

Chapter 18

HOUSING AND CONSTRUCTION

	<i>Page No.</i>
18.1 Housing	217
18.1.1 Housing Trends, 1930-1989	217
18.1.2 Housing Stock	218
18.1.3 Home Ownership	219
18.1.4 Public Housing	219
18.1.5 Home Finance	220
18.1.6 Costs of House Building Materials	221
18.2 Construction	221
18.2.1 Building Construction	221
18.2.2 Engineering Construction	225
18.3 References	226

Chapter 18

HOUSING AND CONSTRUCTION

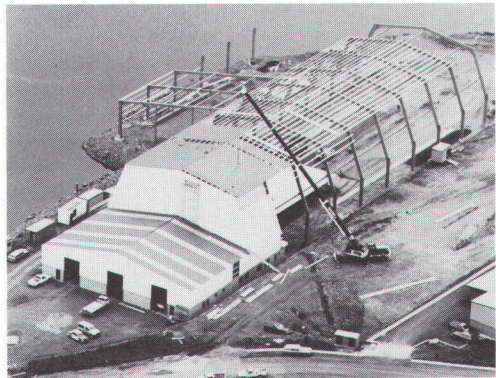
Housing and construction provide useful social records of a community's structure, wealth and aesthetic values. The extent to which a community provides sufficient housing for its members, and the adequacy and style of the housing it does provide are important indicators about the underlying values that shape and govern the community. It also provides important economic data.

The wider construction industry which includes in addition to building houses and other structures the construction of roads, bridges, wharves, dams, airports etc. employs around six per cent of the State's employed persons and contributes about seven per cent of the State's gross product at factor cost. Wages and salaries paid by the industry are just over seven per cent of the estimated total wages and salaries paid by all industries in Tasmania. Its contribution to State gross product is around 40 per cent of the contribution made by manufacturing and around 15 per cent more than the contribution made by agriculture.

18.1 HOUSING

Tasmanians, as do other Australians, place great importance upon home ownership. The 1986 Census revealed that 71 per cent of Tasmanian households had either bought, or were in the process of buying, their own home. This compares with a figure of 63 per cent in Britain, 73 per cent in New Zealand and 52 per cent in Sweden.

Within Tasmania, municipalities with the highest proportions of owner-occupied dwellings include Beaconsfield with 85 per cent, Huon with 84 per cent and Sorell with 83



In July 1989 International Catamarans opened a new boatyard at Prince of Wales Bay in Hobart. The facility is large enough for three large catamarans to be built simultaneously.
Photo: Mercury

per cent. Municipalities with the lowest proportions were Waratah with 10 per cent, Zeehan with 32 per cent and Brighton with 41 per cent.

18.1.1 Housing Trends, 1930-1989

Prior to the Second World War the typical Tasmanian family lived in a single-storey weather-board home consisting of five or six rooms, and situated on about a quarter-acre of land (1000 square metres).

This style continued relatively unchanged until the 1950s and 1960s when substantial changes in building techniques and architectural style occurred. The traditional timber-clad weatherboard home gradually gave way to a building with brick or brick veneer exterior walls. In 1954-55, 75 per cent of all houses commenced were of weatherboard construction; twenty years later in 1974-75, this figure had dropped to five per cent.

Architecturally, this period saw the beginnings of a trend in urban areas towards the flat, apartment or 'home unit' in a block of such dwellings arranged in a courtyard or terrace fashion.

The 1970s brought further changes in lifestyles and housing patterns. Increased affluence, mobility and leisure time enabled many people to experiment with rural-residential living. This period saw the growth of a new feature, the 'five-acre block' situated within an hour's drive or less of a major population centre.

More recently Tasmania has shared in the world-wide fashion for the renovation of nineteenth century urban architecture for domestic use. As much of Tasmania's long-neglected domestic architectural heritage is of this period, the State has benefited greatly from this revitalisation of its Georgian and early Victorian buildings.



Nineteenth century houses, Battery Point.

