



Ref: DG13/1106

Dr Robert Waldersee
Executive Director
Corruption Prevention Division
Independent Commission Against Corruption
G.P.O Box 500
SYDNEY NSW 2001

29 NOV 2013

ATTENTION: BENJAMIN MARX

Dear Dr Waldersee

Re: Implementation of corruption prevention recommendations from Investigation into the misuse of access rights to a Land and Property Information database.

I am enclosing Land and Property Information's (LPI) 24 month progress report which addresses the 11 recommendations in ICAC's final report into *Operation Carina*, an investigation into contractor misuse of LPI systems and data.

The report includes LPI's measures to implement and meet recommendation 10 as per the observation outlined in correspondence from ICAC dated 20 December 2012 (E09/1940).

There were 11 corruption prevention recommendations contained in the ICAC report. Of these:

- six have been implemented
- three have been partially implemented
- two have been implemented differently to ICAC's original recommendations

The 24 month progress report outlines the actions taken by LPI to implement each of the recommendations made in the ICAC final report. LPI has provided reasoning where the recommendation was implemented differently to ICAC's original recommendation or where the recommendation has been partially implemented.

If you require any further information about this report please contact Brooke Baker, Executive Officer, LPI on 02 9236 7612 or brooke.baker@lpi.nsw.gov.au.

Yours sincerely

Laurie Glanfield
Director General

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Investigation into the misuse of access rights to a Land and Property Management Authority database

Please update this schedule with information about the status of each item as at 3 November 2013. Include details of the latest action/update in respect of each initiative, dates where relevant and attach copies of any documents referred to, where possible, in support of implementation of particular initiatives. Please provide the name of a contact person in your agency from whom we can seek more detail if needed. Please return this document to the ICAC in writing and electronically to bmarx@icac.nsw.gov.au by no later than 30 November 2013.

Recommendation 1.

That the Land and Property Information (LPI) section implements an ongoing process that clarifies roles and responsibilities regarding the management of information security risks.

Summary of progress

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

Section 5 of the LPI Information Security Policy (version 5.0, released 19/03/2012) defines various information security management roles and responsibilities including those pertaining to LPI managers, LPI staff, the ICT Security Team, Internal Audit and External Audit.

The LPI Information Security Policy is supported by the Acceptable Use of ICT Services Policy (version 4.0, released 03/11/2011) which provides further information security roles and responsibilities.

In addition to these two policies, LPI's Information Security Management System (ISMS) defines roles and responsibilities regarding the management of information security risks.

Supporting material

- Attachment 1_LPI Information Security Policy (v5.0)
- Attachment 2 _Acceptable Use of ICT Services Policy (v4.0)
- Attachment 3 _ISMS Scope Document
- Attachment 4_ISMS Roles and Responsibilities

Evaluation of implementation

The implementation of this recommendation has been completed.

The roles and responsibilities of the management of information security risks are clearly defined in the Information Security Management System (ISMS), and were updated / reviewed in October 2013.

The LPI ISMS is certified to the Information Security standard ISO 27001 and is scheduled for a recertification audit in March 2014. The ISMS is subject to an annual surveillance audit which was last completed in February 2013.

LPI's ICT Security Team is responsible for maintaining the ISMS, including managing the information security policies to manage security risks.

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Recommendation 2.

That the LPI includes its Integrating Titling System (ITS) and Document Integrated Imaging Management System (DIIMS) databases in the scope of its revised Information Security Management System.

Summary of progress

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

The scope of the revised ISMS has been extended to include a threat and risk assessment of the Integrating Titling System (ITS) and Document Integrated Imaging Management System (DIIMS) databases. The ISMS security calendar is currently used to schedule ITS user access reviews biannually, and an annual Disaster Recovery test for ITS and DIIMS.

LPI has determined that due to budgetary constraints, ISO certification for the extended scope will not be sought at this time. In lieu of certification, LPI will ensure compliance with the standard, by carrying out annual internal risk assessments for ITS and DIIMS databases and implementing controls to mitigate any risks identified in these risk assessments.

