



## **BUILDING CODE COMMISSION**

**IN THE MATTER OF** Subsection 24(1) of the *Building Code Act*, S.O. 1992, c. 23, as amended.

**AND IN THE MATTER OF** Articles 9.23.17.5., 9.23.17.6. and Article 9.36.2.1. of Regulation 403, as amended by O. Reg. 22/98, 102/98, 122/98, 152/99, 278/99, 593/99, 597/99, 205/00 and 283/01 (the "Ontario Building Code").

**AND IN THE MATTER OF** an application by Margaret Sisley, owner, for the resolution of a dispute with Neil Donald, Chief Building Official, Township of Muskoka, to determine whether the proposed seasonal boathouse clad with horizontally installed bevelled wood siding and mounted directly onto the framing without the use of a sheathing membrane provides sufficiency of compliance with Article 9.23.17.6. of the Ontario Building Code at 1126-1 Pleasant View Road, Lake Muskoka, Ontario.

**APPLICANT** Margaret Sisley, owner  
Willowdale, Ontario

**RESPONDENT** Neil Donald  
Chief Building Official  
Township of Muskoka

**PANEL** Len King, Vice-Chair  
Fred Barkhouse  
Robert De Berardis

**PLACE** Toronto, Ontario

**DATE OF HEARING** February 20, 2003

**DATE OF RULING** February 20, 2003

**APPEARANCES** Peter Sisley, Agent  
Toronto, Ontario  
**Agent for the Applicant**

Henry Hess  
Building Inspector  
Township of Muskoka Lakes  
**Designate for the Respondent**

## **RULING**

### **1. The Applicant**

Margaret Sisley, owner, has received a building permit under the *Building Code Act*, S.O. 1992, c. 23, as amended, and is constructing a boathouse located at 1126-1 Pleasant View Road, Lake Muskoka, Ontario.

### **2. Description of Construction**

The Applicant is constructing a boathouse having a Group C occupancy. The proposed structure is two storeys in building height, approximately 60 m<sup>2</sup> in building area, and comprised of combustible construction.

The construction in dispute involves the nature of the wall assembly for the second storey of the proposed structure. This storey is currently used for storage, but it is anticipated that it will be used for seasonal occupation during the summer months at some time in the future. The Applicant wishes, as part of the construction of the second storey, to horizontally mount 16 mm (5/8") rabbeted, shiplapped, pre-painted solid wood bevelled siding directly onto the framing of the wall assembly without the use of a sheathing membrane.

### **3. Dispute**

The issue at dispute between the Applicant and Respondent is whether the proposed seasonal boathouse clad with horizontally installed bevelled wood siding and mounted directly onto the framing without the use of a sheathing membrane provides sufficiency of compliance with Article 9.23.17.6. of the Ontario Building Code (OBC).

In cases such as the one at hand, where no sheathing is used, Sentence (1) of Article 9.23.17.5. requires that two layers of sheathing membrane be installed beneath the cladding. Sentence 9.23.17.5.(3) permits that one layer of sheathing membrane may be omitted if a single layer of wall sheathing is installed in the wall assembly. However, as the Applicant has not chosen to provide sheathing membranes, Article 9.23.17.6. becomes the relevant OBC provision in dispute.

Sentence (1) of Article 9.23.17.6. provides an exemption to Article 9.23.17.5. in that it permits the sheathing membrane to be omitted beneath cladding where the cladding joints are “formed effectively” to prevent the penetration of wind and rain in conformance with Sentences (2) or (4) of the same Article. Sentence (4), which describes metal siding, is not relevant; however, Sentence (3) is germane. It describes various types of cladding material and the manner in which it should be installed in order to comply with Sentence (1). Sentence 9.23.17.6.(3) adds that the joints described in Sentence (2) should be caulked.