18.1.2 Housing Stock

At 30 June 1989, Tasmanian residential dwelling stock totalled 178 119 homes, flats and

units. This figure represents a 5.9 per cent increase in dwelling stock from the 1986 Census, which showed the State to have had 168 270 dwellings of all types.

Over recent years private residential approvals have outnumbered government (public) residential approvals by a factor of 5 to 1. In terms of value the factor has been 6 to 1.

18.1 NUMBER OF DWELLING APPROVALS, TASMANIA

Year	Private		Public	
	Houses	Other	Houses	Other
1983-84	2 554	433	354	336
1984-85	2 945	770	470	185
1985-86	2 648	818	372	270
1986-87	2 349	758	298	233
1987-88	2 395	672	277	154
1988-89	2 684	864	206	160

In terms of dwelling units approved, a fall in levels started in the latter part of 1986 and continued through to October 1987. The trend estimates dropped from a level of around 320 per month in mid 1986 down to a low of 271 in September-October 1987. From that point there was sustained growth back to the 320 to 330 dwelling unit approval level towards the end of 1988.

The trend then tends to flatten out for the first months of 1989 and towards mid 1989 was showing indications of starting to fall. The flattening in growth and indicators of fall in the number of dwelling approvals was a reflection of higher interest rates, which reached the 17 to 17.5 per cent level in the latter part of 1989, and general uncertainty about economic conditions.

In 1988-89, 34 per cent of all houses approved were in the Greater Hobart Statistical Division in which 40 per cent of the State's population live. A further 20 per cent of houses approved were in the Greater Launceston Statistical Sub-division and in the Burnie-Devonport Statistical Sub-division a further 15 per cent were approved. (These two areas contain 20 per cent and 17 per cent of the State's population respectively.)

In terms of other residential buildings (flats, apartments, etc.) just under 40 per cent of approvals were in the Greater Hobart Statistical Division, 31 per cent in the Greater Launceston Statistical Sub-division and 19 per cent in the Burnie-Devonport Statistical Sub-division.

18.2 RESIDENTIAL DWELLING APPROVALS

Region	1987-88	1988-89
Greater Hobart Statistical Division	1 339	1 388
Southern Statistical Division	462	478
Greater Launceston Statistical Sub-division	634	916
Central North Statistical Sub-division	173	152
North-Eastern Statistical Sub-division	152	177
Northern Statistical Division	959	1 245
Burnie-Devonport Statistical Sub-division	539	610
North-Western Rural Statistical Sub-division	180	190
Western Statistical Sub-division	19	3
Mersey-Lyell Statistical Division	738	803
Tasmania	3 498	3 914

18.1.3 Home Ownership

With more than two-thirds of dwellings in Tasmania owned or being purchased by their occupants, home ownership continues to be the desired aim of most Tasmanians. Figures derived from the 1986 Census of population show that 39.1 per cent of occupied private dwellings in Tasmania were owned by the occupants and a further 32 per cent were being purchased. When compared with figures from the 1981 Census, home ownership has increased.

18.1.4 Public Housing

Public housing plays a key role in the provision of housing to social disadvantaged groups such as low income families, single parent fami-

18.3 HOME OWNERSHIP, TASMANIA

Dwellings	1981		1986	
	Number	%	Number	%
Owned	47 928	35.4	58 157 (a)	39.1
Being purchased	44 977	33.2	47 588	32.0
Rented	33 909	25.0	36 747	24.7
Other	8 784	6.5	6 307	4.2
Total	135 598	100.0	148 799	100.0

(a) Includes 3188 dwellings where ownership and purchasing was not distinguished on the Census return.

lies and aged pensioners. The Housing Department has moved away from the broad-acre approach towards urban infilling. In its role of providing housing for the less well-off members of the community the department encourages home ownership. Opportunities are made available to persons to purchase dwellings built by the department on financial terms that are affordable.

Over recent years elderly person units have been a significant part of the department's construction program. (With the increasing



New house being constructed.

Photo: Mercury

proportion of the population in the 'elderly' age group, particularly the very old, this type of construction activity is likely to remain an important part of the public housing program.)

