



These advisory notes are issued as and when is necessary to assist in the interpretation of Tasmanian building legislation and to keep the Building Industry informed of developments occurring with the Building Code of Australia and its reference documents.

Introduction of National Energy Measures for Housing

The Chairman of the Australian Building Codes Board (ABCB), Mr Peter Laver, announced on 30th August 2002 that the Board had agreed to a program to implement important changes to the Building Code of Australia (BCA) by introducing energy efficiency provisions for houses. Mr Laver said:

From 1 January 2003 Australia will have its first national energy code for houses. This will include insulation for walls, ceiling and floor, improved glazing and shading, draught control, making use of air movement for cooling and the reduction of energy waste in services as appropriate for the 8 climate zones proposed.

The BCA will contain a complete package of performance requirements, approved solutions, and the means of assessing innovative alternative designs including the use of Nationwide House Energy Rating Scheme software.

The program is managed jointly by the ABCB and the Australian Greenhouse Office under the National Greenhouse Strategy. It is a clear example of cooperation between industry and government to reduce the energy consumption and greenhouse gas emissions of the building sector, which accounts for about 20% of Australia's greenhouse gas emissions. Energy efficient homes will deliver cost savings to consumers through reduced electricity and gas bills.

The Board was unanimous in its in-principle support for the initiative. The implementation of the measures in some States and Territories may extend beyond 1 January 2003 because of the need for further consultation and consideration, particularly in New South Wales, Queensland and Western Australia. Victoria has decided to implement a 5 Star energy rating standard.

As a result of public and industry comment received earlier this year, the technical details have been revised and will be finalised after the ABCB National Technical Summit in late September. The details will be available for viewing on the ABCB web site at <http://www.abcb.gov.au>.

An education program for practitioners and builders will take place later this year in those jurisdictions that will adopt the measures on 1 January 2003.

Graeme Hunt Manager, Building Standards and Regulation is Tasmania's member of the Board.

Energy Efficiency Seminars supporting industry awareness of BCA changes

The ABCB is conducting two Seminar for designers, architects, builders and building surveyors in Launceston and Hobart during November.

For further details see article on page 2 and flyer.

Please circulate to

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BCA energy efficiency education program

To support the successful adoption of the energy efficiency amendments, a National Education Working Group was formed in April 2002 to steer the development of an education, training and information program. Members of the Working Group include representatives from a number of industry organisations including HIA, MBA, RAIA, BDAA and AIBS. The program aims to take into account the diverse backgrounds, differing training needs and demonstrated preferences for delivery to the target audiences.

Based on Working Group consultations, the ABCB Office has prepared education material for the BCA housing energy measures, comprising four components:

1. Background to the development of energy efficiency measures for the BCA
2. BCA Deemed-to-Satisfy Provisions
3. BCA Performance Approach and Assessment Methods
4. BCA Verification Methods.

Each component will include practical applications for specific climate zones.

While each section or module is complete in itself, each part builds on the knowledge learned in the previous section. Different versions of the Deemed-to-Satisfy Provisions module will be produced for different climatic zones, each containing relevant examples for that area. The seminars will be practically oriented, focusing on house plans typical to each climatic region and will be a workshop style format.

Initially, the ABCB will offer a first round series of seminars which can be followed up after the seminar program with more detailed specific training and information on the energy efficiency measures by relevant stakeholder groups.

The initial program will be delivered in:

- ◆ **Launceston at the Queen Victoria Museum and Art Gallery, Invermay Road on the 11th November 2002.**
- ◆ **Hobart at the Corus Hotel, 156 Bathurst Street on the 13th November 2002.**

All seminars will go from 2.00 until 6.00pm with registration from 1.30pm.

All registration details are being handled by the ABCB.

A separate flyer and registration form is attached.

In addition, the proposed provision will have an impact on the plumbing industry. This has been highlighted through the education program strategy. As part of the proposals, the ABCB is developing an information package that will be forwarded to the relevant State and Territory plumbing regulatory bodies for circulation within the plumbing industry. The ABCB will also make available this information electronically so that these bodies may place this information on their websites.

