



## Determination 2017/069

# Regarding the issue of a notice to fix concerning the installation of a solar water heating system at 21a Hope Drive, Witherlea, Blenheim

### Summary

This determination considers a notice to fix issued for the installation of a solar water heating system without building consent being obtained. The matter turns on whether installation of the system including the solar collectors was exempt under Schedule 1.

#### 1. The matter to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations and Assurance, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.

1.2 The parties to the determination are:

- the owner of the building who applied for the determination, H. Graham (“the applicant”), acting through the water heating system supplier as an agent (“the agent”)
- Marlborough District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.

1.3 This determination arises from authority’s decision to issue a notice to fix for the installation of a solar water heating system. The authority believes that the building work is not exempt under Schedule 1 and a building consent was required

1.4 The matter to be determined<sup>2</sup> is the authority’s exercise of its power of decision in issuing a notice to fix for the installation of a solar water heating system. In deciding this matter, I must consider whether the installation of the solar water heater, including the associated components such as solar collectors and controls, is exempt building work under Schedule 1(38).

1.5 In making my decision, I have considered the submissions of the parties, and the other evidence in this matter.

1.6 The authority has stated that obtaining a building consent was part of its contract with the owner. Any contract that the applicant may have entered into with the authority is outside the scope of this determination; a determination can only consider those matters set out in section 177 of the Act. I do not consider this issue further in the determination other than in relation to the issuing of the notice to fix (refer paragraph 4.3.3).

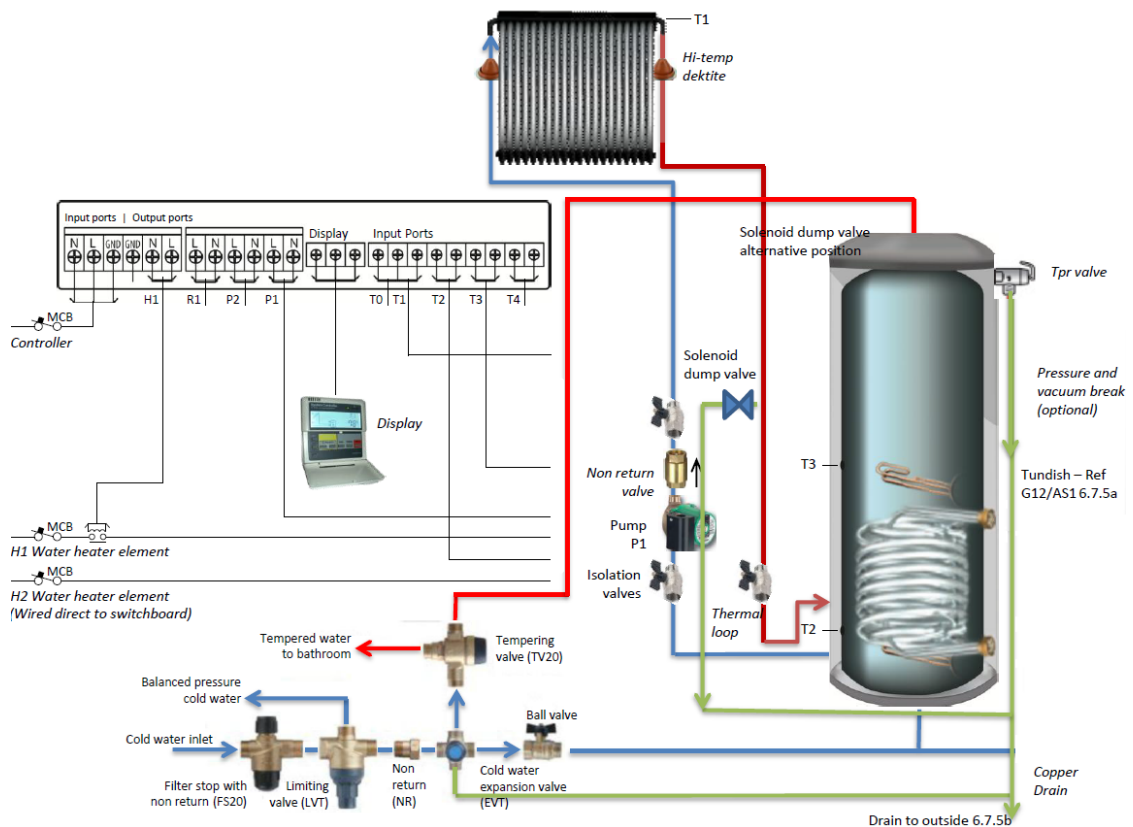
---

<sup>1</sup> The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> Under sections 177(1)(b) and 177(2)(f) of the Act.

