

In confidence

**To: Minister for Land Information (Hon Eugenie Sage)**

**Minister of Finance (Hon Grant Robertson)**

**Minister for Government Digital Services (Hon Kris Faafoi)**

## **Survey and Title Enhancement Programme: quarterly report to 30 June 2019**

<b>Date</b>	12 August 2019	<b>Classification</b>	In confidence
<b>LINZ reference</b>	BRF 20-013	<b>Priority</b>	Medium

### **Actions sought**

<b>Minister</b>	<b>Action</b>	<b>Deadline</b>
<b>Minister for Land Information (Hon Eugenie Sage)</b>	<b>Forward</b> copies of this report to the Minister of Finance and Minister for Government Digital Services.	12 August 2019
<b>Minister for Land Information (Hon Eugenie Sage)</b>	<b>Note</b> the contents of this report.	2 September 2019
<b>Minister of Finance (Hon Grant Robertson)</b>		
<b>Minister for Government Digital Services (Hon Kris Faafoi)</b>		

### **LINZ Contacts**

<b>Name</b>	<b>Position</b>	<b>Contact number</b>	<b>First contact</b>
Aaron Jordan	DCE Property System Infrastructure	027 704 5618	<input checked="" type="checkbox"/>

**Minister for Land Information's office to complete**

<b>Comments</b>					
<input type="checkbox"/> Noted		<input type="checkbox"/> Seen		<input type="checkbox"/> Approved	
				<input type="checkbox"/> Overtaken by events	
1 = Was not satisfactory		2 = Fell short of my expectations in some respects		3 = Met my expectations	
4 = Met and sometimes exceeded my expectations		5 = Greatly exceeded my expectations			
<b>Overall Quality</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> Withdrawn		<input type="checkbox"/> Not seen by Minister		<input type="checkbox"/> Referred to:	

Proactive Release

## Purpose statement

1. This quarterly report outlines progress against key commitments made in the Survey and Title Enhancement Programme (STEP) tranche 1 Single Stage Business Case (SSBC) approved by the Minister of Finance, Minister for Government Digital Services and Minister for Land Information (joint Ministers) on 1 April 2019. Tranche 1 is due to be completed by June 2020.
2. LINZ was asked to provide quarterly tranche progress reports that covered:
  - programme progress and costs
  - resourcing
  - when LINZ anticipates drawing down future capital injections
  - stakeholder engagement.

## Key messages

3. The first three months of the tranche (April to June 2019) focused on building capability, establishing software development squads and planning. The STEP team is building its skills in Agile delivery. Insights gained so far, including our approaches to key challenges, are informing the remainder of the tranche and programme. The programme is operating within budget.
4. Over the course of the successful capability building in the first three months, two key challenges that need to be managed over the next three months have become clearer:
  - 4.1 Ensuring LINZ business groups are able to integrate the programme's products as they are developed. Progress made developing products has outpaced the programme's capacity to integrate products with LINZ business groups through change and engagement activities. We are now actively strengthening links between STEP, the Property Rights group and the rest of LINZ, and better aligning change and engagement resources. Until this is in place the testing of products will be delayed. However, this is not expected to have an overall impact on delivery of the tranche.
  - 4.2 As outlined in the Programme Business Case, the first of two planned fee reviews is expected to be completed by early 2021. However, by then STEP will have developed products and released new Landonline functionality that will begin to accrue depreciation and support costs before the first fee review is complete. While most products are covered by existing fees, these fees do not take into account the higher operating costs that will result from STEP. As a result, the use of existing fees will result in costs being under-recovered until new fee regulations are made. The interaction of product development and fee revenue, now and in the future, is being actively managed by LINZ's Executive Leadership Team (ELT) and a substantive update on the fees review and the impact of STEP on fees will be provided next quarter.
5. Resourcing targets for software development teams were met. Currently 50 per cent of programme positions are filled by LINZ staff (the expected range was 50-60 per cent). Key software squad leadership roles have been filled by experienced staff with a strong understanding of Landonline and customer needs.
6. Key stakeholders in the surveying and conveyancing communities have responded positively to the first formal demonstration of software functionality for new survey and title products held in June. Demonstrations give stakeholders opportunities to provide feedback and be involved in the planning and prioritising of work on products they and their customers will directly benefit from.
7. A framework and process for reviewing and setting survey and title fees that ensures LINZ complies with both Auditor-General guidance and Treasury guidelines has been developed.

- 8 Due diligence has begun on the proposal to move the Landonline database of property information to an offshore public cloud service. The use of an offshore cloud service (subject to due diligence) was a key component of the programme's business case from an operational and cost management perspective. LINZ will need to confirm its position on the offshore cloud service by the end of 2019 as this is a key input to the programme's approach to the tranche 2 SSBC. We are actively working with the Government Chief Digital Officer (GCDO) to ensure that any decision made is aligned with broader consideration of Government use of cloud services by Digital and Data Ministers.

