



**Ministry of Business,
Innovation & Employment**

Science and Innovation Briefing: AgResearch: Future Footprint

Date:	Thursday 20 December	Priority:	Routine
Security Classification:	Commercial In Confidence	Briefing no:	B/12/486

ACTION SOUGHT		
	Action sought	Deadline
Hon Steven Joyce Minister of Science and Innovation	Agree to forward this briefing to Associate Minister of Finance Hon Dr Jonathan Coleman and Minister for Primary Industries Hon David Carter. Approve the attached letter of response and, subject to approval by the Associate Minister of Finance, sign and send it out. Provide comment on the attached draft Cabinet paper.	At your earliest convenience.
Hon Dr Jonathan Coleman Associate Minister of Finance	Approve the attached letter of response.	At your earliest convenience.

CONTACT FOR TELEPHONE DISCUSSION (IF REQUIRED)				
Name	Position	Telephone		1st contact
Michael Bird	General Manager, Institutions and System Performance	917 7868	021 375 652	✓
section 9(2)(e)	Senior Analyst, Institutional Performance	section 9(2)(e)		

THE FOLLOWING DEPARTMENTS/AGENCIES HAVE SEEN THIS REPORT					
<input type="checkbox"/> MSD	<input type="checkbox"/> NZTE	<input type="checkbox"/> Treasury	<input checked="" type="checkbox"/> COMU	<input type="checkbox"/> TEC	<input type="checkbox"/> MoE
<input type="checkbox"/> MFAT	<input type="checkbox"/> DOC	<input type="checkbox"/> MfE	<input type="checkbox"/> MoH	<input type="checkbox"/> TPK	<input checked="" type="checkbox"/> Other

Please specify: MPI

- Minister's Office to Complete:
- | | |
|---|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Declined |
| <input type="checkbox"/> Noted | <input type="checkbox"/> Needs change |
| <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by Events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn |

Comments:

Executive Summary

1. AgResearch requires significant capital reinvestment during the next five years. Its asset base includes aging campuses and several buildings in need of earthquake strengthening. There are also a number of under-utilised assets and research farms.
2. MBIE and previous monitoring agencies have been concerned that these underperforming assets have contributed to historically low financial returns and that revaluations, asset sales and non-core income may be masking an underperforming core business.
3. On 31 October Sam Robinson, Chair of AgResearch, wrote to you to request shareholding Ministers' approval for an \$89.2 million capital investment programme. This programme, the Future Footprint, proposes to make significant investment in two innovation hubs at Grasslands (Massey, Manawatu) and Lincoln (Canterbury) while maintaining two regionally specific centres of expertise at the campuses in Ruakura (Hamilton) and Invermay (Otago). This would require redeploying up to 282 staff (including 67 non-science staff), with the majority moving to Grasslands or Lincoln.
4. Section 2(2)(b)(ii) the business case offers a rare opportunity for AgResearch to work with other stakeholders to build education-research-technology transfer hubs, especially at Lincoln where there is also significant redevelopment proposed by Lincoln University. The economic benefits of such hubs could be significant.
5. AgResearch's proposal is aligned with this Government's Business Growth Agenda. Specifically the Future Footprint develops innovation parks and will help businesses to interact more effectively with research institutions (Building Innovation). It will also support more efficient land and resource use by accelerating technology transfer and embedding best practice knowledge (Building Natural Resources).
6. MBIE recommends that shareholding Ministers provide 'in principle' approval for the proposed Future Footprint plans so that AgResearch can begin the detailed planning phase.
7. MBIE also recommends a series of report backs to assure shareholding Ministers that the risks of this business plan are minimised and the potential upsides of an innovation hub are maximised. These include documentation on the risk of staff loss on transition, joint investment plans with stakeholders and detail on how AgResearch will incentivise collaborative and partnership behaviours at all levels.
8. A proposed letter of response to AgResearch has been provided as Annex One and a draft Cabinet paper has been provided for your input as Annex Two.