## 2. The building work and background

- 2.1 The building work considered in this determination is the installation of a solar water heating system in place of a low pressure, open-vented storage water heater.
- 2.2 The installation of a fireplace wetback was the subject of a building consent (which I have not seen). An officer of the authority visited the house to inspect the fireplace wetback, and observed that a solar water heating system had been installed in addition to consented work. The authority was of the view that the installation of the solar water heating system was building work that required building consent.
- 2.3 The solar water heating system includes a new storage water heater, plumbing and solar collectors, and associated controllers, as shown schematically in Figure 1.
- 2.4 The solar collectors comprise an evacuated tube system with a pump and controllers that circulates heated water through the new storage water heater. The storage water heater incorporates an indirect heating coil that is connected to the fireplace wetback.



**Figure 1: Schematic of the as-built solar water heating system provided by the agent (not to scale)**

- 2.5 On 29 March 2017 the authority issued a notice to fix. The notice listed the particulars of contravention as:

Contrary to s.40 of the Building Act, the following building works have been undertaken without first obtaining a building consent.

- You have installed a solar hot water heating system...evacuated tube system, located on the Northern side of the roof, to your dwelling.

The authority stated to remedy the contravention, the applicant could either:

Remove the unauthorised building works; Or

Pursue any other option/s required to make the structure comply with the Building Act and regulations.

- 2.6 On 30 March 2017 the agent contacted the authority regarding the requirement for a building consent for the installation, supplying correspondence from 2014 with an officer of the Ministry that discussed exempt building work under Schedule 1(38). The agent also enquired about having a “blanket exemption” under Schedule 1(2) for installation of their solar water heaters.
- 2.7 The authority responded on 31 March 2017, stating the notice to fix regarding the installation of the solar water heating system would remain in place.
- 2.8 Further communication continued between the agent and the authority, with the correspondence sent to an officer of the Ministry on 5 April 2017 and subsequent correspondence between an officer of the Ministry and the agent sent to the authority on 10 April 2017.
- 2.9 The authority responded on the same day, reiterating its view that the addition of the solar elements was outside the scope of Schedule 1 and required a building consent.
- 2.10 The Ministry received an application for a determination from the owner on 11 April 2017.

### **3. The submissions**

- 3.1 In a letter with the application for determination the agent submitted (in summary):
- A building consent was not sought, because the agent believes the installation falls under Schedule 1(38) “Replacement or repositioning of water heater that is connected to, or incorporates, controlled heat source”.
  - The solar water heater is controlled to ensure that the water in the hot water heater is no greater than 90°C.
  - The agent also requested clarification regarding the term “repositioning” of a “water heater” as described in Schedule 1(38).
- 3.2 The agent included copies of correspondence between the parties and a schematic of the solar water heater.
- 3.3 In response to my request for further information, the agent explained how the solar system operated and provided photographs of the installed hot water system and a schematic of the solar hot water system (refer Figure 1).
- 3.4 The authority acknowledged the application for determination on 18 May 2017 and provided a submission as follows (in summary):
- The installation of the solar water heating system is not exempt under Schedule 1.
  - There have been liability issues when similar installations have failed.
  - Exemptions for installing solar water heaters under Schedule 1(2) were considered, however, the authority decided they would not be appropriate based upon past experience of these systems.

- The agent had previously been informed that building consents were required for solar water heating systems, so it was appropriate to issue the notice to fix.
- The work to install the solar water heating system did not meet the “like for like” criteria. (I note the agent did not state it had carried out the work on a “like for like” basis, or under Schedule 1(36).)
- There are concerns regarding the consequences of a potentially poorly-installed solar water heating system, and the benefits of inspection of the installation by the authority outweighs the cost of a building consent.

