

# 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;**

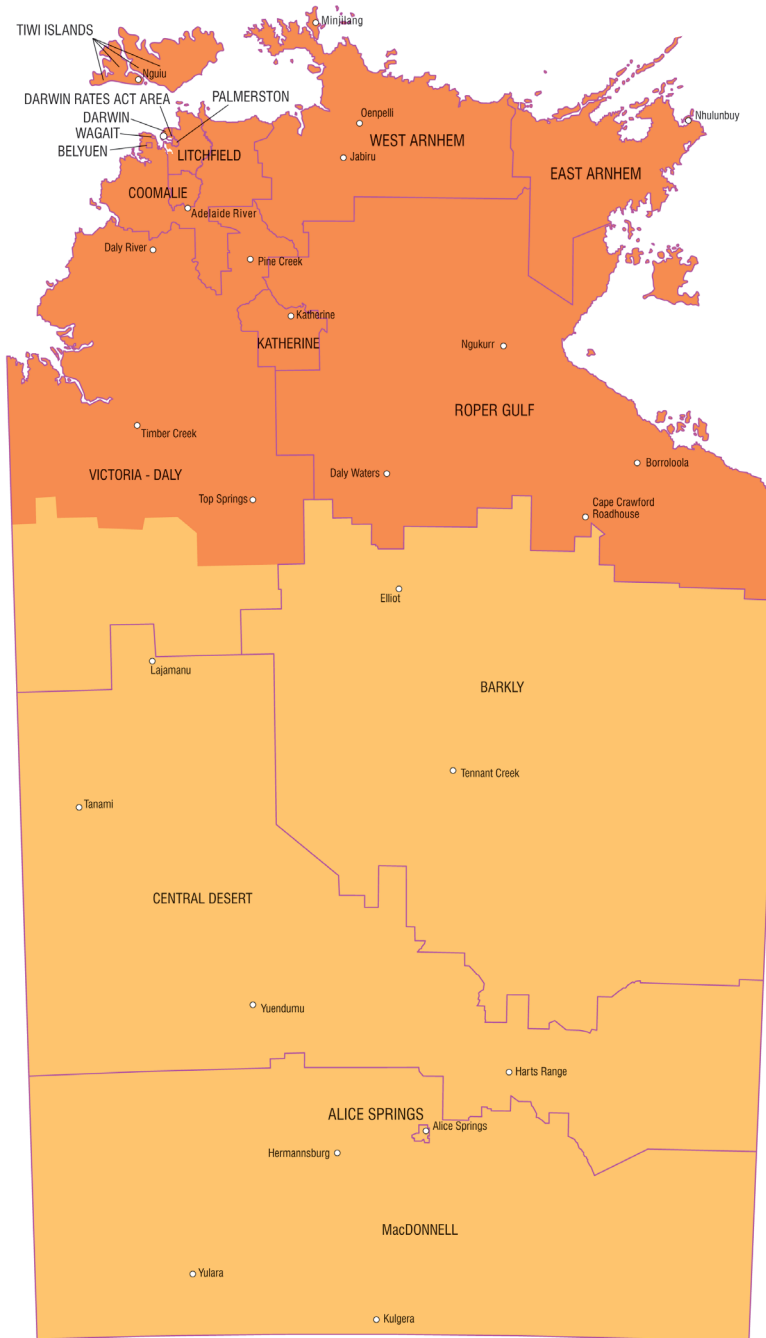
- Under a suspended floor within an enclosed perimeter or
- In a roof space that has downward facing reflective foil insulation fitted to the underside of the roofing i.e. above the duct

## Climate Zones

-  Zone 1
-  Zone 2
-  Zone 3
-  Zone 4
-  Zone 5
-  Zone 6
-  Zone 7
-  Zone 8



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.