Evaluation of implementation

LPI considers that a threat and risk assessment managed within the ISMS is sufficient to maintain the security of the ITS and DIIMS databases.

A threat and risk assessment of the Integrating Titling System (ITS) and Document Integrated Imaging Management System (DIIMS) databases has commenced. The risks are being reviewed by relevant staff and a risk treatment plan is being developed. LPI will carry out this assessment on an annual basis.

The outcome of the risk treatment plans will inform LPI of the need to make changes to ensure compliance with the standard is maintained.

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Recommendation 3.

That the LPI establishes a mechanism to ensure that Spatial Information Exchange (SIX) user accounts (the portal through which the LPI database was accessed) associated with valuation contractors are promptly reviewed if they exceed an agreed level of usage.

Summary of progress

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

Due to fluctuations in usage patterns throughout the year LPI has not determined acceptable usage levels for valuation contractors and as a result, has not negotiated or agreed usage levels with valuation contractors. Usage fluctuates throughout the year due to the varying requirements of the valuation program which are difficult to anticipate. For example the requirement to provide supplementary valuations, which increases usage of LPI systems.

LPI has introduced a mechanism to report at an individual user level and at a contract company level. A *Top 50 User Report* is produced each week to identify (both internal and external) users with significant usage levels for SIX searches and SIX images transactions. These reports provide total transaction counts by user and company. Anomalies identified in the weekly *Top 50 User Report* are followed up with valuation contractors by phone or email.

The top 50 User Report identifies approximately 60,000 instances of username "not found in SIX". These have been investigated and are automated calls from other LPI plan examination systems. This is not considered a fraud risk. This is a known issue and will be rectified as part of current redevelopment of the process.

A second report, the *Valuation Contractors Usage Monthly Report*, is generated each month and provides transaction counts for both SIX searches and SIX images. These figures are reported for each valuation contractor. The report is issued to Valuation Services personnel for review. LPI Valuation Services Contract Managers monitor the usage levels of prior periods as a benchmark to identify any anomalies in usage, which are followed up with the valuation contractors by phone or email upon identification.

Supporting material

Attachment 5_Top 50 User Report

Attachment 6_Valuation Contractors Usage Monthly Report

Evaluation of implementation

LPI considers that its internal review and monitoring process is thorough and sufficiently meets the requirements of this recommendation, alleviating the need to establish agreed usage levels.

Usage reports are now monitored on a weekly and monthly basis by the contract management team. This facilitates improved monitoring of usage of LPI's systems by contractors. Since the implementation of this reporting and monitoring process, anomalies identified in the report have been investigated and found to be within acceptable usage under the contract arrangements.

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Recommendation 4.

That the LPI routinely provides each valuation contractor with a report indicating the extent to which user accounts it has authorised have accessed the LPI database.

Summary of progress

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

LPI has introduced a capability to report at an individual user level and at a contract company level. LPI Valuation Services Contract Managers monitor the usage levels to identify any anomalies in usage, which are followed up with the valuation contractors by phone or email upon identification (as per Recommendation 3). Furthermore, as explained in Recommendation 9, valuation contractors must acknowledge their understanding of obligations to not misuse LPI's systems.

Further modifications were required to the reporting template due to privacy issues before manual distribution could be undertaken. These issues have been resolved and the manual distribution of the usage reports has commenced on a monthly basis.

Evaluation of implementation

Contract Managers discuss anomalies in usage with the valuation contractors whenever they occur. LPI considers that this process is an effective way to inform valuation contractors of the usage corresponding to each of their user accounts.

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Recommendation 5.

That the LPI limits the access that valuation contractors have to its databases to that needed to fulfil their public functions.

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

Valuation contractors are assigned to the “*val*” LDAP user group for access to LPI systems. This user group is assigned various access rights to databases required for the provision of valuation services for the term of the contract.

