INTRODUCTION

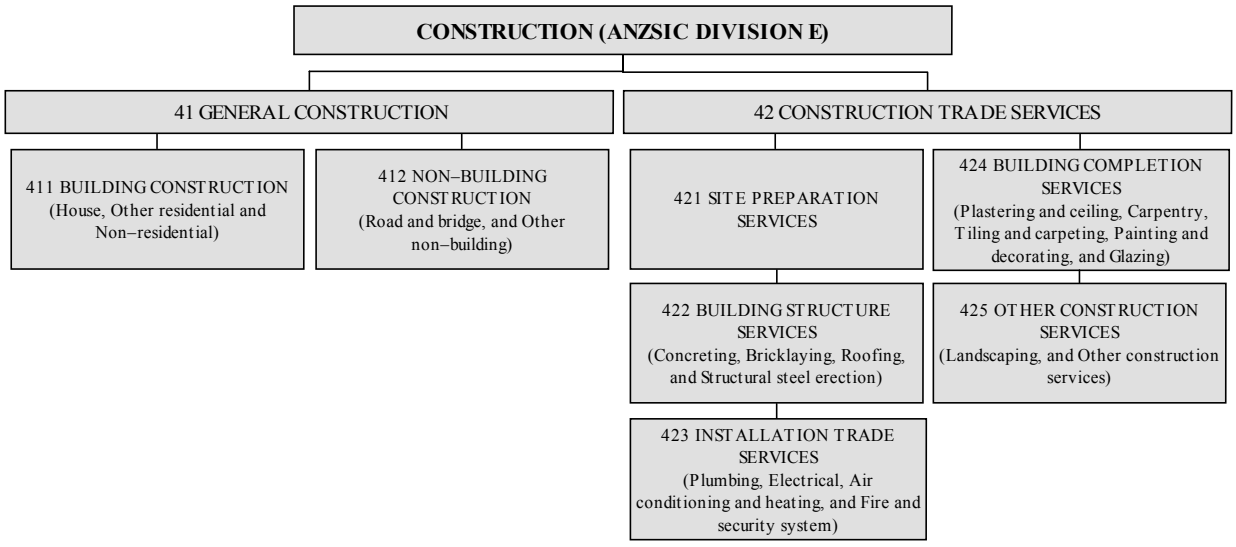
The Construction industry impacts on the lives of every Western Australian. It provides the homes in which we live, recreational facilities, schools and hospitals, and infrastructure for transport, water and electricity supply and telecommunications. The Construction industry is an integral part of the Western Australian economy and is closely linked to other industries such as Manufacturing and Finance. The engineering construction for large mining projects is of particular importance to the state's economy.

This article brings together a range of data on the Western Australian Construction industry over the period from 1998–99 to 2002–03, focusing on trends in construction activity, economic performance and employment. Key facts include:

- The Construction industry contributed an estimated $6,659 million (8.1%) to Gross State Product in 2002–03;
- The value of construction activity increased by 40.5% over the five years to 2002–03, mainly driven by engineering construction;
- The value of residential building activity increased by 40.6% from 1998–99 to 2002–03;
- Business investment in Construction declined sharply in 1999–2000 (down 40.9% to $159 million), before recovering to reach $241 million in 2002–03;
- In 2002–03, the Construction industry employed 77,900 persons or 8.1% of the state's total workforce;
- Apprenticeship and trainee completions in Construction rose by 8.2% over the five years to 2002–03;
- The incidence rate of work-related injury and disease in the Construction industry fell by 40.0% over the five years to 2001–02; and
- In 2002–03, industrial disputes in the Construction industry resulted in 491 working days lost per thousand employees, down from 1,072 working days lost per thousand employees in 1998–99.

DEFINING THE CONSTRUCTION INDUSTRY

The diagram below shows the structure of the Construction industry based on the Australian and New Zealand Standard Industry Classification (ANZSIC), under which Construction (ANZSIC Division E) is split into the Subdivisions of General construction (41) and Construction trade services (42).



Construction Division E comprises the construction of buildings (including the site assembly and erection of prefabricated buildings), roads, railroads, aerodromes, irrigation projects, harbour or river works, water, gas, sewerage or stormwater drains or mains, electricity or other transmission lines or towers, pipelines, oil refineries or other specified civil engineering projects. In general, this Division also comprises the repair of buildings or of other structures, alteration and renovation of buildings, preparation of mine sites, demolition or excavation.