Recommendations

We recommend that you:

a.	Note that AgResearch has submitted a business case, the Future Footprint, to shareholding Ministers which proposes to create two innovation hubs at Grasslands (Massey, Manawatu) and Lincoln (Canterbury) while maintaining two regionally specific centres of expertise at the campuses in Ruakura (Hamilton) and Invermay (Otago). This would require redeploying up to 282 staff, with the majority moving to Grasslands or Lincoln.	
b.	Note that AgResearch has requested approval from shareholding Ministers for investment of 9(2)(b)(ii) at Grasslands and 9(2)(b)(ii) at Lincoln.	
c.	Note that the investment will be funded through the sale of surplus farm and campus assets and operating cash flows. No additional funding will be requested from the Crown.	
d.	Agree to send a copy of this briefing to the Minister for Primary Industries, Hon David Carter for his information.	Agree / Disagree
e.	Approve the attached letter of response (Annex One).	Agree / Disagree
f.	Approve the attached draft Cabinet paper (Annex Two).	Agree / Disagree

Michael Bird
 General Manager, Institutions and System
 Performance
 Date / / 2012

Hon Steven Joyce
 Minister of Science and Innovation
 Date / / 2012

Hon Dr Jonathan Coleman
 Associate Minister of Finance
 Date / / 2012

Purpose

1. On 31 October, Sam Robinson, Chair of AgResearch wrote to you to request shareholding Ministers' approval for an \$89.2 million capital investment programme, the Future Footprint.
2. The proposed investment meets the criteria of a "significant transaction" as defined by the CRI Toolkit. The AgResearch Board is expected to obtain prior written consent from shareholding Ministers for any transactions with a value equivalent to or greater than \$10 million or 20 per cent of the CRI's total assets.
3. Initial analysis of the Future Footprint business case was provided for your meeting with the AgResearch Chair and Chief Executive on 13 December 2012 (B/12/476). This briefing provides final analysis of the Future Footprint business case and proposes a letter of response (Annex One).
4. You have requested a paper to be prepared for Cabinet to note the shareholding Minister's intended decisions. This has been provided as Annex Two.
5. For your convenience a copy of the Future Footprint business case has been provided as Annex Three.

Background

6. The business plan proposes that AgResearch reinvests \$72.7 million from asset sales to build two science and innovation 'hubs' or 'clusters' at Grasslands (Massey) and Lincoln and refocus capability at Ruakura (Hamilton) and Invermay (Dunedin). The total investment by AgResearch is forecast to be \$99.5 million, but this includes of \$10.3 million of land and buildings bought from Plant and Food Research. The plan requires the relocation of 282 staff (before retirements and natural reductions), including 87 non-science staff.

Location	Current	Proposed location for current people	Difference
Ruakura	266	104	-162
Grasslands	267	364	+97
Lincoln	116	268	+152
Invermay	113	26	-87
Total	762	762	0

Table One: Future Footprint staff distribution

7. Grasslands will be focussed on forage, animal and metabolism and health, agricultural greenhouse gases, human nutrition and food assurance and innovation research. AgResearch plans to have approximately 370 staff based at this centre.
8. Lincoln will be focussed on South Island farm (dairy, sheep, beef and deer) systems, sustainability and environment, animal genomics/genetics and reproduction. AgResearch plans to have approximately 270 staff based at this centre. South Island dairy systems are expected to continue to provide the major source of sector growth in the coming years.

9. Ruakura and Invermay will be focussed on regional farm systems, land-use, sustainability and environmental research. AgResearch plans to have approximately 100 staff at the Ruakura campus and 30 staff at Invermay.
10. The business case has to some degree been overtaken by a commitment by AgResearch to work with Lincoln University, Plant and Food Research, Landcare Research and DairyNZ to achieve, over time, the creation of a world-class education-research-technology transfer hub at Lincoln, Canterbury (the Lincoln Hub)
11. MBIE and the Ministry for Primary Industries have prepared a joint briefing on the Lincoln Hub for you and the Minister for Primary Industries, Hon David Carter (B/12/467), recommending that Ministers support an as full as possible integration of capital assets, including specialised laboratories and equipment with integrated teams and joint outcomes. A detailed business plan for the Lincoln Hub is due to be submitted by 31 March 2013.
12. The Future Footprint business plan, as presented, assumes that various developments in Lincoln will take place independently with little sharing of facilities. If shareholding Ministers gave in principle agreement to the Future Footprint capability distribution, AgResearch would be able to enter the Lincoln Hub planning process with defined resource requirements.