Valuation contractors are also provided with different account ‘types’ for access to LPI’s Spatial Information Exchange (SIX) environment based on their public functions. Levels of access to the SIX environment depend on the type of account being used. For example, objection valuation contractors are provided with a different account to rating and taxing valuation contractors. Separate accounts are also maintained for valuation contractors who provide both functions (objection services and rating and taxing services).

LPI conducted an informal review into the access required by valuation contractors to fulfil their public functions and found that limitations to existing access arrangements should not be made. Formal review of access required by contract valuers to fulfil public functions is being carried out as part of LPI’s annual contract review process from 2013.

Evaluation of implementation

LPI considers that the above actions have ensured that valuation contractors are only provided with the level of access required to fulfil their public functions. Furthermore, an independent audit conducted during October –November 2012 confirmed that the user group valuation contractors are assigned to provide access rights to LPI’s databases based on their requirements to deliver the contracted services.

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Recommendation 6.

That the LPI limits the amount of free SIX usage that it provides to valuation contractors to an agreed amount.

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

LPI has considered the potential implications of establishing a limit to the number of free transactions to existing and future contractual arrangements. Estimations of the costs associated with additional use of the SIX database beyond the free threshold may be unnecessarily priced into contracts, given it is difficult to anticipate fluctuations in usage that may occur during the contract period due to changing requirements. As described in recommendation three, contractor usage is monitored frequently.

Evaluation of implementation

LPI considers that its internal review and monitoring process is thorough, and sufficiently meets the requirements of this recommendation, alleviating the need to establish a threshold for free SIX usage.

The frequency of the usage reports facilitates improved monitoring of contractor usage of LPI's systems. Since the implementation of this reporting and monitoring process, no unexplained anomalies have occurred.

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Recommendation 7.

That the LPI develops a process to ensure that when a user account associated with a valuation contractor is locked out, an email be generated and sent to one or more individuals who are in a position to identify whether that lock out is significant.

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

User accounts and passwords are created and stored in a Novel eDirectory LDAP database (Oracle user table). These have been configured to automatically lock accounts after a series of four failed attempts. After four failed attempts, the event is written to the Oracle user table transaction log. A *cron* job is run every five minutes to look for instances of locked account entries and emails a notification to appropriate staff within Valuation Services.

The LPI Valuation Services Contract Managers review the lockout notifications and proactively follow-up anomalies with contractors by phone or email. No instances of unexplainable anomalies have occurred since the development of this process.

Supporting material

Attachment 7_Example Email Text re Account Lockouts

Evaluation of implementation

LPI considers it has fully complied with the recommendation. An independent audit was undertaken during October –November 2012 and verified that the system automatically locked the account after the fourth failed attempt and that a notification is emailed to the nominated LPI personnel.

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Recommendation 8.

That the LPI develops a process to ensure that user accounts associated with a valuation contract are promptly deactivated upon contract completion.

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

LPI has developed a process to ensure that user accounts associated with a contractor are promptly deactivated upon the completion of their contract. Expiry dates have been configured for each member of the "val" (Valuation Contractor) user group within the Oracle/LDAP user account database (WEBCUST). Automated arrangements ensure that user accounts associated with a valuation contract are promptly deactivated upon contract completion.

Evaluation of implementation

LPI considers it has fully complied with the recommendation. An independent audit was undertaken during October – November 2012 and verified that the process specified above was successfully implemented by LPI.

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Recommendation 9.

That the LPI revises the confidentiality agreement, which employees and subcontractors of valuation contractors are required to acknowledge, to expressly prohibit password sharing, state that usage of the LPI database by employees and subcontractors of valuation contractors will be monitored, and outline the potential consequences if they are found to have engaged in misuse of an LPI database.