General construction comprises building construction, which incorporates residential building (houses, flats, etc.), non-residential building (offices, shops, hotels, etc.) and non-building or engineering construction (roads, bridges, etc.).

Construction trade services comprises specified installation activities and special building or construction trade services such as structural steel erection, carpentry, bricklaying, concreting, plumbing, painting, plastering, floor and wall tiling, roof tiling and the installation or laying of floor coverings.

The impact of The New Taxation System

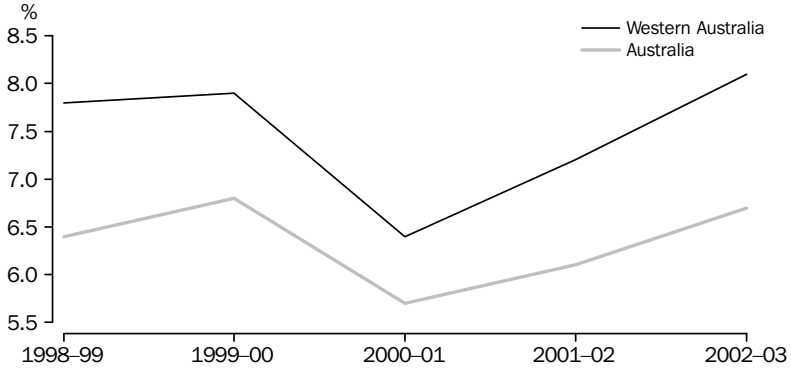
In July 2000, The New Taxation System (TNTS) was introduced in Australia. A key element of TNTS was the introduction of a goods and services tax (GST), and with it a First Home Owners Grant (FHOG) payable to all first home buyers. The impact of TNTS on the Construction industry included price and income changes, which in turn impacted on purchasing patterns in the industry. The impact can be seen in many of the statistics presented in this article, with a significant increase in construction activity in 1999–2000 as work was brought forward prior to the introduction of the GST, followed by a downturn in 2000–01 after the implementation of the GST. The FHOG and the Commonwealth Additional Grant payable to all first home buyers entering into a contract to build a new dwelling between March 2001 and June 2002, coincided with a recovery in construction activity in 2001–02.

CONTRIBUTION TO GROSS STATE PRODUCT

The Construction industry contributes significantly to the Western Australian economy. Over the five years from 1998–99 to 2002–03, the contribution of the Construction industry to Gross State Product (GSP) ranged from a low of 6.4% in 2000–01 to a high of 8.1% in 2002–03. Construction's contribution to GSP in 2002–03 was estimated at $6,659 million, making it the fourth largest industry contributor behind Mining (20.2%), Property and business services (10.0%) and Manufacturing (9.0%).

In percentage terms, the Western Australian Construction industry contributed more to GSP than the Australian Construction industry contributed to Gross Domestic Product (GDP) in each of the five years from 1998–99 to 2002–03. Nationally, Construction contributed an estimated 6.7% to GDP in 2002–03.

CONTRIBUTION OF CONSTRUCTION TO GSP AND GDP



Source: Australian National Accounts, State Accounts (cat.no.5220.0).

ACTIVITY

The value of construction activity in Western Australia rose from $6,469.5 million in 1998–99 to $9,086.6 million in 2002–03, an increase of $2,617.1 million (40.5%) over the five year period. Growth in the value of construction activity in Western Australian during this period exceeded growth at the Australian level (up 32.1%).

TOTAL CONSTRUCTION ACTIVITY, VALUE OF WORK DONE: WESTERN AUSTRALIA

Source: Building Activity, Western Australia (cat.no. 8752.5); and Engineering Construction Activity, Australia (cat.no. 8762.0).

Growth in the value of construction activity in Western Australia over the five years from 1998–99 to 2002–03 was mainly driven by engineering construction. The value of engineering construction rose from $3,305.5 million in 1998–99 to $4,720.2 million in 2002–03, an increase of 42.8% ($1,414.7 million) compared to 28.6% at the Australian level. The largest annual increase in the value of engineering construction activity in Western Australia over the five year period was in 2002–03. In that year, the value of engineering construction increased by 51.3% ($1,600.9 million), mainly due to heavy industry construction activity rising by 81.7% ($920.1 million) in the state's mining sector.

