BRANZ

2 August 2011

Inquiry into Housing Affordability
New Zealand Productivity Commission
PO Box 8036
Wellington 6143

Dear Sir/Madam

This submission is from the Building Research Association of New Zealand (BRANZ) in response to the *Issues Paper Housing Affordability June 2011*. The subject matter is a complex policy and industry

Our main interest is:

a. the supply side of housing issues, given our close involvement with the technical and cost aspects related to buildings; and
b. the building cost of houses, rather than the land cost.

As an input to this submission, we obtained data on the cost make-up of a standard house design from a major group housing company in New Zealand. Given that the company had maintained detailed financial records for the last decade, costs by component were analysed over a nine year period to March 2011. The main findings (report attached) were:

- Input costs rose by approximately 5.8% per annum over the nine years.
- In the same period the capital expenditure price index for new housing rose 4.3% per annum.
- By component the cost escalations were:
  - Materials 4.9%pa;
  - Labour 6.5%pa;
  - Sub-contractors 4.2%pa; and
  - "Other costs" 16.4%pa (being a variety of items including new compliance requirements).
- Compliance changes (i.e. Building Code and consenting changes, new OSH requirements etc) accounted for about a third of the increase over the period.

The conclusion from the study is that input costs have risen faster than output prices for new housing, and that accordingly profit margins have been adversely affected in the industry.

The same house design was sent to a Queensland and a Californian house building company for comparison of costs. The design was slightly modified in each country to represent local practice (methods of construction, design codes). The results are not yet available but will be forwarded to the Commission in a supplementary submission as soon as we have them to hand.

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The Commission's issue paper referred to two of our publications on New House Price Modelling (Study Report No 196), and Changing Housing Need (Study Report No 183). In addition to those we have produced other material reports related to productivity and costs in the industry, including:

- Optimal Design of Timber Framing in Housing (Study Report No 246) which finds that reduced timber use is feasible in housing under current standards, but is not normal practice, and amounts to a possible saving of 1 to 2% by omitting dwangs and some junction studs. Doing so, however, results in a more flexible, less robust house. (Relates to Question 54).

- Cost Efficiencies of Standardised Housing (Study Report No 247) which finds cost savings of about 8% compared to one-off designs. The wide spread preference for bespoke designs has a cost penalty, when in many situations a modified standard design enables individual requirements to be met at a lower price. (Q58).

- Firm Productivity Variations (Study Report No 254) finds that labour productivity is higher in Non-residential building and the civil engineering sector than the residential building sector. (Q60).

- Construction industry data to assist in Productivity Research – Part One (Study Report No 256). A survey indicated a fairly high level of new house owner satisfaction despite a high incidence of call-backs (61% of respondents) for defect repair. (Q61). Also, there was little difference in the level of satisfaction between standard designs (ie group housing) and one-off designs. (Q58).

These reports are downloadable free of charge from the BRANZ web-site.

As noted earlier, this is a complex policy and industry issue, and we are happy to work with the Productivity Commission where we usefully can – and also as noted, we will forward the comparison Queensland and California house cost pricing as soon as we have the information to hand.

Yours faithfully

Pieter Burghout
Chief Executive

TYPICAL HOUSE COST ESCALATION IN RECENT YEARS

Submission from BRANZ to the Productivity Commission – July 2011

A group house builder has provided cost data to BRANZ on inputs into new house construction for a modal house. The costs are annual for each year since 2002. The house is one offered by the builder as a standard design, is single storey on a concrete slab, and has had no changes in layout and very minor changes in materials over the period. It is approximately 190 sqm in floor area with a current list price of about $1,400 per sqm GST inclusive. The changes in costs over 9 years are shown below in Figure 1 and Table 1.