3.5 The agent responded on the same day to the authority’s submission as follows (in summary):

- The agent is not aware of any issues with their installations and noted that certified plumbers carry out the work, and the installation has a producer statement (PS1) provided by a structural engineer.
- The agent questioned whether or not replacing a water heater with a solar water heating system with a controlled source is exempt under Schedule 1.

3.6 A draft determination was issued to the parties for comment on 28 June 2017.

### **Responses to the draft determination**

3.7 The authority responded on 4 July 2017 stating it did not accept the draft determination decision and provided the following comments:

- Schedule 1(38) does not include exemptions for the installation of new solar collectors, only the replacement of existing solar collectors.
- The authority’s interpretation of the guidance document is that adding new solar collection panels will require a building consent.
- If the intent of Schedule 1 was to exempt the installation of new solar collectors a specific exemption would have been included.
- The authority is of the view the determination decision will set a precedent that has wider implications.

3.8 The agent responded on the same day to the authority’s submission and made the following comments:

- The exemption states “any type” of water heater can be replaced or repositioned, if the heat source is controlled, and this includes a controlled solar water heater.
- The exemption does not stipulate that a solar water heater can only be installed if there was an existing solar water heater, in fact any water heater can be replaced with any other water heater (as long as it has a controlled heat source).
- When the agent is not repositioning or replacing a water heating system they apply for a building consent; in this case they replaced the water heater.
- The intent of Schedule 1(38) was to reduce cost, time, and liability to the authority for basic plumbing work that is signed off by a certified plumber.

## 4. Discussion

### 4.1 Schedule 1

- 4.1.1 The issue to be considered is the authority's exercise of its powers of decision in issuing the notice to fix. The matter turns on whether the building work is exempt under Schedule 1(38).
- 4.1.2 The intent of Schedule 1 is to exempt specific types of building work from requiring a building consent when the building work is likely to comply with the Building Code and unlikely to injure someone if it does not comply. A further consideration is the cost associated with obtaining consent being likely to outweigh the benefits a building consent may offer.
- 4.1.3 Schedule 1 Part 2 covers exemptions that apply if a person authorised under *Plumbers, Gasfitters, and Drainlayers Act 2006* carries out the building work. The term 'authorised person' is defined in section 42A(3), and covers registered certified plumbers or apprentices/plumbers working under their supervision.
- 4.1.4 Schedule 1(38), that is relevant to the installation of the solar water heater, states (emphasis mine):
- 38 Replacement or repositioning of water heater that is connected to, or incorporates, controlled heat source
- The **replacement of any water heater** (including the repositioning of an existing water heater) if the replacement water heater is connected to, or incorporates, a **controlled heat source** or, if connected to or incorporating more than 1 heat source, 2 or more heat sources all of which are controlled.
- 4.1.5 In other words, Schedule 1(38) allows for the replacement or repositioning of any water heater provided that all heat sources are controlled. The low risk level is apparent when contrasted to the building work exempt under Schedule 1(37) for water heaters that are uncontrolled. In that situation, water heaters connected to a supplementary heat exchange can only be replaced (not repositioned) if a comparable water heater is used and fixed in the same position with the same open-vented pipework.

### 4.2 Is the building work exempt?

- 4.2.1 In guidance provided by the Ministry<sup>3</sup> ("the guidance document") there is additional commentary that clarifies what work is exempt under Schedule 1(38) – see Appendix A.
- 4.2.2 For the building work to be exempt under Schedule 1(38) it must meet the following criteria :
- The water heater is being replaced or being repositioned.
  - If the water heater is being replaced, the replacement is a system that has a controlled heat source, or if the water heater is being repositioned it is connected to or incorporates controlled heat source(s).
- 4.2.3 The exemption does apply to adding a solar water heater to an existing water heater because the water heater is not being replaced or repositioned.