In 2002–03, engineering construction activity accounted for just over half (51.9%) of total construction activity in Western Australia, compared to approximately one third (34.3%) of total construction activity at the Australian level. The strength of engineering construction activity in Western Australia reflects the state's mining activity, and the high value of engineering construction on roads, highways and subdivisions in the state.

After engineering construction, residential building activity in Western Australia showed the next largest increase in value over the five years from 1998–99 to 2002–03, increasing by 40.6% ($883.6 million) compared to 54.7% nationally. Over this period, the value of work done on houses in Western Australia rose by 36.7% ($695.7 million), while the value of work done on other residential building rose by 66.8% ($188.0 million). In 2002–03, residential building activity accounted for 33.7% of total construction activity in Western Australia, lower than the 44.6% at the Australian level.

The value of non-residential building activity in Western Australia also increased over the five years to 2002–03, up by 32.3% ($318.8 million). Despite this increase, its share of total construction activity fell from 15.2% in 1998–99 to 14.4% in 2002–03. Nationally, the value of non-residential building activity increased by 4.6% over the same period, to account for 21.1% of Australian construction activity in 2002–03. The most significant annual rise in the value of non-residential building activity in Western Australia over the five year period was in 2002–03, increasing by 25.0% ($260.9 million). This increase reflected the commencement of the Perth Convention Centre and private sector development in hotels, motels and other short term accommodation; shops; and offices.

VALUE OF WORK DONE: CONSTRUCTION INDUSTRY, Western Australia

Type of activity	1998–99 $m	1999–2000 $m	2000–01 $m	2001–02 $m	2002–03 $m
Residential building:					
Houses	1 896.6	2 343.1	1 889.8	2 207.5	2 592.3
Other residential building	281.5	445.2	441.5	446.9	469.5
Total	*2 178.2*	*2 788.3*	*2 331.4*	*2 654.4*	*3 061.8*
Non-residential building	985.8	1 210.3	1 064.4	1 043.7	1 304.6
Engineering construction	3 305.5	2 775.4	2 256.6	3 119.3	4 720.2
Total construction	**6 469.5**	**6 774.0**	**5 652.4**	**6 817.4**	**9 086.6**

Sources: *Building Activity, Western Australia (cat.no. 8752.5); Engineering Construction Activity, Australia (cat.no. 8762.0).*

INDUSTRY PERFORMANCE

Income, expenses and profit

The total operating income of the Western Australian Construction industry rose from $9,502 million in 1998–99 to $10,240 million in 2000–01 — an increase of 7.8% ($738 million), slightly below the 9.8% increase recorded by the Australian Construction industry.

Total operating expenses incurred by the Western Australian Construction industry rose from $8,276 million in 1998–99 to $9,346 million in 2000–01. This increase of 12.9% ($1,070 million) over the three year period was consistent with growth of 12.8% at the national level.

Operating profit before tax in the Western Australian Construction industry declined from $1,226 million in 1998–99 to $895 million in 2000–01 — a fall of 27.0% or $331 million, compared to a 16.1% decline at the Australian level. In Western Australia, the decline in operating profit was the result of total operating expenses rising faster than total operating income over the three years to 2000–01. The introduction of the GST in 2000–01 had a major impact on operating profits, which fell by 30.8% in that year, mainly due to increased costs of inputs to the industry.

Although data for 2001–02 and 2002–03 are not yet available, it is likely that the economic performance of the Construction industry in Western Australia will show a marked improvement, given the significant growth in construction activity over the period.

Income, expenses and profit *continued*

INCOME, EXPENSES & PROFIT: CONSTRUCTION INDUSTRY, Western Australia(a)

	1998–99	*1999–2000*	*2000–01*
	$m	*$m*	*$m*
Total operating	9 502	11 273	10 240
Total operating	8 276	9 979	9 346
Operating profit	1 226	1 294	895

(a) Estimates of income, expenses and profit are experimental and should be used with caution. For more information, refer to the source publication *Australian Industry* (cat.no. 8155.0).

Source: ABS data available on request, *Australian Industry*.

Business investment

Over the five years from 1998–99 to 2002–03, business investment in the Construction industry (mainly consisting of trucks and other motor vehicles) decreased from $269 million in 1998–99 to $241 million in 2002–03 — a fall of $28 million (10.4%). The largest decline in private new capital expenditure, $110 million (40.9%) in 1999–00, coincided with a significant fall in mineral exploration expenditure in Western Australia in that year.