## Recommendations

It is recommended that you:

1. **Note** the contents of the quarterly report on the Survey and Title Enhancement Programme for the period 1 April – 30 June 2019.

**Noted**

Aaron Jordan  
**Deputy Chief Executive  
Property System Infrastructure**

Date: 8 / 8 / 2019

Hon Eugenie Sage  
**Minister for Land Information**

Date: / /

Hon Grant Robertson  
**Minister of Finance**

Date: / /

Hon Kris Faafoi  
**Minister for Government Digital Services**

Date: / /



## Background

1. This report on progress of tranche 1 of STEP covers the first three months of the tranche (1 April to 30 June 2019).

### *Programme approvals to date*

2. The rebuild of Landonline as a modern modular ICT platform (at a capital cost of \$128.3 million<sup>1</sup>) was approved by Cabinet in October 2018 [GOV-18-MIN-0078]. The rebuild is being conducted in-house using New Zealand ICT resources and delivered in four tranches over five years.
3. Rebuilding Landonline is a priority for LINZ to ensure the long-term stability of New Zealand's property rights system. The rebuild will create strategic value for the Government and offer significant improvements for users. Landonline is 20 years old and becoming expensive to maintain and difficult to change and secure. Modernising Landonline is essential if New Zealanders are to have continued confidence in property rights and accurate land information.
4. The overall aims of the rebuild are to:
  - address growing risks to confidence in property rights resulting from Landonline's aging technology platform
  - make land information more accessible and easier for the public to use
  - deliver significant benefits for customers
  - improve LINZ's processes, reduce business continuity risks and meet expectations in terms of both quality and cost.
5. Joint Ministers are required by Cabinet to approve a SSBC for each tranche of work. The Tranche 1 SSBC was approved on 1 April 2019 [LINZ Report: BRF 19-219]. Ministers authorised expenditure of up to \$33.39 million,<sup>2</sup> including approval for LINZ to draw down up to \$10.8 million from the \$103 million repayable capital contingency agreed by Cabinet. At the present time we do not expect to draw down any capital until the later part of the 2019/20 financial year.

### *Tranche 1 "Search and Notices" will deliver early benefits to the public and customers...*

6. LINZ's planned approach to tranche 1 has been to start small and deliver early benefits to customers while building capability for subsequent tranches. Tranche 1 will deliver low-risk service improvements that address pain points currently experienced by the public, territorial authorities, conveyancers and financial institutions when accessing or receiving property information:
  - Web-based search will provide the public with real-time ability to easily search for and purchase products such as a title record
  - A new search interface will enable other websites to connect directly to Landonline property data, enabling users to search for and purchase products
  - A notice of change of ownership and occupancy service will automatically deliver a notice to territorial authorities when a property transaction is made, enabling accurate updating of rating information
  - A notice to mortgagee service will automatically notify financial institutions when mortgages are registered or discharged on a title.

<sup>1</sup> This was to be funded by a \$95.4 million repayable capital injection and \$32.9 million from LINZ capital reserves (primarily depreciation).

<sup>2</sup> Tranche 1 expenditure is funded from LINZ capital reserves (\$26.36 million), repayable capital injection (\$3.65 million) and operating expenditure (\$3.38 million).

... and begins addressing wider system security issues ...

- 7 Tranche 1 also starts the crucial work of addressing system security issues related to Landonline's out-of-date software, and lays the ground for more challenging work in tranches 2 to 4. This includes a rigorous assessment of the proposal to store Landonline's database of survey and title information in an offshore public cloud service in Sydney, Australia.

... using an Agile approach

- 8 The programme is being delivered using Agile methodology, an incremental and iterative approach in which work is broken down and completed in smaller portions in frequent, repeated cycles. Agile teams closely engage with the actual users and customers of the product so that quality can be built in and tested during development. In tranche 1 we are focused on building Agile capability to enable more detailed planning and informed judgements about what will be delivered in future tranches.
- 9 STEP's work is planned and delivered in three-monthly programme increments, and tasks within each increment are undertaken by development *squads* in two-weekly work sequences known as *sprints*. Squads demonstrate progress to the programme team at the end of each sprint, and take on feedback to inform the next sprint. Key stakeholders participate in a system demonstration at the end of each three-month *increment*, allowing them provide direct feedback and participate in the planning and prioritising of work on products.
- 10 The insights gained from STEP's use of Agile will inform LINZ's plans to apply Agile more broadly across the organisation.

### STEP's current status

- 11 The primary focus of the tranche's first three-month programme increment was on building capability, establishing development squads and planning. Programmed work is on track and working software code is being produced – a result of successful recruitment for software development squads. A strong foundation for Agile delivery has been laid and accumulated insights we are gaining are informing the approach to more challenging work in future tranches.
- 12 The programme is operating within budget. The first completed 12-week programme increment between 1 April and 30 June incurred expenditure of \$2.22 million.