Application of BCA provisions — proposed legislative changes

To provide for a transitional period in relation to the non-application of BCA provisions where building work has been substantially designed or completed before the adoption of a new BCA provision, BSR are proposing to seek Building and Plumbing Regulations Board approval to add a new regulation to the existing *Building Regulations 1994* to cover this issue. The proposed regulation will be similar to section 232 of the new *Building Act 2000* and section 10 of the *Victorian Building Act 1993*.

The new regulation will allow for a new or amended provision of the BCA to not apply to any building work where a building permit has been granted before the

provision was adopted, or if the building surveyor certifies in writing that substantial progress was made on the design of the building work before the provision was adopted.

The new regulation will also allow the building surveyor and owner to agree that a new BCA provisions applies despite the circumstances referred to above.

The requirement for a legislative provision of this type had been identified for some time however, the need to progress the new regulation became apparent to BSR in facilitating the smooth adoption of the new energy efficiency provisions into the BCA on 1 January 2003.

Copies of the above amended Regulations will be available in due course from the
Printing Authority of Tasmania, 2 Salamanca Place, Hobart.

Energy efficiency provisions in the Building Code of Australia

The new energy efficiency provisions for houses are in two new parts of Volume 2. The Performance Provisions are in Part 2.6 and the deemed-to-satisfy provisions are in Part 3.12. The provisions of **Part 2.6** are as follows-

Objective:

The objective is to reduce greenhouse gas emissions by efficiently using energy.

Functional statement:

To reduce greenhouse gas emissions, a building, including its domestic services, is to be capable of efficiently using energy.

Performance Requirement

Building

A building must have, to the degree necessary, a level of thermal performance to facilitate the efficient use of energy for artificial heating and cooling appropriate to -

- (a) the function and use of the building; and*
- (b) the internal environment; and*
- (c) the geographic location of the building; and*
- (d) the effect of nearby permanent features such as topography, structures and buildings; and*
- (e) solar radiation being -*
 - (i) utilised for heating; and*
 - (ii) Controlled to minimise energy for cooling; and*
- (f) the sealing of the building envelope against air leakage; and*
- (g) the utilisation of air movement to assist cooling.*

Services

A building's domestic services, including any associated distribution system and components must have features that, to the degree necessary, facilitate the efficient use of energy appropriate to -

- (a) the domestic service and its usage; and*
- (b) the geographic location of the building; and*
- (c) the location of the domestic service; and*
- (d) the energy source.*

A building solution will comply with the BCA if it satisfies the Performance Requirements.

Compliance with the Performance Requirement, can be achieved by complying with the deemed-to-satisfy provisions or by formulating an alternative solution.

The energy efficiency measures will vary according to geographical location. All regions in Australia have been divided into 1 of 8 Climate Zones. In Tasmania there are two Climate Zones. All of Tasmania except the alpine area is Zone 7. This includes the Islands. An alpine area is an area more than 900m above the Australian Height Datum and is Climate Zone 8. The two Climate Zones in Tasmania are based on heat loss and not heat gain.

The deemed-to-satisfy provisions of **Part 3.12** include requirements in relation to building fabric, external glazing, building sealing, air movement and services. Typically for Zone 7 the following is required-

Building fabric

For roof /ceiling a minimum total R-Value of 3.8

For walls a minimum total R-Value of 1.9

For suspended floor a minimum total R-Value of 1



External glazing

For single clear glass in standard aluminium framing the percentage of total glazing area to total floor area must not exceed 25%. (This can increase up to 39% with the use of special glazing and frames.)

Building sealing

Sealing to minimise air leakage through roofs, walls, floors, windows and doors. Dampers or the like to flues, chimneys, and exhaust fans.

Services

Insulation to hot water supply systems, central heating water piping and heating ductwork.

Alternative solution

If an alternative solution to the deemed-to-satisfy provision is proposed it can be assessed for compliance with the Performance Requirements of the BCA by one or a combination of the following methods-

- ◆ By documentary evidence to show that the alternative solution meets the Performance Requirements or the deemed-to-satisfy provisions.
- ◆ By comparing the alternative solution with the deemed-to-satisfy provisions.
- ◆ By expert judgment.
- ◆ By a verification method in the BCA.

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The energy efficiency provisions in the BCA include a number of verification methods.