During 1987-88 the department completed 539 dwellings and purchased 71. Just over 40 per cent of the dwellings completed were in the Greater Hobart Region and a further 35 per cent were in the Burnie-Devonport Statistical Sub-division. To carry out the program the department had available \$64.3 million. Thirty per cent of the funds (\$19.4 million) were from the Federal Government.

In 1988-89 almost 47 per cent of the public sector house approvals were in the Greater Hobart Statistical Division with a further 21 per cent in the Greater Launceston Statistical Sub-division and 23 per cent in the Burnie-Devonport Statistical Sub-division. The areas outside the main urban groupings had only nine per cent of public sector house approvals; they contain in order of 22 per cent of the State's population.

18.1.5 Home Finance

During 1988-89 major lenders (banks, building societies and other financial institutions) made secured financial commitments for home purchases or building of \$373 million. Trading banks were responsible for 77 per cent of the commitments made and saving banks for a further five per cent. Most of the balance was from permanent building societies. The total secured financial commitments made in 1988-89 was three per cent above the 1987-88 level.

The average amount per commitment in 1988-89 was \$41 000. (This was less than half the average commitment level for New South Wales, \$87 000 and around 60 per cent of the Victorian average of \$69 000.) Average commitments in Tasmania in 1988-89 were five per cent above 1987-88 levels and almost 11 per cent above the average levels for 1986-87. For Hobart the monthly median price of houses sold rose from around the \$65 000 to \$70 000 level in 1987 to around \$80 000 to \$85 000 in 1989.

18.4 SECURED HOUSING FINANCE COMMITMENTS, TASMANIA

Year	Number of dwelling units	\$m
1986-87	6 706	248.2
1987-88	8 686	338.8
1988-89	8 909	373.1

Huntingfield Estate: a new concept in housing developments.*

In 1989 the first of an expected 3700 new houses started appearing on the Huntingfield Estate sub-division in the Kingborough Municipality.

The estate, which will be the most important residential development to happen in Kingborough, is located on 425 hectares of land acquired by the Housing Department in 1972.

The sub-division development has been broken down into three separate phases. The first phase, pioneering, providing 700 houses, should be finished in 1993 and will provide sufficient population for the second phase, town development, to begin.

This will include the building of a primary school, shopping facilities and 1300 houses. It should be completed in 1999.

The final phase, consolidation, should see 1700 new houses completed by the year 2008.

Huntingfield will offer a variety of lot sizes from 300 square metres to one acre; a road structure serving quiet streets with provision for pedestrians and cyclists; and parks, shops, school and community facilities.

According to a recognised planning consultant firm, the land was identified as being the major area for future residential development in the municipality.

A 1970 Housing Department report on the Huntingfield Estate, stated that Kingborough was receiving 10 per cent of new housing growth in the Hobart area. In 1985 the figure had risen to 25 per cent. The report said this should increase as a result of extensive main road works in the municipality.

A general structural plan has been designed for Huntingfield, but the report said this was only a broad framework for development. The quality of the development would depend on the treatment of planning, landscape and architectural details. The Housing Department intends to aim for excellence in this area.

**This article was taken from the Mercury.*

18.5 TYPES OF PRIVATE DWELLINGS, TASMANIA, 1986

	<i>Occupied</i>	<i>Unoccupied</i>	<i>Total</i>
Separate house	127 347	16 058	143 405
Semi-detached house	2 141	237	2 378
Terrace house	840	129	969
Medium density (a)	14 539	1 654	16 193
Other	3 932	1 392	5 324
Total	148 799	19 470	168 269

(a) Flats, home units, etc. up to and including three storeys.

The large majority of the number of new financial commitments entered into are for the purchase of established dwellings - almost 80 per cent in 1988-89. A further 16 per cent were for the construction of new homes. Only three per cent of the number of new secured financial commitments were for dwelling units other than houses.

18.1.6 Costs of House Building Materials

Although the prices of materials used in house building in Hobart have risen during the last three years, the increases are less than the national average but are above the increase in the Consumer Price Index (CPI) for two of the past three years.