Period	Budget (modelled cost - millions)	Actual (millions)
1 April – 30 Jun 19	\$4.36	\$2.22

- 13 A combination of recruitment timing and a phased approach to on-boarding resources, along with savings on staff and contractor rates, means we are currently spending under budget. At this early stage of the programme we are monitoring expenditure to identify any full tranche trends. A further report back will be provided in the next quarterly update.

### Key challenges

- 14 We are managing two related key challenges:
- an overarching "business integration" challenge – ensuring LINZ is ready to receive, test and deploy programme products such as web search and notification products, and
  - aligning the release of programme products with planned reviews of survey and title fees.

### Business integration

- 15 The business integration challenge is a consequence of our initial focus on ICT recruitment. The progress being made developing products has outpaced the programme's capacity to integrate products with LINZ business groups through change and engagement activities. We are now



actively working to strengthen the links between STEP, the LINZ Property Rights group and the rest of LINZ, and better aligning change and engagement resources. While this is being put in place there are delays to the release of products for testing purposes. However, this is not expected to have an overall impact on delivery of the tranche.

*Aligning fees and charges reviews with product releases*

- 16 As outlined in the Programme Business Case, the first of two planned fee reviews is expected to be completed by early 2021. However, by then STEP will have developed product and released new Landonline functionality that will begin to accrue depreciation and support costs before the first fee review is complete. While most products are covered by existing fees, these fees do not take into account the higher operating costs that will result from STEP. As a result, the use of existing fees will result in costs being under-recovered until new fee regulations are made. The interaction of product development and fee revenue, now and in the future, is being actively managed by LINZ's Executive Leadership Team (ELT) and a substantive update on the fees review and the impact of STEP on fees will be provided next quarter.

**Progress against tranche 1 SSBC commitments**

*Successfully deliver tranche 1 search and notices products*

- 17 Two software development squads began building features of the public web search and territorial authority notifications products. Both squads made good progress against objectives for this increment, while at the same time bedding in Agile ways of working.
- 18 Fortnightly demonstrations to the programme team and expert advice from embedded representatives of Landonline customers and internal LINZ business groups has ensured customer perspectives are being incorporated into the build.
- 19 Both squads are supported by an "enablement" squad whose role is to provide the underlying technical resources needed to perform their tasks.

*Conduct due diligence on moving the Landonline database to an offshore public cloud*

- 20 Due diligence commenced on the proposal to move the Landonline database to an offshore public cloud service. Four streams of work are in progress – assessments of data sovereignty; privacy; social licence; and security implications. An independent privacy impact assessment has been commissioned.
- 21 The programme expects to make a final recommendation to the LINZ Chief Executive on the offshore public cloud service by the end of the year. A confirmed position is needed by the end of 2019 as this is a key input to the programme's approach to the tranche 2 SSBC. We are actively working with the Government Chief Digital Officer (GCDO) to ensure that the programme is aligned with broader consideration of Government use of cloud services by Digital and Data Ministers.

*Complete technical proofs of concepts for database move to public cloud*

- 22 A database squad began testing the technical feasibility of migrating Landonline's database to the public cloud. A number of key technical questions have already been answered and the next phase will be to begin testing in a secure cloud testing environment using data stripped of personal information. Outputs from this work will inform the policy decision on the acceptability of the offshore cloud storage proposal.

*Build an enduring culture and capability*

- 23 The shift to an Agile delivery culture has been strongly embraced by the programme and embedded into product delivery and governance structures. Particular attention has been paid to building Agile capability and governance skills in programme staff, contractors, the STEP Board and ELT.



- 24 Agile delivery supports continuous learning and important insights have been gained so far – for example on the programme’s approaches to recruitment, business integration and software development. These insights are helping the programme to adapt and refine its approach to programme delivery, and ensure the organisation is engaged and supportive. As noted earlier in the report, these insights are also informing change processes LINZ is considering for broadening the use of Agile across the organisation. Further useful insights have been gained from engagement with the Department of Internal Affairs and Ministry of Education as they are both implementing large-scale Agile projects.
- 25 Targets for recruiting ICT resources have been met. The programme has so far successfully struck the anticipated balance between LINZ staff and contractor resources needed to deliver the tranche. Currently 50 per cent of programme positions are filled by LINZ staff (the expected range was 50-60 per cent). Key software squad leadership roles have been filled by experienced staff with a strong understanding of Landonline and customer needs. This supports LINZ and the programme’s aim of developing internal capability and reducing reliance on contracted resources as the work progresses.
- 26 The initial focus on recruiting ICT capability meant the programme was slightly behind on recruiting change management resources. Two critical appointments have since been made and we anticipate this will be resolved by the next quarter.

