

Victoria / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

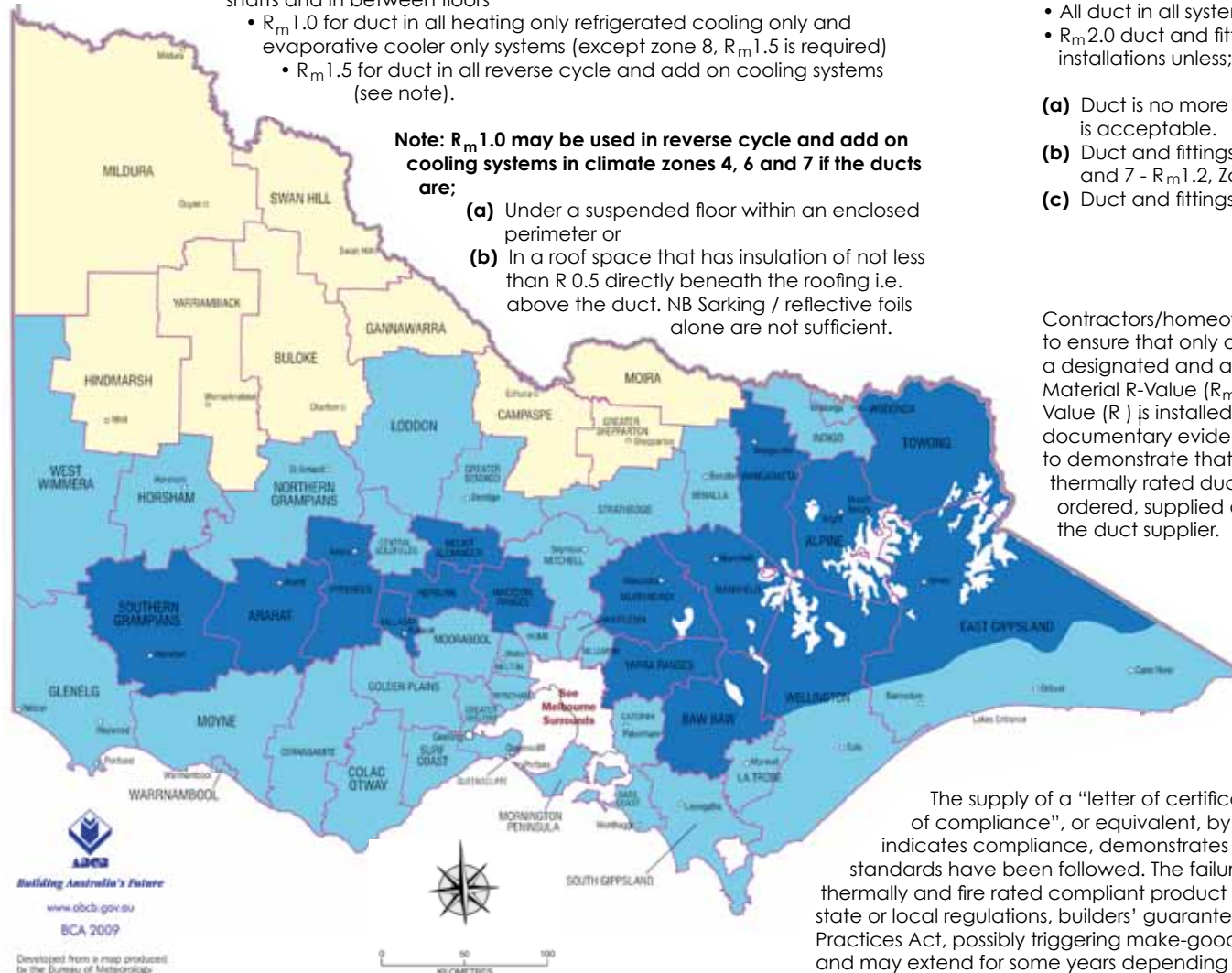
BCA 2011 applies to ALL domestic buildings issued with a building permit from May 1 2011:

BCA 2011 specifies;

- Material R Values (R Value of insulation only) must be used on flexible duct and fittings tested to AS/NZS 4859.1. It is not acceptable to quote an insulation thickness and/or weight instead of a total R Value (R_m).
- All duct in heating systems that is ignited by a flame must be fire rated to AS 4254
- $R_m 0.4$ for fittings in all installations
- $R_m 0.6$ insulation can only be used on duct within 'the insulated building envelope' e.g In riser shafts and in between floors
 - $R_m 1.0$ for duct in all heating only refrigerated cooling only and evaporative cooler only systems (except zone 8, $R_m 1.5$ is required)
 - $R_m 1.5$ for duct in all reverse cycle and add on cooling systems (see note).