18.6 PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING AND CONSUMER PRICE INDEX (CPI): CHANGE FROM PREVIOUS YEAR (%)

<i>Year</i>	<i>Price index of materials used in house building</i>		
	<i>Hobart</i>	<i>Weighted average of six State capital cities</i>	<i>CPI all groups Hobart</i>
1986-87	+ 5.0	+ 5.8	+ 9.9
1987-88	+ 5.4	+ 7.6	+ 7.4
1988-89	+ 8.4	+ 10.8	+ 6.3

18.2 CONSTRUCTION

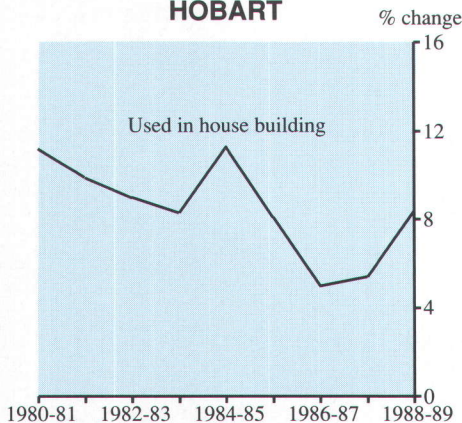
The total value of construction for the 1988-89 financial year was just under \$773 million. In real terms there has been only a small increase over the past three years, in both the building and the engineering sectors.

18.2.1 Building Construction

Total building work done in 1988-89 was valued at \$464.5 million which was a 19.5 per cent increase on the value of building the previous year. The increase was spread across residential, alterations to residential building and non-residential building.

The total value of monthly building approvals for Tasmania started at \$19.3 million in January and peaked at \$45.3 million in October. Total value of building during the year was \$415.5 million at an average of \$34.6 million per month.

PRICE INDEX OF MATERIALS, HOBART



DERWENT ENTERTAINMENT CENTRE*

The Derwent Entertainment Centre, located on a picturesque waterfront site at Wilkinsons Point on the western bank of the Derwent River just five kilometres from the centre of Hobart, is one of Australia's premier sporting and entertainment facilities.

The centre has been specifically designed to accommodate every type of function from exhibitions to indoor sports, conventions to rock concerts, circuses and chamber music.

Jointly funded by the State Government (\$9.0 million), the Glenorchy City Council (\$2.44 million) and the Federal Government (\$1.35 million), it was originally conceived as a Bicentennial Project.

Concept

Following preliminary documentation and working drawings, construction commenced on site on 4 November 1987. Final detail documents were completed on 31 March 1988 and construction was completed on 10 March 1989, the original tendered date for completion.

Blythe Yeung and Menzies in association with Peter Hunt were responsible, with their

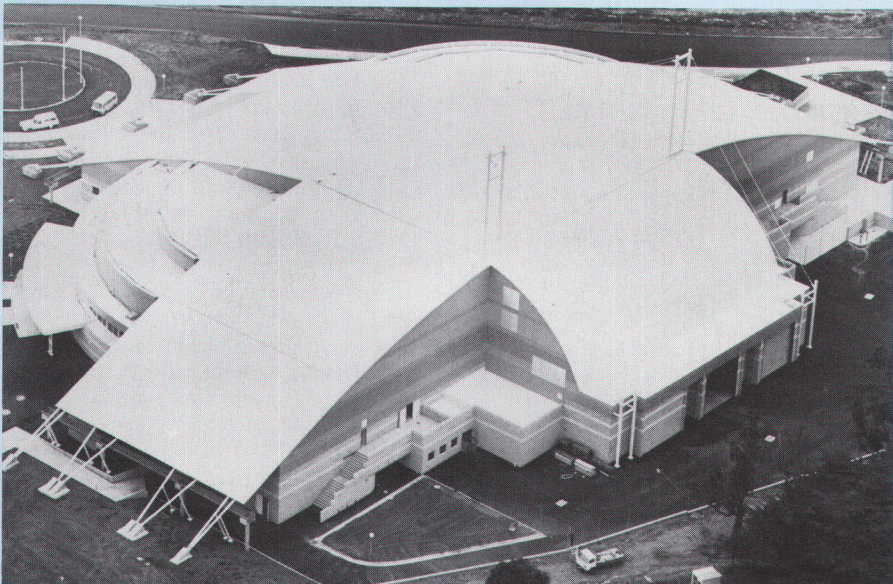
engineering consultants, for the total design concept and documentation. Fricker Developments, in the role of Project Managers, were responsible for liaison between the designers, the builder, the Department of Construction Tasmania, the Glenorchy City Council and the client. Hansen Yuncken (Tasmania) Pty Ltd, as the builders, were responsible for the construction of the works (in association with their various trade contractors and suppliers), together with the cost control and the sequence programming and performance.