---

<sup>3</sup> *Building work that does not require a building consent* (Ministry of Business, Innovation and Employment) June 2016

- 4.2.4 In this situation the existing storage water heater has been replaced with a new solar water heating system and the building work meets the first test. The matter of whether the building work falls under Schedule 1(38) therefore turns on whether the system incorporates or is connected to a controlled heat source. If the solar water heating system does not have a controlled heat source then the work is not considered exempt under Schedule 1(38).
- 4.2.5 The guidance document defines a “controlled heat source” as a heat source that ‘has controls or devices that ensure the water temperature in the storage tank is no greater than 90°C’.
- 4.2.6 The heat source in this case is controlled using two methods, the first being the pump cut off and the second being the solenoid dump valve. The pump stops circulating water when 80°C is reached in the storage water heater. However, there is still water in the solar collectors that will heat up and expand into the storage water heater. In this event, when 88°C is reached at a temperature sensor on the solar collectors, a solenoid dump valve is activated and hot water is dumped from the solar collectors before it reaches the storage water heater. The dump valve remains open until the temperatures in the water storage heater and solar collectors are adequately reduced. The temperature and pressure relief valve, and cold water expansion valve, also allow for water and pressure to escape from the storage water heater.
- 4.2.7 Based upon the description of the system with two forms of control that prevent the temperature exceeding 90°C, I am of the view that the solar water heating system has a controlled heat source.
- 4.2.8 Schedule 1(38) does not exclude the use of solar water heating systems where the water heater being replaced is not solar; its only requirement is that the heat source is controlled.

### **4.3 Notice to fix**

- 4.3.1 A notice to fix can be issued if an authority considers on reasonable grounds that a ‘specified person is contravening or failing to comply with this Act or the regulations...’ The authority is of the view that the building work to install the solar collectors, and associated pipework and controllers, required building consent and issued the notice to fix based on that interpretation.
- 4.3.2 I have concluded that the building work is exempt under Schedule 1 and a building consent was not required for the installation of the solar water heating system.
- 4.3.3 The authority has stated that obtaining a building consent was part of its contract with the owner. I note there is nothing in the Act that prohibits a person from applying for a building consent for work that is exempt under Schedule 1. However, I consider that issuing a notice to fix is not the correct mechanism to deal with a contractual matter, and the authority should explore other pathways to resolve this issue.

### **4.4 Conclusion**

- 4.4.1 In conclusion, the existing water heater was replaced with a water heater that was connected to controlled heat sources. This work is exempt under Schedule 1(38), which includes the installation of a solar water heating system associated with replacement of a water heater when the heat source is controlled.
- 4.4.2 As the building work was exempt under Schedule 1(38) a notice to fix should not have been issued.

## 4.5 “Repositioning”

- 4.5.1 While not the matter to be determined in this case, the agent has requested guidance on the interpretation of “repositioning” in Schedule 1(38) and I consider it useful to include a discussion on what constitutes repositioning.
- 4.5.2 The agent queried whether twisting the water storage heater to align it to solar collectors qualifies as “repositioning” the water storage heater. While twisting, or rotating, the heater can be considered as adjusting or altering the water heater’s orientation, its location is not different – it is still in the same position.
- 4.5.3 The term “reposition” is not defined in the Act, and I have considered the term in its ordinary and natural meaning. The *Oxford English Dictionary*<sup>4</sup> defines “reposition” as: ‘(a) To restore to a particular position; ... (b) To alter or adjust the position of’.
- 4.5.4 I take this to mean that for the water storage heater to be considered “repositioned” it is placed in a distinctly different location. There is no specific distance stated in Schedule 1 or the guidance document that clarifies when a water heating system can be considered to be repositioned; however, I am of the view that the new position would need to be sufficiently different to ensure that thought is given to the associated pipework, valving, and the like.
- 4.5.5 Therefore, I consider a water storage heater’s position only qualifies as being repositioned when its new position is distinctly different from the original position; removing and reinstalling a water storage heater in the same location or reorienting (i.e. rotation) is not “repositioning”.

## 5. The decision

- 5.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the building work was exempt under Schedule 1(38), accordingly the authority incorrectly exercised its power of decision in issuing the notice to fix and I reverse that decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 24 August 2017.