For Climate Zones 7 and 8 one verification method is by determining that a building's annual energy load (using a thermal calculation method) is equal to or less than the annual energy load equivalent to a 4 star house energy rating. This can be undertaken by using a number of

computer analysis software programs such as NatHERS, FirstRate or BERS.

The other method is by comparing the building with a reference building and determining that the heating load of the building is equal to or less than the reference building. A reference building is a hypothetical building that is used to determine the maximum allowable heating load for the proposed building.

Questions and answers

Since the introduction of the Building Regulations 1994, and the Building Code of Australia, Building Standards and Regulation has had numerous calls for information and advice on the Regulations, the BCA and their relationship to other legislation. For the benefit of all users, a summary of the advice given is included. The purpose is to promote consistency of interpretation between all users of the Legislation.

Strata Titles Act

*BSR has been asked to clarify the interpretation of sub-section 31(3) (c) of the **Strata Titles Act 1998**. In particular, advice was sought on application to an existing building for which no building work is proposed, only a change to the title.*

Before a Council can issue a certificate of approval for a strata title, it must satisfy itself that there has been "substantial compliance" with the safety and other requirements under Part 2 of the *Local Government (Building and Miscellaneous Provisions) Act 1993* (LGBMPAct). Where a strata title proposal refers to an existing building, whether or not the proposal is for building work this requirement applies. Some Councils have questioned whether a strata title application will require the building to be brought up to existing Building Code of Australia (BCA) standards in all respects?

Advice to BSR did not agree with the proposition that s.31 (3) (c) required a Council to satisfy itself that the building had been brought up to existing BCA standards. Closely related to this issue is the application of section 29 of the LGBMPAct. BSR have been advised that if a building was constructed to the standards of the *Local Government Act 1962*, s.29 is proof of compliance with Section 31 (3) (c) of the *Strata Titles Act 1998*, therefore no additional upgrade of building standards is required. A Council can rely upon s.29 as indicating substantial compliance with any building or alteration work done prior to 17th January 1994 (when the LGBMPAct commenced) for buildings existing at the date of application for strata title approval. BSR have also been advised, however, that there are some areas where s.29 will be irrelevant. A strata title application will additionally need substantial compliance with technical provisions not in the Regulations, for example: fencing (s.33), and heating appliances (s.47).

This advice has been provided by BSR as general advice. It is not legal advice. Should you require legal advice, you should consult a legal practitioner.

Second hand materials

BSR has from time to time been asked to advise on the use of second hand materials:

In 1994 the new *Building Regulations 1994* specifically did not continue to restrict the use of second hand materials. This issue was widely discussed at the time and the reasoning was that to restrict second hand materials would be contrary to the philosophies of sustainability and a performance based building code.

Under a sustainable building control system any question of the standard building materials should be answered by fitness for purpose. The fact that a material or component of a building is second hand is merely historical. If that material or component meets the performance requirements of the BCA when that material or component is to be re-used, it should be able to be used. Indeed the same test applies to new materials or components.

Responsibility for workmanship:

BSR has been asked to comment on a council's role in relation to workmanship:

A council's statutory role is to be satisfied that a building complies with the *Building Regulations 1994* and the Building Code of Australia. This may or may not involve inspections of the building work and certainly does not require the supervision of the building work. That is clearly the responsibility of the builder. A council cannot be expected to be responsible for the intrinsic worth of a building or workmanship of unregulated components of a building.

The workmanship of regulated components, however, would come under the attention of a council when inspecting a building. This workmanship relates only to the capacity of a building element to meet the requirements of the BCA. For example, workmanship in relation to the layout and jointing of a fire-rated plasterboard lining is critical. The look of the wall is not.

New Building Act 2000 implementation update

The implementation of the Building Act is being undertaken in close and continuing consultation with industry organisations. The commencement date was to be 1 January 2003, however, for 3 significant reasons this is not now possible:

- ◆ A number of minor but necessary amendments to the Act have been identified and a Consequential Amendments Bill is also required prior to final implementation of the Act. However, due to the Government's heavy legislative program, this will not be dealt with during this year's parliamentary sittings.
- ◆ Parliamentary Counsel has a significant drafting program and has advised that it is not likely to be able to complete the Regulations before the new-year.
- ◆ Considerable work is now being undertaken by industry to develop an authorised body for the accreditation of building practitioners. The Act cannot commence until an Authorised Body is in place.