Note: $R_m 1.0$ may be used in reverse cycle and add on cooling systems in climate zones 4, 6 and 7 if the ducts are;

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.



Commercial Applications

BCA 2011 is mandatory for Commercial buildings issued with a building permit from May 1 2011 in:

- * Building classes 2, 3, 4, 5, 6, 7, 8, 9.

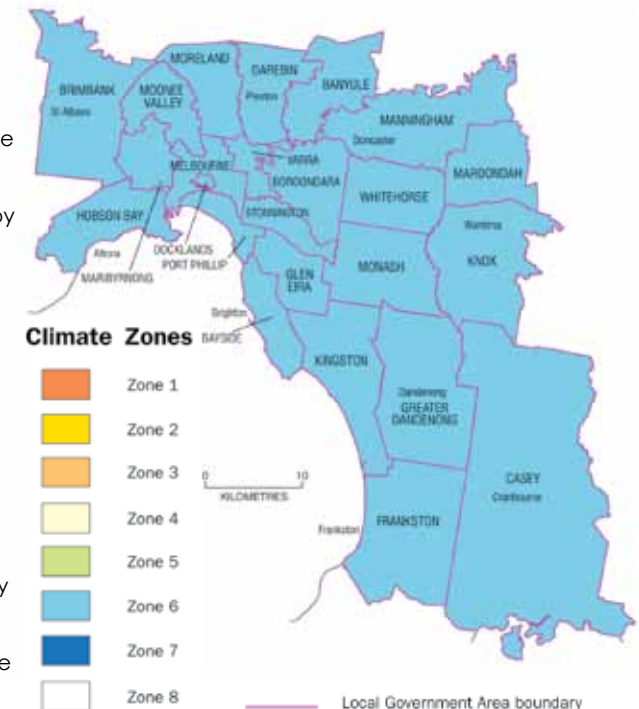
BCA 2011 specifies;

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1 "Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in all systems must be fire rated to AS 4254.
- $R_m 2.0$ duct and fittings must be used on all heating, cooling and evaporative installations unless;
 - Duct is no more than 3 metres in length to an outlet or from an inlet then $R_m 1.0$ is acceptable.
 - Duct and fittings are installed within a "conditioned space" which require, Zones 4, 6 and 7 - $R_m 1.2$, Zone 8 - $R_m 1.6$.
 - Duct and fittings are installed in Zone 8 which requires $R_m R 2.4$.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts.

Melbourne Surrounds



Queensland / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

BCA 2011 is mandatory for all Class 1 + 10 buildings in QLD issued with a building permit from May 1 2011:

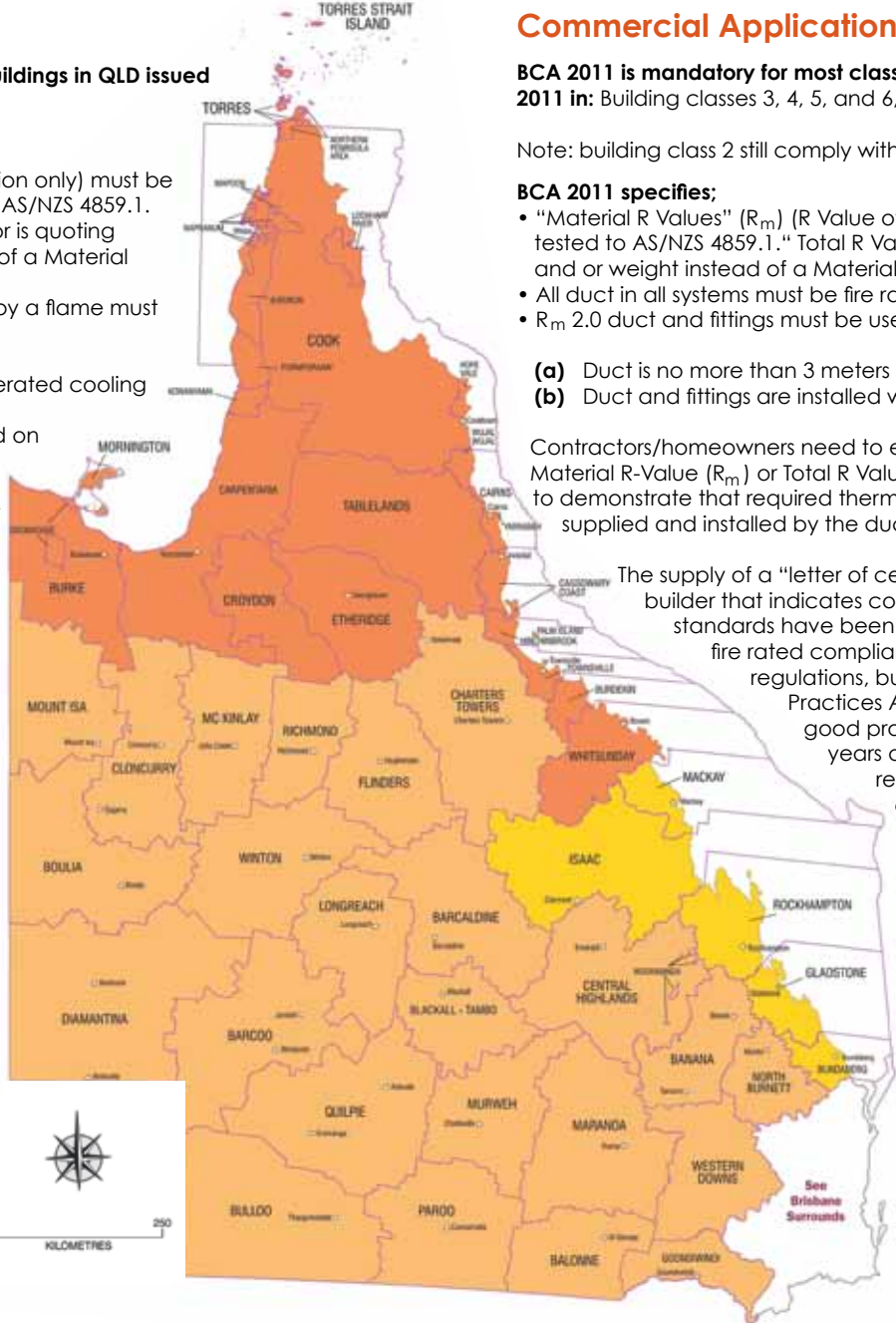
BCA 2011 specifies;

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1. "Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in a heating system that is ignited by a flame must be fire rated to AS 4254.
- R_m 0.4 for all fittings in all installation.
- R_m 1.0 for all duct in all heating only, refrigerated cooling only and evap cooler only systems.
- R_m 1.5 for all duct in reverse cycle and add on cooling systems, except zone 2 and 5 where R_m 1.0 is required (see note).
- R_m 0.6 insulation can only be used on duct within "the insulated building envelope" e.g. In riser shafts and in between floors.

Note: R_m 1.0 may be used in reverse cycle and add on cooling systems in climate zones 1 and 3 if the ducts are;

- (a) Under a suspended floor within an enclosed perimeter or
- (b) In a roof space that has insulation of not less than R 0.5 directly beneath the roofing i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.

Climate Zones



Commercial Applications

BCA 2011 is mandatory for most classes of buildings in QLD issued with a building permit from May 1 2011 in: Building classes 3, 4, 5, and 6,7,8,9.

Note: building class 2 still comply with the requirements of BCA 2009.

BCA 2011 specifies;

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1. "Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in all systems must be fire rated to AS 4254.
- R_m 2.0 duct and fittings must be used on all in heating, cooling and evaporative installations unless;

- (a) Duct is no more than 3 meters in length to an outlet or from an inlet then R_m 1.0 is acceptable.
- (b) Duct and fittings are installed within a "conditioned space" which require R_m 1.2.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R_t) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts.



Tasmania / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

BCA 2009 is mandatory for all Class 1 + 10 domestic buildings in TAS issued with a building permit from May 1 2009:

BCA 2009 specifies;

- Total R Values (R_t) (insulation R Value plus R 0.15 allowance for outer air surfaces) for all flexible duct and fittings tested to AS/NZS 4859.1. It is not acceptable to quote an insulation thickness and/or weight instead of a Total R Value (R_t).
- All duct in heating systems that is ignited by a flame must be fire rated to AS 4254
- R_t 0.4 for fittings in all installations
- R_t 0.6 for duct in all evaporative systems
- R_t 1.0 for duct in all heating only or refrigerated cooling only systems (except zone 8, R_t 1.5 is required)
- R_t 1.5 for duct in all reverse cycle and add on cooling systems (see note).