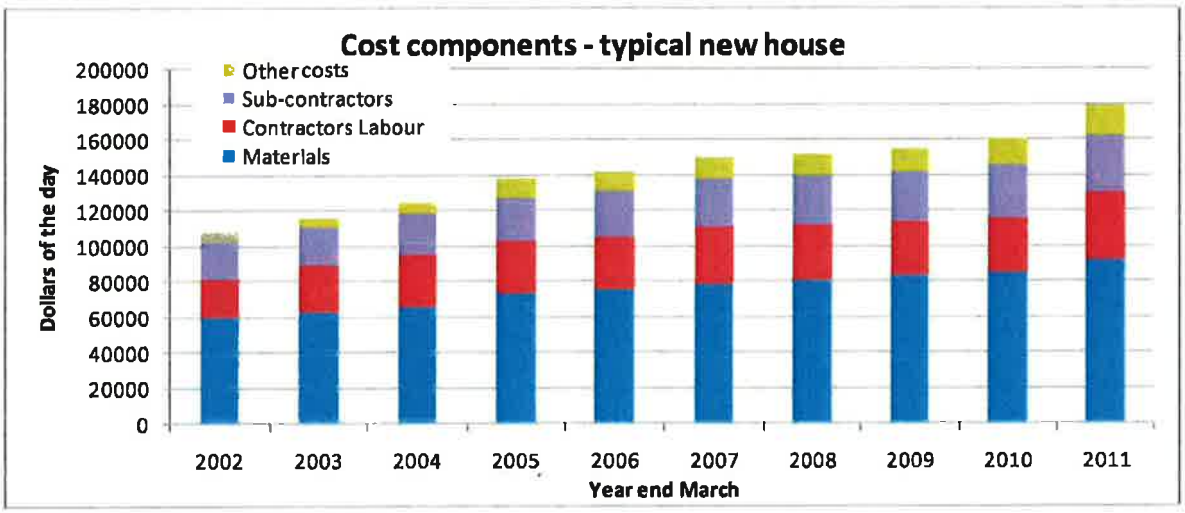

FIGURE 1 Major cost components

Typical new house - Cost components

	Dollars of the day										% ann
Year end march	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	chg
Materials (1)	60336	63287	65905	73649	76255	79157	80717	83815	85600	92526	4.9
Contractors Labour	21669	26095	29516	29329	29243	32378	31228	29985	29985	38170	6.5
Subcontractors (2)	21984	21731	23130	24427	25903	26490	28056	28908	30792	31905	4.2
"Other costs" (3)	3891	5184	6443	10997	10862	12090	12045	12420	14339	17076	17.9
Total costs	107881	116297	124995	138403	142263	150116	152046	155129	160717	179676	5.8
										Total escalation excl heat pump and smart sys.	5.6
										Total escalation excl all "Other costs".	5.1

(1) Materials installed by the builder, plus concrete slab, roofing, insulation, and windows.
(2) Sub-contractors are electrical, plumbing, tiling, carpet, paint/ decor, and includes their materials and labour.
(3) Other costs include consent fees and levies, drawings, OSH requirements, heat pump/ security systems as standard.

TABLE 1 Major cost components.

The costs exclude administration overheads, marketing, sales and management.

Over the 9 year period total input costs escalated by 5.8% per year. This compares with the capital expenditure price index for new housing escalation of 4.3% per annum over the same period, indicating that profit margins decreased on average over the period.

The largest percentage increase in input costs was in the "Other costs" category, where the annual change was almost 18% per year. This was partly due to new items being included as "standard" i.e. heat pumps and smart/ security systems. But major increases occurred in consent fees, drawing documentation, OSH requirements (scaffold, site sanitation), waste disposal charges, and the DBH levy, see Table 2.

Approximately a third of the total cost increase between 2002 and 2011 was due to compliance costs.

Typical new house - Cost increases 2002 to 2011

Materials	$ incr	% ann chg	Labour	$ Incr	% ann chg	Sub-Contractors	$ Incr	% ann chg	Other	$ Incr	% ann chg	Total $
Framing/truss	9732	7.3	Shell	4530	6.3	Painting& decor	2600	4.9	Building consent	4551	18.5	
Windows	4940	4.7	Excav/backfill	2940	16.3	Carpeting	2431	5.1	Drawings	2704	35.2	
Roofing	4556	4.7	Foundations	2889	9.6	Electrical	2222	4.7	Smart system	974	11.4	
Concrete	2817	7.8	Linings	2395	4.3	Plumbing	1352	3.8	Heat pump	2622	5.0	
Joinery	2733	6.3	Finishing	2381	8.3	Floor tiling	911	3.9	Scaffold	382	na	
Foundation hardware	2545	12.5	Wall clad	1140	2.7	Drainage	463	1.8	DBH/BRANZ levy	508	13.2	
Wall cladding	1398	3.8	Floor placing	225	4.0	Slab cutting	-59	-2.9	Temporary services	510	7.6	
Insulation	1251	2.7							Miscellaneous (2)	934	7.3	
Miscellaneous (1)	2217	1.1										
	32189	4.9		16501	6.5		9921	4.2		13185	17.9	71795
Compliance costs (3) included in above	10157			4200			0			6949		21305
									Compliance changes as percent of increase			29.7%

Note: The Materials group includes some labour component eg concrete and insulation placing.
Likewise the Labour group includes some materials , i.e. backfill, paint, electrical and plumbing fittings.
(1) Miscellaneous Materials includes appliances, linings, doors, wraps, bathroom wall fittings.
(2) Miscellaneous Other includes trade organisation fees, insurance, waste charges, site sanitation (OSH requirement).
(3) Compliance costs are building code related changes, including design and council changes, and new OSH requirements.

TABLE 2 – Cost increases by component details.

Material and labour cost increases included building code changes related to clause B1, B2 and E2 affecting foundations, framing and wraps/seals. There was an increase in window costs due to the introduction of double glazing, amounting to about $3,000 in one year, but apart from that window costs increases have been quite low at about 2% per annum over the nine year analysis period.