The overall decline in business investment in the Construction industry over the five years to 2002–03 was solely due to declining investment in Construction trade services. Private new capital expenditure in Construction trade services fell by $59 million (33.9%), from $174 million in 1998–99 to $115 million in 2002–03. In contrast, private new capital expenditure in General construction increased by $30 million (32.3%), from $93 million in 1998–99 to $123 million in 2002–03.

PRIVATE NEW CAPITAL EXPENDITURE: CONSTRUCTION INDUSTRY, Western Australia

	1998–99	*1999–2000*	*2000–01*	*2001–02*	*2002–03*
	$m	*$m*	*$m*	*$m*	*$m*
General construction	93	72	80	90	123
Construction trade services	174	87	83	58	115
Total construction(a)	**269**	**159**	**165**	**148**	**241**

(a) Discrepancies may occur between sums of industry subdivisions and totals due to rounding.

Source: ABS data available on request, *Private New Capital Expenditure and Expected Expenditure, Australia.*

Industrial disputes

Industrial disputes in the Construction industry peaked in 1999–2000 at 93 disputes, before declining to 76 disputes in 2002–03. In 2002–03, industrial disputes in the Construction industry involved 13,500 employees and resulted in 23,600 working days lost.

In 1998–99, the Western Australian Construction industry recorded 1,072 working days lost per thousand employees due to industrial disputes, compared to 269 working days lost per thousand employees nationally. This gap was significantly reduced by 2002–03, when Construction in Western Australia recorded 491 working days lost per thousand employees, compared to 235 working days lost per thousand employees nationally.

INDUSTRIAL DISPUTES: CONSTRUCTION INDUSTRY, Western Australia

	1998–99	*1999–2000*	*2000–01*	*2001–02*	*2002–03*
Number of disputes	70	93	31	43	76
Number of employees involved ('000)	16.5	22.3	3.4	5.8	13.5
Working days lost ('000)	47.0	33.6	6.1	13.4	23.6
Working days lost per thousand employees	1 072	671	123	269	491

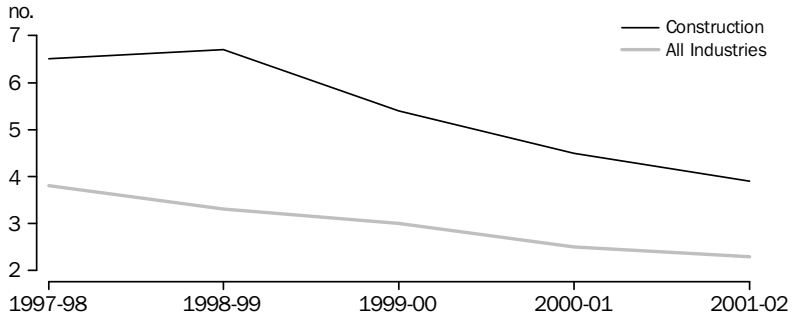
Source: ABS data available on request, *Industrial Disputes, Australia*.

Health and safety

According to WorkCover Western Australia, the number of lost-time claims made as a result of injury and disease caused at work in the Construction industry in Western Australia decreased from 2,981 in 1997–98 to 1,917 in 2001–02 — a fall of 35.7%, compared to a 31.4% fall in the total for all industries.

The average duration of lost-time claims in the Western Australian Construction industry also declined, falling by 4.9% from 58.6 days lost per claim in 1997–98 to 55.7 days lost per claim in 2001–02. The decline in average days lost per claim in the Construction industry was well below the 13.0% decrease for all industries (46.3 days were lost per claim in 2001–02).

INCIDENCE RATE(a): WESTERN AUSTRALIA



(a) The incidence rate is the number of lost–time claims per 100 workers.

Source: WorkCover Western Australia, Western Australia Workers' Compensation Statistical Report 1998–99 — 2001–02.

The incidence rate (number of lost-time claims per 100 workers) of work-related injury and disease in Western Australian Construction decreased from 6.5 claims in 1997–98 to 3.9 claims in 2001–02 (down 40.0%). Despite this decrease, the incidence rate for the Construction industry was still well above the all industries rate of 2.3 claims in 2001–02.