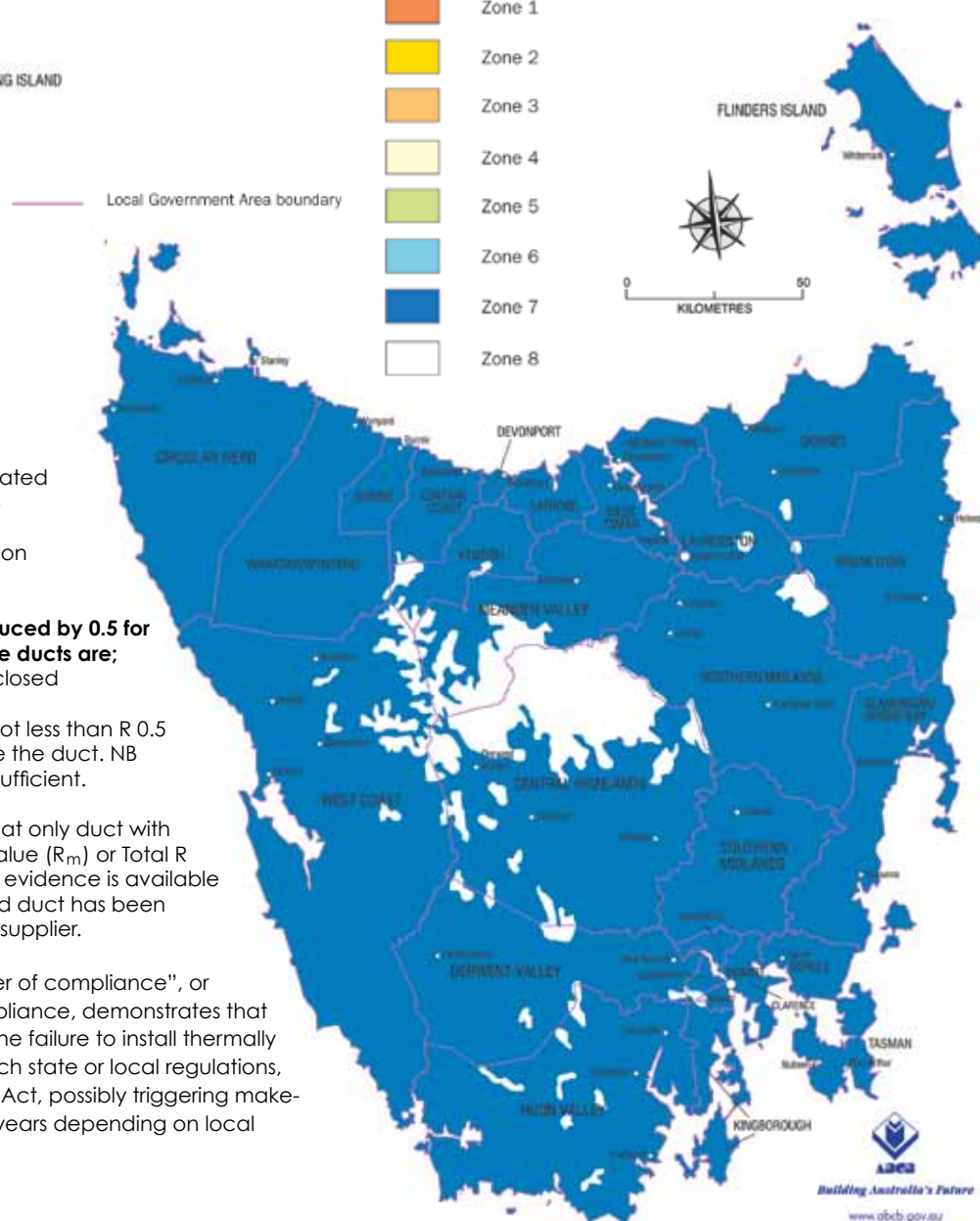
Note: R_t Value required for duct may be reduced by 0.5 for reverse cycle systems in climate zone 7 if the ducts are;

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R_t) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts

Climate Zones



Commercial Applications

BCA 2009 is mandatory for all commercial buildings in TAS issued with a building permit from May 1 2009:

BCA 2009 specifies;