#### *Stakeholder engagement*

- 27 STEP has actively engaged with external stakeholders and will continue to do so as the tranche progresses.
- 28 A successful first formal demonstration of progress on search and notices products was made in June to representatives from the surveying and conveyancing communities and Wellington City Council. These formal demonstrations, called “system demonstrations”, are a key feature of the Agile approach and they occur at the end of each programme increment. They are an important opportunity for stakeholders to provide feedback and contribute to product design and planning from a customer and user perspective. Demonstrations also provide assurance to decision-makers that products are delivering on expectations. Similar demonstrations were made to LINZ staff, the ELT, STEP Board, and LINZ’s independent Risk and Assurance Committee (RAC).
- 29 STEP’s external engagement in May and June included participation in several national fora run by professional surveying, conveyancing and specialist territorial authority organisations, and in the LINZ-hosted Property System Stakeholder forum. Participants at these events demonstrated a real hunger for change and are strongly supportive of the Landonline rebuild.

#### *Conduct a review of survey and titles fees*

- 30 Landonline’s survey and title services operate on a full cost-recovery model, including the recovery of associated depreciation and capital charge through fees paid by Landonline users. User fees will fund the incremental operating expenditure associated with the STEP investment. Cabinet directed LINZ [GOV-18-MIN-0078] to complete two reviews of survey and title fees:
- one review to be completed by early 2021; and
  - a second review to occur when STEP is completed (expected to be in 2023/24).
- 31 Challenges regarding the timing of the fee reviews and release of STEP products have been covered earlier in this report. Work has also been undertaken to develop and consult stakeholders on a framework and process for reviewing and setting fees that ensures LINZ complies with both Auditor-General guidance and Treasury guidelines. The framework will also help ensure LINZ has information appropriate to complete Cabinet-mandated regulatory impact analysis (RIS) and cost-recovery impact statement (CRIS) requirements. The review of survey and title fees will take place in close consultation with the Minister for Land Information and other Ministers. Cabinet will consider a public discussion document (mid-2020) before it is released and will make the final decisions on fees and charges (early 2021).



*Achieve benefits*

- 32 Landonline is critical economic infrastructure and work to de-risk the current technology platform will ensure New Zealanders can have continued confidence in property rights. This work is underway and will be fully realised over subsequent tranches.
- 33 Tranche 1 service improvements are expected to deliver an estimated \$90 million in monetised benefits over the 12-year funding life of the programme, through improved real-time accessibility to property information, and time and cost reductions in property transactions. Overall programme benefits are an estimated \$119 million to \$143 million. These benefits were based on baseline data collected in 2015 for the programme's Detailed Business Case. Updated baseline data was gathered from a customer survey in April 2019, and as a result LINZ is revising the estimated benefits STEP is expecting to generate. Revised benefits and measures will be reported in the next quarter.

*Programme assurance*

- 34 Regular risk and assurance reporting to RAC, the STEP Board and Enterprise Programme Management Office is ongoing. Continuous assurance is integral to Agile delivery and is based on the "three lines of defence model" – a combination of:
- internal quality management controls (including automated testing as software is developed that allows early identification and remedying of any issues. Independent technology assurance and security training at the squad level provides further layers of quality assurance)
  - management oversight of these controls, and
  - independent assurance.

- 35 An independent quality assurance expert is expected to be appointed as an advisor to the programme in the next quarter.

*Formal programme reporting*

- 36 Along with quarterly reporting by LINZ to joint Ministers, the Minister for Land Information will provide a formal report back to Cabinet on programme progress in September 2019. A draft Cabinet paper will be circulated to joint Ministers for comment before it is submitted to Cabinet.

*Deliver tranche 2 Single Stage Business Case*

- 37 Early preparatory work has begun on the tranche 2 SSBC. The delivery timetable will be finalised in the next quarter. A working group will engage with Central Agencies from August with the aim of ensuring the programme's approach to the timing and release of funding for tranche 2 aligns with Treasury requirements.

*Integrate STEP with LINZ key strategic priorities and operations*

- 38 The programme is working with other parts of LINZ to ensure STEP is aligned with key strategic change priorities and operational activities. An integration group comprised of representatives of other LINZ key initiatives and impacted business groups is in place. Monthly reports on the status of integration and alignment activities are provided to the STEP Board.

**Programme Increment 2**

- 39 Planning for Programme Increment 2 (July – September 2019) was completed at the end of June. By the end of the increment we expect to have:
- made significant progress on the design of search and notices products, and developed a strategy for the staged release of the products
  - completed analysis of due diligence on and the technical feasibility of the offshore public cloud service proposal
  - completed the benefits refresh

- progressed the survey and title fee review.

**Next quarterly report**

40 The next quarterly report will be provided to you at the end of October 2019.

Proactive Release