LABOUR

Number of employed persons

The Construction industry is one of the largest employing industries in Western Australia. In 2002–03, the Construction industry employed 8.1% of the state's total workforce, making it the fifth largest employing industry behind Retail trade (15.9%), Property and business services (11.5%), Manufacturing (10.4%) and Health and community services (9.0%). Over the five years to 2002–03, the number of persons employed in Construction increased by 10.8% from 70,300 persons in 1998–99 to 77,900 persons in 2002–03.

Number of employed persons *continued*

Of the 77,900 persons employed in the Construction industry in Western Australia in 2002–03, 71.4% were employed in Construction trade services and 28.6% were employed in General construction. Between 1998–99 and 2002–03, the number of persons employed in General construction decreased by 3.5%, and the number of persons employed in Construction trade services increased by 18.0%.

Over the five years from 1998–99 to 2002–03, the majority of Construction trade services recorded increases in employment. The number of persons employed in Other construction services increased by 132.5%, and the number of persons employed in Site preparation services and Building completion services increased by 42.5% and 28.2% respectively. Construction trade services that recorded decreases in employment over the five year period were Building structure services, down 20.6%, and Installation trade services, down 4.3%.

NUMBER OF EMPLOYED PERSONS: CONSTRUCTION INDUSTRY, Western Australia

	1998–99 Average	*1999–2000 Average*	*2000–01 Average*	*2001–02 Average*	*2002–03 Average*	*Change from 1998–99 to 2002–03*
Industry	*'000*	*'000*	*'000*	*'000*	*'000*	*%*
General construction:						
Building construction	14.0	15.0	18.4	17.7	15.2	8.6
Non–building construction	9.1	9.0	5.8	7.9	7.1	–22.0
Total(a)	*23.1*	*24.0*	*24.2*	*25.5*	*22.3*	*–3.5*
Construction trade services:						
Site preparation services	4.0	5.5	4.8	5.5	5.7	42.5
Building structure services	10.2	8.4	8.3	7.6	8.1	–20.6
Installation trade services	14.1	15.4	16.8	16.6	13.5	–4.3
Building completion services	14.9	19.5	17.5	18.8	19.1	28.2
Other construction services	4.0	5.9	8.6	6.8	9.3	132.5
Total(a)	*47.1*	*54.7*	*56.0*	*55.2*	*55.6*	*18.0*
Total construction(a)	**70.3**	**78.7**	**80.2**	**80.8**	**77.9**	**10.8**

(a) Discrepancies may occur between sums of industry components and totals due to rounding.

Source: ABS data available on request, *Labour Force Survey, Australia*.

Status of employment

Of persons employed in the Construction industry in Western Australia in 2002–03, 61.2% (47,700) were employees compared to 65.0% at the Australian level. Own account workers accounted for 32.6% (25,400) of persons employed in Construction in Western Australia in 2002–03, more than the 28.3% nationally. Employers and contributing family workers accounted for 6.0% (4,700 persons) and 0.1% (100 persons) of the Western Australian Construction industry respectively, consistent with their share of Australian Construction.

Hours worked

Persons employed in the Construction industry in Western Australia worked an average of 40.7 hours per week in 2002–03, compared to 38.4 hours per week nationally. In Western Australia, the average number of hours worked per week differed between General construction and Construction trade services in 2002–03, with persons employed in General construction working an average of 43.2 hours per week, and those employed in Construction trade services working an average of 39.7 hours per week.

Over the five years from 1998–99 to 2002–03, average weekly hours worked by persons in the Western Australian Construction industry increased by 0.6 hours, from 40.1 hours in 1998–99 to 40.7 hours in 2002–03. This increase was in direct contrast to the decline of 0.5 hours worked per week (on average) at the national level.

Income

According to the Census of Population and Housing, the median weekly income of persons employed in the Construction industry in Western Australia was $683 in 2001, higher than any other state in Australia. Median income is the level of income which divides a group into two equal parts, one having incomes above the median and the other below. The median weekly income of persons employed in General construction was $720, compared to $662 in Construction trade services.

In General construction, persons employed in Building construction had a median weekly income of $678 and those employed in Non-building construction had a median weekly income of $796. The median weekly incomes of persons employed in Construction trade services were: $769 in Site preparation services; $677 in Building structure services; $658 in Installation trade services; $664 in Building completion services; and $580 in Other construction services.