- Total R Values (R_t) (insulation R Value plus R 0.15 allowance for outer air surfaces) for all flexible duct and fittings tested to AS/NZS 4859.1. It is not acceptable to quote an insulation thickness and/or weight instead of a Total R Value (R_t).
- All duct in all systems must be fire rated to AS 4254.
- R_t 0.4 for fittings in all installations.
- For systems less than 65 KWr and 65 KW heating capacity, the following R_t duct is required;
 - R_t 0.6 for duct all in evaporative systems.
 - R_t 1.0 for duct in all heating only or refrigerated cooling only systems, except zone 8 – R_t 1.5 required.
 - R_t 1.5 for duct in reverse cycle and add on cooling systems (see note).

Note: R_t 1.0 may be used in reverse cycle and add on cooling systems in climate zone 7 if the ducts are;

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing .NB Sarking / reflective foils alone are not sufficient.

- For systems greater than 65 KWr and 65 KW heating capacity, the following R_t duct is required,
 - R_t 0.9 for duct in all evaporative cooling systems, except for a conditioned space, where no insulation is acceptable.
 - R_t 1.8 for duct in all heating only or refrigerated only systems in zone 7, except for a conditioned space, where R_t 1.3 required.
 - R_t 2 for duct in all heating only or refrigerated only systems in zone 8, except for a conditioned space, where R_t 1.5 required.

Northern Territory / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

BCA 2009 is mandatory for all Class 1 + 10 domestic buildings in N T issued with a building permit from May 1 2009.

BCA 2009 specifies;

- Total R Values (R_t) (insulation R Value plus R 0.15 allowance for outer air surfaces) for all flexible duct and fittings tested to AS/NZS 4859.1. It is not acceptable to quote an insulation thickness and/or weight instead of a Total R Value (R_t).
- All duct in a heating systems that is ignited by a flame must be fire rated to AS 4254
- R_t 0.4 for fittings in all installations
- R_t 0.6 for duct in all evaporative systems
- R_t 1.0 for duct in all heating only or refrigerated cooling only systems.
- R_t 1.5 for duct in all reverse cycle and add on cooling systems (see note).

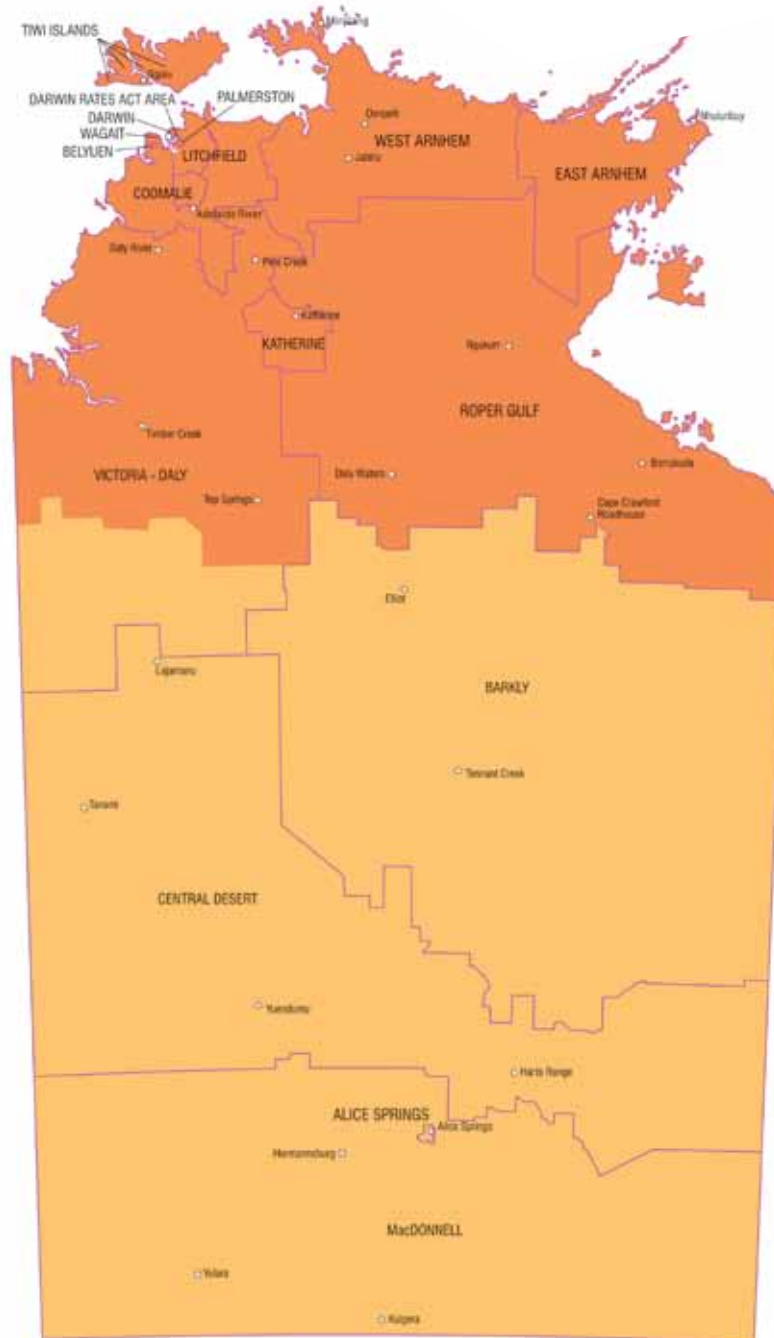
Note: R_t 1.0 may be used in reverse cycle and add on cooling systems if the ducts are;

