements, provision of technical expertise and stakeholder engagement. |
| Hitchhiker | An organism that has an opportunistic association with a commodity or item with which it has no biological host relationship. |
| Import Health Standard (IHS) | An import health standard specifies requirements to be met for the effective management of risks associated with importing risk goods, including risks arising because importing the goods involves or might involve an incidentally imported new organism. |
| Item inspection (passenger baggage) | A partial inspection undertaken at the inspection bench, where only baggage containing items of interest is inspected, or the risk items themselves are inspected. Any un-inspected baggage is then directed for x-ray screening or if otherwise eligible for Green Lane may be directed to exit after inspection. |
| MPI | Ministry for Primary Industries |
| NZ/AU passport holder | Passenger travelling on a New Zealand or Australian passport |
| NZCS | New Zealand Customs Service. |

| | |
|--|--|
| Passenger Process Assurance Group (PPAG) | Passenger Process Assurance Group: An internal MPI group tasked with ensuring the Passenger processing model has clear ownership of processes, performs to required standards, provides a mechanism for continuous improvement. The group is lead by the Border Clearance Services directorate and includes members from across MPI that have a stake in the passenger processing model. |
| Passenger | For the purposes of this report, a passenger refers to either a travelling airline passenger or a member of air crew arriving into New Zealand. |
| Performance Assurance Quarantine Inspectors (PA QIs) | QIs selected into a dedicated survey team to do assurance work such as surveys. |
| Pathway | Any means that allows the entry or spread of a pest. |
| Quarantine Inspector (QI) | A person appointed under section 103 of the Biosecurity Act 1993 for the purposes of administering and enforcing the provisions of the Biosecurity Act. |
| Risk good | Any organism, organic material, substance or other thing that it is reasonable to suspect constitutes, harbours or contains an organism that may cause unwanted harm to natural and physical resources or human health in New Zealand; or that may interfere with the diagnosis, management or treatment, in New Zealand, of pests or unwanted organisms. |
| RoW passport holder | A passenger who is travelling on a passport that is not from New Zealand or Australia. |
| Seizure | A risk good that does not immediately, on arrival, comply with an import health standard, and is either treated, destroyed, reshipped or held for further documentation or investigation. |
| Slippage | These are risk goods entering New Zealand that, if they had been detected, would have required biosecurity action. Also known as survey seizures. |
| Slippage rate | The proportion of passengers that are still carrying a risk good after biosecurity interventions have been completed. This is the compliment of the compliance rate. |
| Survey Inspection | An inspection carried out by a QI, in accordance with the, survey statistical design, and the survey instructions for this study. |