Asset Sales

13. AgResearch has maintained an asset base that includes aging campuses and under-utilised assets. MBIE and previous monitoring agencies have been concerned that these have contributed to low historic financial returns and that revaluations, asset sales and non-core income may be masking an underperforming core business.
14. AgResearch's Wallaceville campus (Upper Hutt) was declared surplus to requirements by the Board in 2008. The site is soon to be advertised for sale as approved by shareholding Ministers (B/12/319). Proceeds are expected to be approximately section 9(2)(b)(i)
15. The AgResearch 2010-2015 Farm Strategy, approved by the Board in November 2010, set out AgResearch's plans to reduce the number of farms from 13 to 5 over a five-year period. Shareholding ministers approved the sale of two farms at Flock House in September 2011. The sale of farms is expected to raise section 9(2)(b)(i)
16. Stakeholders, such as the Ministry for Primary Industries and FertResearch, have expressed some concern that farm sales will lead to the loss of two long running fertiliser trials. AgResearch has noted these concerns and has assured MBIE that it will work with stakeholders to mitigate the risks.
17. MBIE recommends that shareholding Ministers approve the remaining farms for sale with the expectation that the AgResearch Board lead the process and regularly update MBIE on progress.

Summary of Investment Options

18. The following table summarizes the investment options:

Table Two: Future Footprint business case options

Investment option	Future Footprint	Business as Usual 1 (BAU1)	Business as Usual 2 (BAU2)
Summary	Move capability to create hubs at Lincoln and Massey – creating 'clusters' or 'hubs'.	Retain capability in existing locations. Upgrade and build in existing sites to meet immediate needs.	Minimum investment required to maintain business.
Capital Investment	\$99.5m	section 9(2)(b)(ii)	section 9(2)(b)(ii)
Asset sale proceeds			
Short term operating cashflow reinvestment			
Dividends paid to 2022			
NPV	10 year: 9(2)(b)(ii) In perpetuity: 9(2)(b)(ii)	10 year: 9(2)(b)(ii) In perpetuity: 9(2)(b)(ii)	10 year: 9(2)(b)(ii) In perpetuity: 9(2)(b)(ii)
Build completion	2016	2018	2018
Forecast revenue 2022		section 9(2)(b)(ii)	
Forecast return on equity 2022			
Forecast adjusted return on equity 2022			

* In BAU1 the first dividend
section 9(2)(b)(ii)

section 9(2)(b)(ii)

Financial Analysis of the Options

19. MBIE has considered the assumptions made in the respective business cases and found them to be reasonable. Build cost contingencies, transition provisions and growth assumption are within normal expectations. We find the timing of asset sales to be optimistic but this has been considered in the sensitivity analysis presented.
20. MBIE recommends that shareholding Ministers do not consider the BAU2 option, which is the minimum investment level. AgResearch's campuses are in need of significant upgrade so additional business plans will be needed in future years. A deferred patchwork of smaller works will erode any benefit arising from the initial 9(2)(b)(ii) of additional dividends.
21. section 9(2)(b)(ii)
22. We also note that the BAU1 business case, being improving capability with the existing site configuration, takes one year longer. This is because substantially upgrading occupied buildings is slower than undertaking a new build.
23. The use of debt and alternative funding sources has not been presented in detail. Bank debt is discussed further in the sensitivity analysis section below. Alternative forms of finance such as partnership with local iwi or sale and lease back have not been presented. MBIE understands that many options have been considered by management and found to be unsuitable. We recommend that these findings should be presented to shareholding Ministers as a report back condition.
24. In conclusion, on the basis of the information provided, the Future Footprint proposal does not present a threat to the financial sustainability of the business. section 9(2)(b)(ii)
section 9(2)(b)(ii)

