

KANNALAND MUNICIPALITY: SOLAR WATER HEATING BY-LAW

Under the powers conferred by section 156 of Constitution, 1996, read with section 11(3)(m) of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000), the Kannaland Municipality enacts as follows:

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1. Definitions

In this By-law, unless the context indicates otherwise -

“aperture area” means the area in a collector cover through which unconcentrated solar radiant energy is admitted to the absorber as defined in SANS 1307;

“applicant” means the person or entity submitting an application for building plan approval;

“authorised official” means the building control officer or a person delegated to perform this function;

“building” means a building as defined in section 1 of the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977);

“developer” means the person or organisation that is building or developing a property with a view to sale or rent when completed;

“domestic solar water heater” means a solar water heater used by a household; Municipal Structures Act or his nominee;

“municipality” means the Municipality of Kannaland, established in terms of Section 12 of the Municipal Structures Act, 117 of 1998, and includes any political structure, political office bearer, councillor, duly authorised agent or any employee acting in connection with this by-law by virtue of a power vested in the municipality and delegated or sub-delegated to such political structure, political office bearer, councillor, agent or employee;

“notice of exemption” means a formal document signed by an authorised official setting out the manner and conditions of exemption of a particular building from the requirements of this By-law;

“owner” means the person who has legal claim to a building or property by virtue of title deeds or other legally accepted documents;

“permanent shading” means shading caused by unsuitable orientation or by existing buildings, mountains, and other similar obstacles;

“solar collector” means a device that contains or incorporates an absorber and a means for transferring thermal energy from the absorber to a fluid passing through it as defined in the SANS 1307;

“solar contribution” means the energy input to a hot water tank from a solar collector or collectors; and

“Solar Water Heater (SWH)” means a complete operating system that uses energy from the sun to produce hot water and that comprises one or more collectors, hot water tanks and includes all the necessary interconnecting pipes and functional components as defined in SANS 1307, which can be combined with electrical energy.

2. Objectives

The purpose of this by-law is to –

- (a) regulate the incorporation of solar water heaters for the production of sanitary hot water in buildings in the Greater Kannaland area and to provide for matters connected therewith;
- (b) improve electrical energy security and improve energy risk management;
- (c) reduce the use of electricity;
- (d) reduce the national contribution to environmental impacts associated with the burning of fossil fuels, such as carbon dioxide (CO₂), sulphur dioxide (SO₂) and nitrous oxide emissions (NO₃);
- (e) improve the quality of life through the provision of hot water; and
- (f) create jobs in the solar water heater industry.

3. Scope of application

- (1) This By-law applies to all new buildings in the Kannaland area, other than those exempted in subsection (3).
- (2) This By-law applies to all additions to existing buildings that will require the use of hot water (eg bathroom, bedroom with en-suite bathroom and kitchen extensions) other than those exempted in subsection (3).
- (3) This By-law does not apply to the following cases:
 - (a) Buildings used only for industrial purposes where hot water requirements exceed that which can be reasonably obtained through solar water heating;
 - (b) any privately funded residential building of which the extent is less than 120 m² (including garage space); or
 - (c) buildings with heat pump installations, as approved in terms of section 4.
- (4) The Municipality may exempt buildings or parts of buildings from the obligations of this By-law if there are valid reasons for such an exemption, such as –
 - (a) Historical Buildings; or
 - (b) buildings in areas which, due to permanent shading, are not able to have solar water heating.
- (5) Multi-storey buildings are required to have as much solar water heating as can be technically and economically accommodated by the structure and may apply for a ‘notice of exemption’ for the hot water requirements not able to be served.
- (6) No ‘notice of exemption’ will be valid unless given in writing over the signature of an authorised official.

4. Requirements for building plan approval

- (1) An application for building plan permission must disclose a description of the solar water heating system, showing compliance with this By-law.
- (2) The description referred to in subsection (1) must contain the following information:
 - (a) The manufacturer's name, trade name or trade mark;
 - (b) model number;
 - (c) aperture area; where an aperture area of 0.7m² per 50l of usage is deemed the minimum acceptable;
 - (d) whether the Solar water heater is freeze resistant or not freeze resistant;
 - (e) for domestic solar water heating, a signed declaration from the manufacturer or distributor regarding compliance of the solar water heater with SANS 1307;
 - (f) a declaration including the rated daily output according to SANS 6211-1 or SANS 6211-2 which should equal 80%, unless exemption has been granted in terms of section 3(4) or (5), provided that in the absence of SABS standards, international standards should be adhered to; and
 - (g) the name of the installer and the installing company.
- (3) The municipality may require information additional to those set out in subsection (2)

5. Standards

- (1) A domestic solar water heating system and its sub-components must comply with either SANS 1307 or certified international standards and compliance to those standards must be declared in writing.
- (2) The solar collector must be fitted in such a manner as to attain optimum performance given the constraints of the building geometry and orientation, and bearing in mind the requirements of section 4(2)(f), noting that a true North orientation and an inclination of the collector of 30° to the horizontal are optimal;
- (3) The installation of the solar water heating system shall be done according to National Codes of Practice SANS 10106 when they come into effect; until such time, the installation must be signed off by a certified installer in possession of an NQF level 4 certification or higher.
- (4) The manufacturer must give a written 5 year performance warranty declaration on the solar water heating system.
- (5) The municipality may require that a service contract be entered into between an installer and an owner and that it include at least:
 - (a) a commitment from the installer to perform a commissioning check within one month after installation, handing over the commissioning check list according to National Code of Practice SANS 10106 to the owner and that this commissioning check be included in the price of the system;
 - (b) a commitment from the installer to perform an annual service check at a reasonable fixed price stated in the contract, for a period of at least the two first years.
- (6) Any electrical work associated with the solar water heating system must comply with SANS 10142 South African National Standard for the Wiring of Premises.