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.

Climate Zones



Local Government Area boundary



Commercial Applications

BCA 2009 is mandatory for commercial building Class 2 and a class 4 part of a building in N T issued with a building permit from May 1 2009:

Note: BCA Section J does not apply to class 3 and classes 5-9 buildings

BCA 2009 specifies;

- Total R Values (R_t) (insulation R Value plus R 0.15 allowance for outer air surfaces) for all flexible duct and fittings tested to AS/NZS 4859.1. It is not acceptable to quote an insulation thickness and/or weight instead of a Total R Value (R_t).
- All duct in all systems must be fire rated to AS 4254.
- R_t 0.4 for fittings in all installations.
- For systems less than 65 KWr and 65 KW heating capacity, the following R_t duct is required;
 - R_t 0.6 for duct in all evaporative systems.
 - R_t 1.0 for duct in all heating only or refrigerated cooling only systems.
 - R_t 1.5 for duct in all Reverse cycle and add on cooling systems (see note).
- For systems greater than 65 KWr and 65 KW heating capacity, the following R_t duct is required.
 - R_t 0.9 for duct in all evaporative cooling systems, except within a conditioned space, where no insulation is acceptable.
 - R_t 1.8 and R_t 1.5 duct in all heating only or refrigerated only systems in Climate Zones 1 and 2 respectively, except within a conditioned space where R_t 1.0 acceptable. (see note)

Note: R_t 1.0 may be used in reverse cycle and add on cooling systems if the ducts are;

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing. NB Sarking / reflective Foils alone are not sufficient.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R_t) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts.

South Australia / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

BCA 2011 is mandatory for all Class 1 + 10 domestic buildings in S A issued with a building permit from May 1 2011.

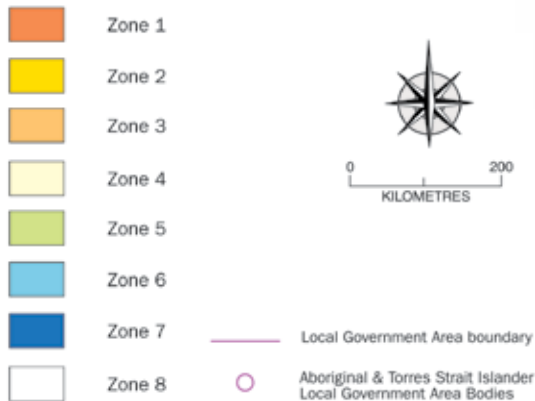
BCA 2011 specifies;

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1. "Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in a heating system that is ignited by a flame must be fire rated to AS 4254.
- R_m 0.4 for all fittings in all installation.
- R_m 1.0 for all duct in all heating only, refrigerated cooling only and evap cooler only systems.
- R_m 1.5 for all duct in reverse cycle and add on cooling systems, except zone 5 where R_m 1.0 is required (see note).
- R_m 0.6 insulation can only be used on duct within "the insulated building envelope" e.g. In riser shafts and in between floors.

Note: R_m 1.0 may be used in reverse cycle and add on cooling systems in climate zones 4 and 6 if the ducts are:

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing. i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.