Sensitivity Analysis of the Preferred Option

25. Cash flow requirements for the project are highly sensitive to variation in the timing and proceeds of sales and in the purchase price of assets. The worst case scenario presents a peak debt of 9(2)(b)(ii) in 2017. No discussion is presented regarding AgResearch's ability to maintain such a level of debt. However, the recent CRI Balance Sheet Review (B/12/358) suggests that AgResearch could currently support up to 9(2)(b)(ii) debt.
26. A hypothetical peak debt of 9(2)(b)(ii) has been discussed with AgResearch management. This would require dividends if sales proceeds are better than the worst-case scenario. MBIE recommends that any approval would be conditional on AgResearch developing such a model.
27. Sensitivity of NPV to cash flow variations is significant. There is a 9(2)(b)(ii) spread between best and worst case scenarios (10 year NPV).
28. No sensitivity to discount rate has been presented. MBIE has interrogated the financial models provided and found that this sensitivity is substantially less than those sensitivities modelled.

Table three: Sensitivity to discount rates

Model	NPV – 10 years
Future Footprint (8%)	section 9(2) (b)(ii)
Future Footprint (6%)	
Future Footprint (10%)	

29. In conclusion, the sensitivities presented are reasonably selected and do not present any reason why the Future Footprint model would not be approved. However, there is a significant exposure to variation in the timing and proceeds of sales and in the purchase price of assets. MBIE recommend that any in principle agreement be contingent on AgResearch providing detail of clear and unequivocal exit points so that if the further work establishes that the business case is not as viable as currently suggested, then the programme can be reassessed.

Economic Analysis

30. AgResearch's purpose is not just to produce a financial return. It primarily exists to improve the performance of its sector so the economic consequences must also be considered.

Quantity of output

31. AgResearch has informed officials that there is no substantial difference in the nature of research between the options presented. Any differences are incremental and can be considered in conjunction with total output.
32. Although total revenue is not significantly higher in the Future Footprint option, it is derived from commercial revenue growth, a key proxy for technology transfer performance. Forecast commercial revenue in 2022 is section 9(2)(b)(ii) higher than the BAU options. This growth is in addition to the 9(2)(b)(ii) average annual commercial revenue growth included in the BAU model.
33. AgResearch has not considered the economic effect of this increased activity or stated whether it is derived through competitive advantage or through increased business expenditure on research and development.

Quality of output

34. AgResearch has presented some analysis linking internal staff co-location to better quality research and ultimately GDP impact. The model, based on Treasury working papers¹, indicates that the Future Footprint plan would result in a \$16 million increase in annual GDP (2021). This arises solely from the benefits of AgResearch staff co-locating. MBIE assesses the individual assumptions as reasonable, but finds the overall cause and effect tenuous.

¹ Hall, J. & Scobie, G.M. (2008) *The Role of R&D in Productivity Growth: The Case of Agriculture in New Zealand 1927 to 2001*, Report No. 08/01, New Zealand Treasury Working Paper, Wellington, New Zealand and Blakeley, N., Lewis, G., Mills, D. (2005) *The Economics of Knowledge: What Makes Ideas Special for Economic Growth?*, New Zealand Treasury Policy Perspectives Paper 05/05.

Wider impact

35. AgResearch is proposing the formation of innovation hubs at both Lincoln and Massey. The benefits of successful hubs, such as the Danish 'Food Valley' and Tasmanian Institute of Agricultural Research, are described qualitatively but there is little quantitative documentation available. It is commonly accepted that integrated services and aligned objectives maximise economic benefits.
36. An innovation hub will not succeed simply because companies are co-located – it will succeed when all parties have a culture of collaboration. AgResearch's relationships with stakeholders such as DairyNZ and the universities historically were poor, although they have recently improved significantly. Poor relationships are a significant potential barrier to success and MBIE recommend that AgResearch reports back on how it will develop relationships at an executive level and how it will incentivise collaborative and partnership behaviours at every level.

Strategic fit

37. AgResearch's objectives at Lincoln and Massey can be clearly linked to the Government's Business Growth Agenda, specifically:
- Building Innovation: Strengthening research institutions by helping businesses interact more effectively with research institutions.
 - Building Innovation: Developing innovation infrastructure and encouraging the development of Innovation Parks.
 - Building Natural Resources: Building growth from more efficient land and resource use by accelerating technology transfer and embedding best practice knowledge.
38. Furthermore, the Ministry for Primary Industries is aware of the Future Footprint business case and generally supports its principles. It has requested to be fully consulted if the proposal continues.