The construction works on site employed at its peak in excess of 100 persons with as many off-site preparing special pre-fabricated components for the \$11 million project.

Design

The design of the Derwent Entertainment Centre was based on the requirements of a multi-disciplinary complex. It had to be adaptable to serve a wide range of popular entertainment styles and formats including commercial sporting presentations.

Essentially the layout focuses on the 2100 square metres of arena floor space. Encircling the arena in an amphitheatre arrangement are



stepped seating platts along with two sets of retractable seating providing seating for 5000 spectators. Further seating can be provided for 1000 persons using stackable seats.

Looking towards the stage, an acoustic block wall 60 metres long with a maximum height of 22 metres separates the arena from the backstage area. The backstage area provides a huge space for equipment storage as well as containing dressing rooms, change rooms, workshops and plant rooms.

Surrounding the front of the arena are the main and general entry foyers. These provide waiting areas and access to seating, the reception area, public bar, a 500-seat theatre style hall overlooking the river and five seminar rooms. These foyers incorporate public services, including concessions and toilets as well as an administration area. The 1200 square metres of foyer area has been designed so that it can be divided into three separate areas for product launches or functions.

Construction

The design of the Derwent Entertainment Centre required structural steel, rectangular box trusses to span up to 50 metres. Two 36 metre high columns extending past the roof help support the trusses as well as anchor the building through a series of tension stays and anchor blocks.

The seating arrangement has been achieved by positioning individual precast platts over raking steel beams.

The arena concrete slabs have been cast to achieve fine tolerances so that a true surface is provided for the centre's various sports and entertainment modes.

The height from the surface of the arena to the top of the roof structure exceeds 22 metres.

External Cladding

External cladding consists essentially of a 'K-Clad' roofing system combined with fibre cement sheet and Besser blocks. Large semi-circular gutters 1.2 metres wide and approximately 32 metres long are positioned around the building to catch the volume of rain water run-off generated by the sloping roof.

Incorporated within the structure are many acoustic features such as perforated fibre cement sheets, acoustic blocks and acoustic doors, all of which are intended to enhance the sound characteristics of the building.

A nine millimetre compressed sheet light-weight facade system was selected by the architects as the feature external cladding. The compressed sheet has a high degree of dimensional stability. It won't rot, is unaffected by termites, will not burn, is immune to water damage, does not corrode and is not affected by salt air, sunlight or air pollution. Building elements having a high airborne sound transmission loss can also be constructed from compressed sheet. With such a formidable list of physical properties it's hardly surprising that this single building product can be found in everything from bathroom floors to building facades.

In the Derwent Entertainment Centre situation, all cladding panels were documented to form an expressed 10 millimetre wide shadowline gap detail between adjacent panels.

Different colours in the coatings were utilised to provide a banded effect to the exterior of the building.

Internally, compressed sheet was used for toilet partitions while perforated fibre cement sheets were applied extensively in areas such as the foyers to provide aesthetic appeal.

Curved Roof

Due to the curvature of the roof shapes, where one section of roofing was a quarter of a circle in elevation on a 15 metre radius, KH-Stramit Ltd and their fixer, Calvin Radcliffe, worked to set safety standards using life lines and other safety aids including commencing work at 6 a.m. to enable them to fix the roof sheeting before the sea breeze came in.