Climate Zones



Commercial Applications

BCA 2011 is mandatory for all commercial buildings in SA issued with a building permit from May 1 2011:

BCA 2011 specifies;

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1 " Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in all systems must be fire rated to AS 4254.
- R_m 2.0 duct and fittings must be used on all in heating, cooling and evaporative installations unless;
 - (a) Duct is no more than 3 meters in length to an outlet or from an inlet then R_m 1.0 is acceptable.
 - (b) Duct and fittings are installed within a "conditioned space" which require Zone 5 R_m 1.2, Zones 4 and 6 – R_m 1.0.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R_t) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts



New South Wales / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

BCA 2011 is mandatory for all Class 1 + 10 domestic buildings in NSW issued with a building permit from May 1 2011:

BCA 2011 specifies:

- Material R Values (R_m) (R Value of insulation only) must be used on flexible duct and fittings tested to AS/NZS 4859.1. It is not acceptable to quote an insulation thickness and/or weight instead of a total R Value (R_m).
- All duct in a heating systems that is ignited by a flame must be fire rated to AS 4254
- R_m 0.4 for fittings in all installations
- R_m 0.6 insulation can only be used on duct within 'the insulated building envelope' e.g In riser shafts and in between floors
- R_m 1.0 for duct in all heating only refrigerated cooling only and evaporative cooler only systems (except zone 8, R_m 1.5 is required)
- R_m 1.5 for duct in all reverse cycle and add on cooling systems, except in climate zones 2 and 5 where R_m 1.0 is acceptable.(see note).

Note: R_m 1.0 may be used in reverse cycle and add on cooling systems in climate zones 4, 6 and 7 if the ducts are:

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.

Note: Class 1 & 10 buildings are subject to BASIX but still use section 3.12.5.3 for flexible duct.

Climate Zones



Sydney Surrounds



Sydney Urban

Commercial Applications

BCA 2011 is mandatory for most classes of commercial buildings in NSW issued with a building permit from May 1 2011 including:

Building classes 3, 5, 6,7,8,9.

Note: Class 2 and a class 4 are subject to Basix but still use section J for flexible duct.

BCA 2011 specifies:

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1 " Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in all systems must be fire rated to AS 4254.
- R_m 2.0 duct and fittings must be used on all in heating, cooling and evaporative installations unless;
 - (a) Duct is no more than 3 meters in length to an outlet or from an inlet then R_m 1.0 is acceptable.
 - (b) Duct and fittings are installed within a "conditioned space" which require, Zones 2 and 5 - R_m 1.2, Zones 4,6 and 7- R_m 1.2 and zone 8 - R_m 1.6.
 - (c) Duct and fittings are installed in Zone 8 which requires R_m R 2.4.
- Dependant on building class and sub class BASIX requirements may also apply.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R_t) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts.

ACT / ADMA-NCC (BCA) Flexible Duct, Thermal & Fire Rating Requirements from May 1 2011