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

The existing confidentiality agreement that must be signed by employees and subcontractors of valuation contractors does not currently:

- explicitly prohibit password sharing,
- state that usage of the LPI database will be monitored
- outline potential consequences of misuse

However, this Recommendation has been implemented in a different way. A separate document, the *LPI Databases & Information Systems Terms and Conditions*, must be signed by anyone wishing to obtain access to LPI network systems. The document contains provisions addressing all three of the above items and has been distributed to all valuation contractors (including the employees and subcontractors of the valuation contractors) as an acknowledgement and acceptance of the above three points. Valuation contractors were made aware of this document's relevance to the ICAC's investigation into the misuse of access rights to LPI's database when it was distributed in April / May 2012.

LPI holds signed copies of this document for all valuation contractors with access to LPI systems.

Supporting material

Attachment 8 _Confidentiality Undertaking

Attachment 9 _LPI Databases & Information Systems – Terms and Conditions

Attachment 10 _Email to Valuation Contractors re LPI Databases and Information Systems Terms and Conditions

Attachment 11 _Email to Valuation Contractors to re-iterate importance of Terms and Conditions

Evaluation of implementation

An internal review was conducted in the first quarter of 2013 to coincide with changes in contracts and to ensure that LPI has a record of all signed copies of this document. The provisions related to the above 3 points were reiterated to all valuation contractors in a separate email (Attachment 11).

LPI considers that this implementation effectively meets the requirements of this recommendation.

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Recommendation 10.

That prior to granting an employee or subcontractor of a valuation contractor access to SIX, the LPI obtains auditable records that the individual has acknowledged their confidentiality agreement with the LPI, received a briefing explaining their confidentiality obligations in relation to the LPI database, and received a document in plain English outlining their obligations when accessing the LPI database

Summary of progress

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

Confidentiality agreements are signed by valuation contractors before they are granted access to the SIX system. The agreement confirms they have received training regarding the use of the system and their confidentiality obligations. These signed agreements are retained by LPI Contract Managers.

The LPI Databases & Information Systems Terms and Conditions must also be signed by anyone wishing to obtain access to LPI network systems. LPI holds signed copies of this plain English document outlining obligations for all valuation contractors with access to LPI systems.

Supporting material

Attachment 9_LPI Databases & Information Systems – Terms and Conditions

Attachment 11_Email to Valuation Contractors to re-iterate importance of Terms and Conditions

Evaluation of implementation

An internal review was conducted in the first quarter of 2013 to coincide with changes in contracts and to ensure that LPI has a record of all signed copies of this document.

LPI considers it has fully complied with the recommendation.

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Recommendation 11.

That the LPI develops a process to ensure that when a SIX user account associated with a valuation contractor has a concurrent access log out, an email providing details of the log outs is sent to the contractor, the LPI contract administrator and the LPI local administrator.

Summary of progress

- Implementation has not yet started
- The recommendation has been implemented
- The recommendation will be implemented differently
- The recommendation is no longer relevant
- The recommendation has been partially implemented

Action taken to implement recommendation

The default IBM WebSphere portal allows a maximum of one session to be run at a time. If a second session is initiated, it automatically logs out the prior session and an event is written to the Oracle user log. A cron job is automatically run every five minutes to look for instances of such events and emails a notification to members of the Valuation Services team (including Contractor Managers) and the LPI SIX Web Portal Administrator.

LPI Valuation Services Contract Managers review the logout notifications and proactively follow-up anomalies with contractors by phone or email.

These automated notifications are not currently sent to the valuation contractors as this functionality in the SIX system is still being developed and because LPI considers it important to review the notifications prior to them being issued to the valuation contractors.

Where valuation contractors do receive notifications of concurrent access log outs, this occurs via emails manually sent by LPI personnel.

Evaluation of implementation

LPI considers that this implementation effectively meets the requirements of this recommendation.

An independent audit was undertaken during October – November 2012 and verified LPI's successful implementation of this recommendation by instigating a concurrent session lock out and confirming that an automatic notification is generated. Follow up of these occurrences by LPI's Contract Managers ensures these matters are raised and addressed with the valuation contractors.

It is important to note that concurrent sessions do not necessarily mean that passwords are being shared, as concurrent sessions may arise as a result of browser problems requiring a new session to be established.