The Appendix to this Article (A-9.23.17.6.), while not an official part of the OBC, provides useful information regarding the case at hand and the application of Article 9.23.17.6. It states that Article 9.23.17.6. only applies to certain types of cladding consisting of very large sheets or panels and it does not apply to material installed in narrow strips, which is intended to look like lapped wood siding. The Appendix goes on to state that; “(s)uch material does not act as a substitute for sheathing membrane

since it incorporates provisions for venting the wall cavity and has many loosely-fitted joints which cannot be counted on to prevent the entry of wind and rain”.

It should be noted that, according to Article 9.36.2.1. of the OBC, buildings used or intended to be used as seasonal recreational buildings need not comply with Sections 9.5. to 9.7. and 9.9. to 9.11. of the Code. Although the subject building is intended to serve as a seasonal boathouse, Article 9.36.2.1. provides no relief from the sheathing membrane as required by Subsection 9.23.17. of the OBC.

To achieve sufficiency of compliance with the Code, the Applicant has proposed to provide weathertight joints between the sheets of the solid wood bevelled siding by using shiplapped boards and caulking.

#### **4. Provisions of the Ontario Building Code**

##### **9.23.17.5. Sheathing Membranes in Lieu of Sheathing**

- (1) Except as provided in Article 9.23.17.6., where no sheathing is used, at least 2 layers of sheathing membrane shall be applied beneath the cladding. (See Article 9.23.16.1. and Appendix A.)
- (2) All joints in the sheathing membrane required in Sentence (1) shall occur over framing, and the membrane shall be fastened to the framing with roofing nails or staples spaced not more than 150 mm (5<sup>7</sup>/<sub>8</sub> in) along the edges of the outer layer of sheathing paper.
- (3) Wall sheathing is permitted to be used in lieu of 1 layer of sheathing membrane required in Sentence (1), and the thickness need not conform to Table 9.23.16.2.A.

##### **9.23.17.6. Face Sealed Cladding**

- (1) Sheathing membrane is permitted to be omitted beneath cladding when the joints in the cladding are formed to effectively prevent the passage of wind and rain in conformance with Sentence (2) or (4) as applicable.
- (2) Cladding consisting of sheets of plywood, hardboard, OSB, waferboard or asbestos cement is considered to meet the requirements of Sentence (1) provided the cladding is applied so that
  - (a) all edges are directly supported by framing, and
  - (b) the vertical joints between adjacent sheets are
    - (i) covered with battens,
    - (ii) shiplapped, or
    - (iii) otherwise matched to provide weathertight joints.
- (3) Joints between sheets described in Sentence (2) shall be caulked.
- (4) Metal siding consisting of sheets of metal is considered to meet the requirements of Sentence where the joints between sheets are of the locked seam type.

##### **9.36.2.1. Exclusions**

- (1) Except as provided in Articles 9.36.3.1. and 9.36.2.4. and Subsection 9.10.15., *buildings* used or

intended to be used as seasonal recreational *buildings* need not comply with Sections 9.5. to 9.7. and 9.9. to 9.11.

- (2) Flooring need not comply with Section 9.30., but tight-fitting floors shall be provided to support the *live* and *dead loads*.
- (3) Except as provided in Sentences (4) and (5), thermal insulation, vapour barrier, air-barrier construction, interior finishes, plumbing, heating, mechanical ventilation, *air-conditioning* and electrical facilities, need not be provided, but where any of these are provided, they shall comply with the requirements of this Part.
- (4) Where heating and *air-conditioning* are provided, Article 9.33.3.1. need not be complied with.
- (5) Where thermal insulation is provided, the minimum thermal resistance of insulation in Table 9.25.2.1. need not be provided.

## 5. Applicant's Position

The Applicant's Agent submitted that the first storey of the proposed boathouse has been constructed with the use of a sheathing membrane. Despite this, he advised that it is the Applicant's intention to maintain a rustic appearance inside the second storey and that the use of a sheathing membrane would only work to defeat this purpose. Furthermore, the Agent added that several structures located in the area of the proposed boathouse (Lake Muskoka) have been constructed without the use of a sheathing membrane.