There were 125 lengths of Off White 'K-Clad' in excess of 25 metres and lengths of 17 to 18 metres were quite common.

**This article was taken from the Tasmanian Building Journal, April 1989.*

Housing Construction

Work on residential building (building new houses, flats etc. or alterations to them) accounts for around 50 per cent of total building work done in Tasmania. Over the five year period 1983-84 to 1988-89 the average value of houses approved increased by 62 per cent for the private sector and by 55 per cent for public sector housing. (The price index for materials used in building increased by 41 per cent from June 1984 to June 1989.)

Housing activity levels and prices in Tasmania increased at a slower rate than in other

States. This may be due to the fact that events and circumstances are slower to reach Tasmania and with a lesser economic effect.

During 1988 home buyers and home builders were faced with high interest rates. These high interest rates will inevitably have an effect on home building levels.

Commercial Construction

During 1988, while the private housing sector showed a gradual increase in activity, the commercial building sector in Tasmania showed a steady level of activity. Non-residential private

Housing Construction Trends*

Due to the rapid escalation in cost of land and materials, home ownership is becoming increasingly expensive, forcing many first home buyers to accept minimum standards of sizes and equipment in their new homes.

Families without children, single parent families and older couples as well as single persons buy or rent two bedroom units or town houses, thereby making old stock available for larger families. Prices for new homes have been on a par with existing stock, causing more people to opt for a new house during 1988, a year of increased activity in the Tasmanian housing market.

Rumpus rooms have virtually disappeared from the 'menu' and have been replaced by family rooms, patios, balconies and other outdoor activity areas as well as carports and/or garages.

In the larger new houses more attention has been given to bathrooms, including spa baths, and to the kitchen with up to date appliances and walk-in pantries.

The use of concrete floors in lieu of timber has increased as has the use of colorbond metal cladding on the roofs. More and more builders are using gangnail roof trusses because of their reduced weight, ease of handling and stability. A mixture of masonry and other forms of cladding on houses has gained popularity amongst designers and end buyers.

Tasmania is following a national trend where home owners elect to alter or extend their house rather than move to another house. This market and trend is continuing to expand particularly with renovations of kitchens and bathrooms. People become increasingly aware of the benefits of modern day fittings and appliances and will re-decorate and renew an entire kitchen to install for example a dishwasher and/or microwave oven.

It is generally perceived to be a good investment as it will increase the value of the existing property provided it is done sensibly.

18.7 NUMBER OF NEW HOUSES APPROVED BY MATERIAL OF OUTER WALLS, TASMANIA

Outer walls	1986-87	1987-88	1988-89
Double brick	152	98	130
Brick veneer	2 016	2 048	2 248
Fibre cement	93	37	54
Timber	332	404	374
Other	54	85	84
Total	2 647	2 672	2 890

*This article was contributed by Laver Pty Ltd.

sector approvals over the past five years, on average, have accounted for around 60 per cent of the value of non-residential approvals. However, this proportion fluctuates considerably due to the impact of major projects - in 1988-89 the private sector accounted for over 70 per cent of non-residential approvals whereas in 1986-87 the proportion was only 48 per cent.

The comparatively large increase in the value of building for the entertainment and recreation category is attributable to the construction of the Derwent Entertainment Centre at Glenorchy.

The State Government continued to provide funds for building and construction with many capital works projects continuing or starting. Federal Government funding of building projects was minimal.

Major non-residential projects approved during 1988-89 included: education facilities at Claremont (approval value \$10 million); the Derwent Entertainment Centre (\$9.8 million); a theatre complex in Collins Street, Hobart (\$8 million); several office blocks in Hobart (one of

\$8 million, a second for \$6.5 million and one of \$4 million); a new furnace building at Bell Bay (\$7.8 million); and a police headquarters building (\$5.3 million).

There was a continual redevelopment of the Launceston General Hospital and continued modernization at the Pasmenco-EZ plant. The Stock Exchange building in Hobart, the \$23 million Telecom Centre in Hobart and the new Launceston International Hotel were completed.