Age

The Census of Population and Housing showed persons employed in the Construction industry both in Western Australia and nationally had a median age of 38 years in 2001. This represented an increase from 36 years in Western Australia and 37 years nationally in 1996. The median age of persons employed in an industry is the age at which half the persons employed in that industry are older and half are younger. In Western Australia, the median age of persons employed in General construction in 2001 was 39 years, while the median age of persons employed in Construction trade services was 38 years.

Site preparation services recorded the highest median age of the Construction trade services in 2001 at 39 years, followed by Building completion services at 38 years. The median age of persons employed in Building structure services, Installation trade services and Other construction services was 37 years.

Apprentice and trainee completions

In 2002–03, apprentice and trainee completions accounted for 0.7% of the total number of persons employed in the Construction industry in Western Australia. Of the 530 apprentices and trainees who completed their training in the Construction industry in that year, 60 (11.3%) were in General construction and 470 (88.7%) were in Construction trade services. The majority of apprentice and trainee completions in Construction trade services were in Installation trade services (320 or 68.1%), and Building completion services (110 or 23.4%).

The number of apprenticeships and traineeships completed in the Construction industry increased by 8.2% (40 completions) over the five years from 1998–99 to 2002–03. This rise was mainly the result of Installation trade services increasing by 90 completions. However, offsetting the rise was a fall in Building completion services, decreasing by 50 completions.

The Construction industry accounted for 7.1% of the total number of completed apprenticeships and traineeships in Western Australia in 2002–03, down from 8.0% in 1998–99. Construction recorded the fifth largest proportion of completed apprenticeships and traineeships in the state in 2002–03, behind Property and business services (22.7%), Retail trade (20.0%), Manufacturing (13.4%) and Personal and other services (8.1%).

Apprentice and trainee completions *continued*

APPRENTICE AND TRAINEE COMPLETIONS: CONSTRUCTION INDUSTRY, Western Australia

Industry	1998–99 no.	1999–2000 no.	2000–01 no.	2001–02 no.	2002–03 no.
General construction	50	60	50	40	60
Construction trade services	450	390	410	480	470
Total construction(a)	**490**	**450**	**460**	**510**	**530**

(a) Discrepancies may occur between sums of industry components and totals due to rounding.

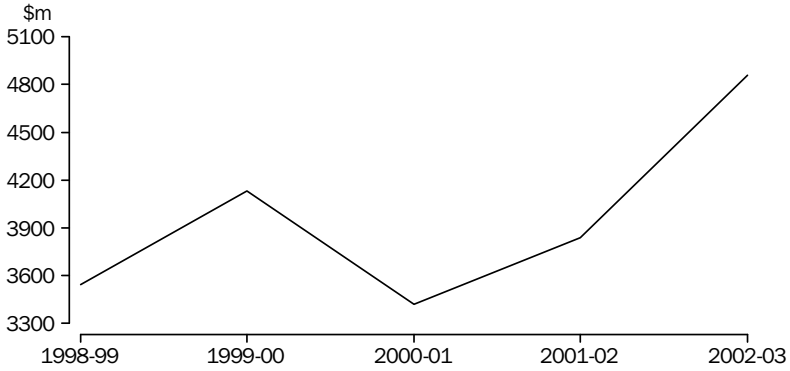
Source: Data available on request, National Centre for Vocational Education Research.

INDUSTRY FORECAST

Building approvals are often used as a leading indicator of building activity. Based on the building approvals for the second half of 2002–03, the outlook for building activity in Western Australia for 2003–04 is positive. The value of total building approvals in the six months to June 2003 rose by 27.7% ($533.2 million) from the same period in the previous year.

Growth in the value of total building approvals in Western Australia in the second half of 2002–03 was the result of an increase in the value of approvals for both residential and non-residential building, rising by 21.1% ($300.4 million) and 46.7% ($232.8 million) from the second half of 2001–02 respectively.

VALUE OF TOTAL BUILDING APPROVED: WESTERN AUSTRALIA



Source: Building Approvals, Australia (cat.no.8731.0).

This positive outlook for the Construction industry in Western Australia in 2003–04 is supported by the most recent projections by the state's Housing Industry Forecasting Group (HIFG). The HIFG forecast is for approximately 19,000 new dwelling commencements in 2003–04, slightly below the total number of dwelling units commenced in 2002–03 (20,558). Housing activity is expected to remain strong during this period, largely due to delays in the availability of materials and labour which have resulted in the lengthening of the supply pipeline.