John Gardiner  
**Manager Determinations and Assurance**

---

<sup>4</sup> Oxford English Dictionary (OED Third Edition, December 2009)

## Appendix A

A1. The relevant clauses of Schedule 1 discussed in this determination:

### **Schedule 1 Building work for which building consent not required**

#### *Part 1 Exempted building work*

##### *General*

### **2 Territorial and regional authority discretionary exemptions**

Any building work in respect of which the territorial authority or regional authority considers that a building consent is not necessary for the purposes of this Act because the authority considers that—

(a)

the completed building work is likely to comply with the building code; or

(b)

if the completed building work does not comply with the building code, it is unlikely to endanger people or any building, whether on the same land or on other property.

#### *Part 2 Sanitary plumbing and drainlaying carried out by person authorised under Plumbers, Gasfitters, and Drainlayers Act 2006*

##### *Water heaters*

### **38 Replacement or repositioning of water heater that is connected to, or incorporates, controlled heat source**

The replacement of any water heater (including the repositioning of an existing water heater) if the replacement water heater is connected to, or incorporates, a controlled heat source or, if connected to or incorporating more than 1 heat source, 2 or more heat sources all of which are controlled.



- A.2 The relevant exemption guidance from the Ministry's document *Building work that does not require a building consent*

---

### 38. Replacement or repositioning of water heater that is connected to, or incorporates, controlled heat source

---

*The replacement of any water heater (including the repositioning of an existing water heater) if the replacement water heater is connected to, or incorporates, a controlled heat source or, if connected to or incorporating more than 1 heat source, 2 or more heat sources all of which are controlled.*

This exemption enables an authorised person (refer to the glossary) to **replace** and/or **reposition** an existing water heater (of any type), as long as all the heat sources of the replaced or repositioned water heater are controlled. This exemption will not apply if a water heater has a heat source that is not controlled (eg a wetback connected to a solid-fuel heating appliance, or a solar thermosiphon system).

A controlled heat source has controls or devices that ensure the water temperature in the storage tank is no greater than 90°C.



#### ALERT:

If the proposed scope of the building work is outside the scope of this or any other exemption (eg adding solar collectors to an existing water storage heater, which has provision for solar connection and is not being replaced or repositioned), we suggest that you consider applying to the council for an [exemption 2](#). The council can then decide whether or not it will require a [building consent](#). Before doing this, we recommend that you talk to the council to gauge whether or not it is prepared to exercise its discretion under exemption 2 on your project.

Any repair or maintenance of part of a water heater (which may include the replacement of a component of the water heating system) falls outside the scope of this exemption. Exemption 36 deals with repairs or maintenance of part of a water heater.

Replacing a hot water cylinder which is connected to an existing wetback falls outside this exemption (refer to exemption 37 for open-vented systems).

## Examples where this exemption could apply

### Water storage heaters

- Replacing an existing valve-vented water storage heater with a thermostatically controlled valve-vented water storage heater (eg electric to electric, gas to gas, electric to gas, or gas to electric).
- Repositioning an existing valve-vented water storage heater that has a controlled heat source.
- Replacing an existing open-vented water storage heater with a valve-vented water storage heater that has a controlled heat source.
- Repositioning an open-vented water storage heater, when in the new position it is connected to a controlled heat source.

### Solar water storage heaters

- Replacing and/or repositioning an existing water storage heating system comprising a water storage heater that includes controlled solar collectors.
- Replacing or repositioning an existing electric or gas water storage heater with a water storage heater system that includes controlled solar collectors.

### Heat pump water storage heaters

- Replacing a water storage heater with a heat pump water storage heater.
- Replacing and repositioning an internal water storage heater with an external heat pump water storage heater.
- Replacing an external water storage heater with an external heat pump water storage heater.

### Instantaneous water heaters

- Replacing or repositioning an instantaneous water heater that is thermostatically controlled.
- Replacing an existing storage water heater with a gas instantaneous water heater.

## Examples where building consent is required

Adding a solar collector to an existing water storage heater (even if the existing water storage heater has provision for solar connection). A building consent is required because this exemption only covers replacement or repositioning of existing water heaters.

Adding a wetback (not a replacement wetback) connected to a water storage heater. A building consent is required because this exemption only covers replacement or repositioning of existing water heaters. Also the wetback is an uncontrolled heat source.

Adding a split heat pump (not a replacement split heat pump) to an existing water storage heater. A building consent is required because this exemption only covers replacement or repositioning of existing water heaters.