A Hub at Lincoln

39. Growth in the dairy industry is forecast to be focused in the South Island. Therefore, it is reasonable to create a hub at Lincoln, building on existing relationships and aligning with the proposed move of DairyNZ staff.
section 9(2)(b)(ii)
40. The plan currently presented is one of co-location, sharing a building with DairyNZ next to the Lincoln campus. However, since the business plan was submitted it has been recognised that there is the potential to build a fully integrated campus with Lincoln University, Plant and Food Research, Landcare Research and DairyNZ.
41. Assuming that the proposed development operates within the capital constraints documented in this business case, MBIE recommends that shareholding Ministers encourage the development of an integrated campus at Lincoln and provide in principle agreement for detailed planning to commence.

A Hub at Grasslands / Massey

42. There is potential to leverage Massey University's strength in food technologies with the existing assets at Grasslands. Fonterra also has a very strong research and development presence in the area.

43. Massey University's assets do not need urgent investment therefore a fully integrated campus is not yet viable. However, AgResearch still has the option to further develop plans to integrate the needs of Massey, Fonterra, Plant and Food Research and other local stakeholders.
44. MBIE recommends that AgResearch is given in principle agreement so that it can fully engage with stakeholders and prepare joint detailed plans. Once detailed plans are presented, MBIE will be able to fully consider whether the plans presented are appropriate rather than being gold plated. Given that the creation of a Massey Hub is less advanced than Lincoln and that stakeholders such as Fonterra are currently considering their needs. We recommend a 30 June 2013 reporting deadline.

Staff

45. The Future Footprint plan focuses on AgResearch's tangible assets. However, the company's greatest determinate of success is its staff. This fact is not covered in sufficient detail in the business case presented, despite the proposed 282 site transfers (before retirements and natural reductions). Three significant queries need to be addressed:
- What is the risk of losing staff in the change process? Is there any concentration of exposure with key staff?
 - Will a new hub improve AgResearch's ability to recruit and retain the best staff? What are the benefits of this?
 - How will staff be encouraged to collaborate and innovate across the sector, in particular within the context of the new proposal for the Lincoln Hub?

Science and Non-Science Transitions		
From Current Location	To Future Location	Transitions – before retirements, resignations
Ruakura	Grasslands/Hopkirk	86
	Lincoln	76
Grasslands	Lincoln	14
Lincoln	Grasslands	19
Invermay	Grasslands	6
	Lincoln	81
Total Science and Non-Science Transitions		282

Table Four: Staff transitions

46. MBIE recommends that AgResearch report back on all these questions.

Next Steps

47. A proposed letter of response to the AgResearch Board is provided as Annex One.
48. You have requested that a draft Cabinet paper be provided for your input. This has been attached as Annex Two.

Communications/Media

49. We recommend that you charge the AgResearch Board with managing any public interest issues as they arise and that you request AgResearch to keep your office informed of any developments in the planning process and asset sales programme.
50. The AgResearch Board will also be expected to carefully manage internal communications to staff and external communications with national and international science community.
51. There is additional risk that local Ruakura and Invermay stakeholders will be concerned with a reduction in headcount at these sites. MBIE recommend that AgResearch work with your office to prepare a communications plan.

Annexes

Annex One: Proposed Letter of Response

Annex Two: Draft Cabinet Paper

Annex Three: Future Footprint Business Case

RELEASED UNDER THE
OFFICIAL INFORMATION ACT

Annex One: Proposed Letter of Response

RELEASED UNDER THE
OFFICIAL INFORMATION ACT

8(2)(f)(iv)

RELEASED UNDER THE
OFFICIAL INFORMATION ACT

9(2)(f)(iv)

RELEASED UNDER THE
OFFICIAL INFORMATION ACT

Annex Two: Draft Cabinet Paper

section 9(2)(g)(i)

RELEASED UNDER THE
OFFICIAL INFORMATION ACT

Annex Three: Future Footprint Business Case

section 18(d)

RELEASED UNDER THE
OFFICIAL INFORMATION ACT