An area of concern is the shortage of trained and qualified tradespersons amongst the building sector. It is hoped that a further increase in work will provide opportunities for builders to overcome this problem by training more apprentices.

18.2.2 Engineering Construction

The major component of engineering construction continues to be roads, highways and sub-divisions, although the relative proportions of the categories has remained much the same over the past three years.

Construction of works such as dams, roads, bridges, airports and wharves is around 70 per cent of the value of work done on house and

18.8 VALUE OF WORK DONE, TASMANIA (\$m)

Type of building	1986-87	1987-88	1988-89
New houses	136.1	141.4	162.6
Other new residential buildings	39.7	32.6	46.6
Total new residential buildings	175.8	174.0	209.2
Alterations and additions to residential building	18.8	20.2	27.1
Hotels etc.	32.1	21.9	23.2
Shops	26.7	22.1	10.9
Factories	16.3	21.7	24.8
Offices	35.6	23.9	48.1
Other business premises	8.7	21.7	22.3
Educational	22.2	31.2	36.7
Religious	1.9	1.6	1.9
Health	13.1	36.1	24.7
Entertainment and recreational	11.8	4.8	20.1
Miscellaneous	14.4	9.6	15.4
Total non-residential building	182.7	194.4	228.2
Total all building	377.2	388.7	464.5

18.9 ENGINEERING CONSTRUCTION, VALUE OF WORK DONE, TASMANIA (\$m)

Project	1986-87	1987-88	1988-89
Roads, highways, and sub-divisions	88.5	82.4	100.4
Bridges	8.1	5.5	11.6
Railways	-	0.7	-
Harbours	3.4	5.0	4.4
Waterstorage and supply (a)	8.4	5.6	42.9
Sewerage and drainage	11.9	9.1	8.3
Electricity generation, transmission and distribution (a)	101.5	99.5	54.3
Pipelines	0.3	0.2	-
Recreation	5.1	6.4	4.6
Heavy industry	28.0	21.6	45.2
Telecommunications	37.0	32.4	35.8
Other	1.0	0.5	0.9
Total	293.1	268.9	308.3

(a) From 1988-89 there were changes in reporting by the Hydro-Electric Commission.

other building in Tasmania. During 1988-89 just over 70 per cent of the value of work done on engineering construction projects was government or government agency works. The main works in the government area were roads and highways, water supply and storage, telecommunications and electricity generation and transmission. Private engineering construction works were dominated by works for heavy industry, roads and sub-division projects.

18.10 TOTAL VALUE OF CONSTRUCTION, TASMANIA (\$m)

Year	Building	Engineering	Total
1986-87	377.2	293.1	670.3
1987-88	388.7	268.9	657.6
1988-89	464.5	308.3	772.8

18.3 REFERENCES

ABS Publications produced by the Canberra Office:

Cross-Classified Characteristics of Persons and Dwellings, Tasmania Census 86: (2495.0).

Building Approvals, Australia (8731.0), monthly.

Building Activity, Australia (8752.0), quarterly.

Engineering Construction Survey, Australia (8762.0), quarterly.

Construction Industry Survey: Private Sector Construction Establishments, Australia, 1988-89, Preliminary (8770.0), irregular.

Construction Industry Survey: Private Sector Construction Establishments, Summary of Operations, Australia, 1988-89 (8771.0), irregular.

Construction Industry Survey: Private Sector Construction Establishments, Details of Operations, Australia, 1988-89 (8772.0), irregular.

Public Sector Construction Activity Survey, Australia, 1988-89 (8775.0), irregular.

Construction Activity at Constant Prices, Australia (8782.0), quarterly.

Price Index of Materials used in Building other than House Building, Six State Capital Cities and Darwin, Australia (6407.0), monthly.

Price Index of Materials used in House Building, Six State Capital Cities, Australia (6408.0), monthly.

ABS Publications produced by the Tasmanian Office:

Building Approvals, Tasmania (8731.6), monthly.

Dwelling Unit Commencements Reported by Approving Authorities, Tasmania (8741.6), monthly.

Building Activity, Tasmania (8752.6), quarterly.