6. Appearance and design

- (1) The municipality may require changes in the proposed design and appearance of a building in order to minimise the visual impact of the solar water heater.
- (2) Where possible, hot water cylinders must be installed within the roof space or internally -
 - (a) in areas of frost prevalence to address insulation concerns; or
 - (b) for aesthetic reasons in sensitive contexts such as buildings older than 60 years and in heritage areas.

7. Owners' obligations

- (1) The owner, or in the case where transfer to a final owner has not yet taken place, the developer of a building on which a solar water heater system is installed, is responsible for compliance with the requirements of this By-law.
- (2) The owner of the solar water heater system is responsible for maintenance and repairs necessary to keep it in good repair and functioning adequately.

8. Inspection

- (1) The Municipality may by written notice require an owner of a building to provide within a reasonable period any information it requires to give effect to this By-law.
- (2) If the information contemplated in subsection (1) is not provided within the time stated in the notice, the municipality may carry out an inspection of the building at the owner's cost to check compliance with the requirements of this By-law.

9. Prohibitions

No person may:

- (a) Install a solar water heater system in contravention to requirements in this By-law;
- (b) Fail to maintain the solar water heater system according to requirements in this By-law;
- (8) Fail or refuse to provide information or give access to buildings as provided for in section 8 in this By-law.

10. Compliance notice

- (1) When a municipal official finds that a provision of this By-law is contravened by an applicant or that a condition has arisen that has the potential to lead to a contravention of this By-law, such authorised official may issue a compliance notice to the owner or the person in charge of the solar water heater.
- (2) A notice issued in terms of subsection (1) must state:
 - (a) the provision of the By-law that has been contravened or will be contravened if the condition is allowed to continue;
 - (b) the measures that must be taken to rectify the condition; and
 - (c) the time period in which the notice must be complied with.
- (3) If a person on whom notice was served in terms of subsection (2) fails to comply with the requirements of the notice, the municipal manager may take such steps as may be necessary to rectify the condition at the cost of the applicant or owner of the solar water heater.

11. Authentication and service of notices and other documents

- (1) A notice issued by the municipality in terms of this by-law is deemed to be duly issued if an official of the municipality has signed it.

(2) Any notice or other document that is served on a person in terms of this by-law is regarded as having been duly served –

- (a) when it has been delivered to that person personally;
- (b) when it has been left at that person's place of residence or business in the Republic with a person apparently over the age of 16 years;
- (c) when it has been posted by registered or certified mail to that person's last known residential or business address in the Republic, and an acknowledgment of the posting thereof from the postal service is obtained;
- (d) if that person's address in the Republic is unknown, when it has been served on that person's agent or representative in the Republic in the manner provided by paragraphs (a), (b) or (c);
- (e) if that person's address and agent or representative in the Republic is unknown, when it has been posted in a conspicuous place on the land or business premises to which it relates;
- (f) in the event of a body corporate, when it has been delivered at the registered office of the business premises of the body corporate; or
- (g) when it has been delivered, at the request of that person, to his or her e-mail address.

(3) Service of a copy is deemed to be service of the original.

(4) When any notice or other document is served on the owner, occupier, or holder of any property, or right in any property, it is sufficient if that person is described in the notice or other document as the owner, occupier, or holder of the property or right in question, and it is not necessary to name that person.

12. Appeal

A person whose rights are affected by a decision of the municipality may appeal against that decision by giving written notice of the appeal and the reasons therefore in terms of section 62 of the Local Government: Municipal Systems Act, Act 32 of 2000 to the municipal manager within 21 days of the date of the notification of the decision.

13. Offences and penalties

A person who contravenes a provision of this By-law, or fails to comply with a condition or notice legally issued in terms of this By-law, is guilty of an offence and on conviction is liable to the payment of a fine.

14. Short title and commencement

This By-law is called the Kannaland Municipality: Solar Water Heating By-law and it will come into effect upon publication in the Provincial Gazette.

ANNEXURE A

Estimation of consumption

Knowledge about the hot water consumption is needed when estimating/calculating the solar contribution from the solar water heater.

Values from table 1 below may be used for estimation of the hot water usage if not known from previous surveys or other means.

Table 1: Estimation of hot water usage in different cases-

Case	Amount of hot water used Per day	Unit
Individual households		
High/Middle income sector	50	litres/person
Low income sector	25	litres/person
Apartments	30	litres/person
Hospitals and clinics	60	litres/bed
Old people's homes	40	litres/person
Day schools	5	litres/pupil
Factories and workshops	20	litres/person
Offices	5	litres/person
Camp sites	60	litres/site (occupied)
Hotels	100	litres/bedroom (occupied)
plus	8	litres/meal (sold)
Colleges	30	litres/student
Laundries	5	litres/kilogram of clothes
Restaurants	8	litres/meal (sold)