It is now planned that accreditation of building practitioners will commence in April next year with the full Act commencing in July 2003.

Accreditation of Building Practitioners

Since the last Advisory Note the Accreditation Guidelines, developed in consultation with the industry, have been issued by the Minister. Considerable work is now being undertaken by industry organisations with regard to the details of the accreditation schemes. On 1 August, 13 industry groups signed a memorandum of understanding with regard to the establishment of a single authorised body for the accreditation of all categories of building practitioner.

Expressions of interest were sought by BSR from any organisation interested in becoming an authorised body. Two expressions of interest were received, one from the Joint Industry Group mentioned above and the other from the Tasmanian Building Compliance Corporation. BSR facilitated a meeting between these two groups in September.

Building Practitioners will receive information and training regarding the effect of the new accreditation system once the accreditation schemes are developed. Accreditation affects building contractors, building surveyors, architects, engineers, project and construction managers, building designers and building services designers if they are responsible for the design, construction or assessment of building work.

Sub-contractors and tradesmen **do not** require accreditation and the Act does not alter the requirements

for the registration of plumbers or electricians.

Accreditation also introduces insurance requirements. The development of these insurance requirements is proceeding although the insurance climate continues to create uncertainty.

Regulations

Three sets of regulations have been identified. These are the Building Regulations, Plumbing Regulations and Fees and Levy Regulations. Pre-Parliamentary Counsel drafts of these have been developed with the help of the Regulations Reference Group. BSR is now working with Parliamentary Counsel.

There are still a number of issues that need to be finalised in the Regulations before they can be completed by Parliamentary Counsel.

Training

BSR will commence some training in October and November and will develop information sheets for building practitioners. However, until the Regulations are finalised it will not be possible to conduct comprehensive training seminars.

The Training Reference Group has agreed that training with regard to accreditation cannot commence until the authorised body and the accreditation schemes are in place.

Building Appeal Board

Appointments to the new Building Appeal Board are expected shortly. Once the Board has been appointed it will meet to determine its procedures. The new Building Appeal Board needs to be in place prior to accreditation commencing.

Other Matters

There are a range of tasks that need to be completed before the Act can be introduced. These include:

- Appointment of Permit Authorities by Councils;
- Drafting the table of matters that the Act requires the Director to Specify;
- Design of Approved forms and Registers;
- Design of Infringement Notices;
- Arrangements for the collection of the Levy by Permit Authorities;
- Drafting of the Owner-Builder statement.

For more information about the new Building Act please contact Paul Sayer (contact details on the last page).

Sustainability and buildings

Governments are beginning to implement various requirements for sustainability. Those requirements can relate to building materials, components and practices. The need for sustainable buildings was a recurring theme at the 2001 ABCB National Conference. The Australian Building Codes Board (ABCB), is involved in new research by the Cooperative Research Centre for Construction Innovation into appropriate sustainability requirements for buildings.

The minimum Energy Efficiency requirements for dwellings, to be introduced in January, are a step towards the more sustainable operation of buildings. The next step could possibly be positive action towards sustainable building materials and products. At this stage there are no controls over embodied energy consumption in manufacture of building materials but consideration of this matter is on the agenda.

Plumbing Regulation Advisory Note

BSR has recently published an October issue of -
Plumbing Regulation Advisory Notes.

The contents of the Note includes information on -

- ◆ Electrical Safety for Plumbers
- ◆ Blue-Water Syndrome
- ◆ Water Filters

- ◆ Building Act 2000
- ◆ Energy Efficiency Proposals (plumbing)
- ◆ Australian Standards Amendments
- ◆ Plumbing Code of Australia (proposal)

A copy of this Note is available on BSR Web site at:

<http://www.wsa.tas.gov.au/bsr/PAN-OCT-2002.pdf>

Notes for your diary

Energy Efficiency Seminars

Launceston Seminar - Queen Victoria Museum and Art Gallery, Invermay Road on the 11th November 2002.

Hobart Seminar - Corus Hotel, 156 Bathurst Street on the 13th November 2002.

Adoption of the energy efficiency provisions in the Building Code of Australia 1 January 2003

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