The Agent submitted that Sentence 9.36.2.1.(3) of the OBC excludes the proposed boathouse from requiring the use of air-barrier construction. Further, the Agent added that it was the Applicant's belief that Article 9.23.17.6. of the OBC permits a sheathing membrane to be omitted when the joints in the cladding are formed to effectively prevent the penetration of wind and rain. The Agent advised that, in his view, the shiplapped design of the proposed siding would prevent this from occurring and added that only an excessive force of wind would result in water penetrating into the wall assembly.

The Agent added that a bubbler, which constantly agitates the lake's water during the winter months, is located just in front of the boathouse. The Agent submitted that the presence of moisture caused by this bubbler does not pose a huge threat with respect to additional wind driven moisture entering the wall assembly of the proposed boathouse. Furthermore, the Agent advised that any water which penetrates into the wall assembly would have the opportunity to dry out, because of the lack of insulation and interior finish.

In summation, the Agent argued that there should be no concern over water penetrating into the wall cavity, because the shiplap design of the proposed siding would prevent such an occurrence. Lastly, the Agent added that it is the Applicant's intention to provide a weathertight joint by applying caulking to the sheets of the proposed siding.

## 6. Respondent's Position

The Designate for the Respondent submitted that correspondence from the manufacturer of the

proposed wood bevelled siding clearly states that the product is to be installed in compliance with the OBC and that its shiplap joints will not prevent wind driven rain from migrating into the wall assembly. The Designate submitted that the presence of water in a normally insulated wall assembly would work to reduce the value of the insulation and also cause deterioration of the wood framing, because that space is difficult to dry out once made wet. The Designate added that he does not believe that wind driven rain would sooner dry out in a wall assembly where there is no interior finishing membrane.

The Designate indicated that the Applicant's intention to use the proposed boathouse as a future residential occupancy heightens the need to ensure that wind driven rain does not enter the building, damaging both the framing and interior contents. Moreover, the Designate submitted that renovation is a common occurrence in the Lake Muskoka area and that although the proposed boathouse may be currently used for storage it could be turned into a living space in the future. In this respect, correcting the proposed wall assembly may be a difficult endeavour for future occupants.

The Designate submitted that the absence of sheathing in the wall assembly of the proposed boathouse is not consistent with the fact that in 1997 a decision to make sheathing membranes a requirement in a similar situation was made by the Chief Building Official for Parry Sound. In this respect, the Designate advised that ensuring uniform OBC enforcement across the Parry Sound-Muskoka Region is important, and this extends to the proposed boathouse.

In summation, the Designate stated that the manufacturer of the proposed wood siding indicated that it does not provide protection from water penetration and that furthermore, the manufacturer instructs that the joints between the proposed siding should not be caulked as per the Applicant's intention.

## **7. Commission Ruling**

It is the decision of the Building Code Commission that the proposed seasonal boathouse clad with horizontally installed bevelled wood siding and mounted directly onto the framing without the use of a sheathing membrane does not provide sufficiency of compliance with Article 9.23.17.6. of the Ontario Building Code at 1126-1 Pleasant View Road, Lake Muskoka, Ontario.

## **8. Reasons**

- i) Provision of a sheathing membrane is a required element in the construction of this boathouse. There is no compelling technical reason as to why this structure cannot be built to comply with the Code.
- ii) As noted by the building inspector, it is not unusual in this region of the Province, for unprotected wood building materials to show signs of rot and decay as a result of water penetration. Furthermore, the siding manufacturer does not certify the product to prevent wind driven rain from migrating into the wall cavity behind the siding.
- iii) The Commission is concerned that, in the future, the inside of the second storey could be finished, thereby trapping moisture in the wall cavity and causing the walls to deteriorate.

Dated at Toronto this **20th** day in the month of **February** in the year **2003** for application number **2003-04**.

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Len King, Vice-Chair

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Fred Barkhouse

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Robert De Berardis