Domestic Applications

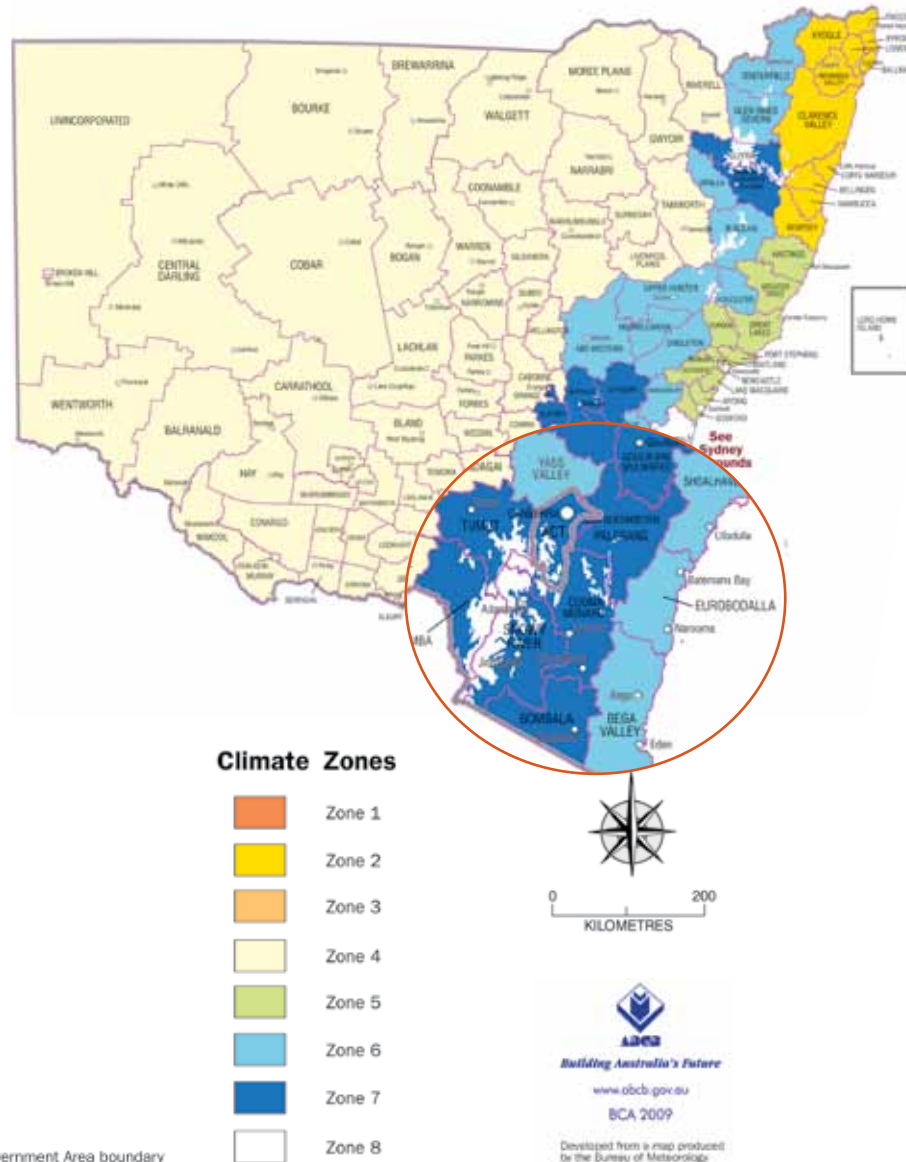
BCA 2011 is mandatory for all Class 1 + 10 domestic buildings in ACT issued with a building permit from May 1 2011.

BCA 2011 specifies:

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1 "Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in a heating system that is ignited by a flame must be fire rated to AS 4254.
- R_m 0.4 for all fittings in all installation.
- R_m 1.0 for all duct in all heating only, refrigerated cooling only and evaporative cooling only systems except zone 8 where R_m 1.5 is required.
- R_m 1.5 for all duct in reverse cycle and add on cooling systems. (see note).
- R_m 0.6 insulation can only be used on duct within "the insulated building envelope" e.g. In riser shafts and in between floors.

Note: R_m 1.0 may be used in reverse cycle and add on cooling systems in climate zone 7 if the ducts are;

- Under a suspended floor within an enclosed perimeter or
- In a roof space that has insulation of not less than R 0.5 directly beneath the roofing i.e. above the duct. NB Sarking / reflective foils alone are not sufficient.



Local Government Area boundary

Commercial Applications

BCA 2011 is mandatory for all commercial buildings in ACT issued with a building permit from May 1 2011

BCA 2011 specifies:

- "Material R Values" (R_m) (R Value of insulation only) must be used on flexible duct and fittings, tested to AS/NZS 4859.1 "Total R Values" (R_t) are not acceptable nor is quoting insulation thickness and or weight instead of a Material R-value (R_m).
- All duct in all systems must be fire rated to AS 4254.
- R_m 2.0 duct and fittings must be used on all in heating, cooling and evaporative installations unless;
 - Duct is no more than 3 meters in length to an outlet or from an inlet then R_m 1.0 is acceptable.
 - Duct and fittings are installed within a "conditioned space" which require, Zone 7- R_m 1.2, Zone 8- R_m 1.6.
 - Duct and fittings are installed in Zone 8 which requires R_m R 2.4.

Contractors/homeowners need to ensure that only duct with a designated and appropriate Material R-Value (R_m) or Total R Value (R_t) is installed and that documentary evidence is available to demonstrate that required thermally rated duct has been ordered, supplied and installed by the duct supplier.

The supply of a "letter of certification", "letter of compliance", or equivalent, by a builder that indicates compliance, demonstrates that regulatory standards have been followed. The failure to install thermally and fire rated compliant product may breach state or local regulations, builders' guarantees, or the Trade Practices Act, possibly triggering make-good provisions, and may extend for some years depending on local regulations and building contracts.