Arts Centre Hastings

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The Arts Centre Hastings was designed by Chris Magwood and Ingrid Cryns, and built by the students of the 2007 Sustainable Building and Design program at Fleming College, under the direction of Chris Magwood and Ali Lam.

Located in the Madoc Skate Park in downtown Madoc, Ontario, the project was funded by the Municipality of Centre Hastings. The building is designed to host indoor performance events for up to 80 people, and outdoor performances for up to 500.


An earthbag foundation is created for the octagonal main building. The round "donuts" will support the round bale columns.
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Hempcrete foundations are formed to support the three extension rooms.
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Rammed earth tire piers support the roof posts for the outdoor stage.

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The round bales for
the structural
columns arrive.
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The round bales are strapped together to form the 12 foot tall columns that will support the main roof.
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After attempting to stack the round bales one at a time, the strapped columns were lifted into place as one unit.

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All eight round bale columns are in place. The ring beam that will sit on them is assembled in the field, ready to be placed on top.
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The structure of the main building is ready and awaiting the roof. The columns and ring beam have been tension strapped to the foundation.
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A runny clay slip is sprayed onto the columns in advance of the earth plaster.
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The roof was built and sheathed on the ground and lifted into place by a crane as one unit.
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The bales are dipped in clay slip prior to installation.
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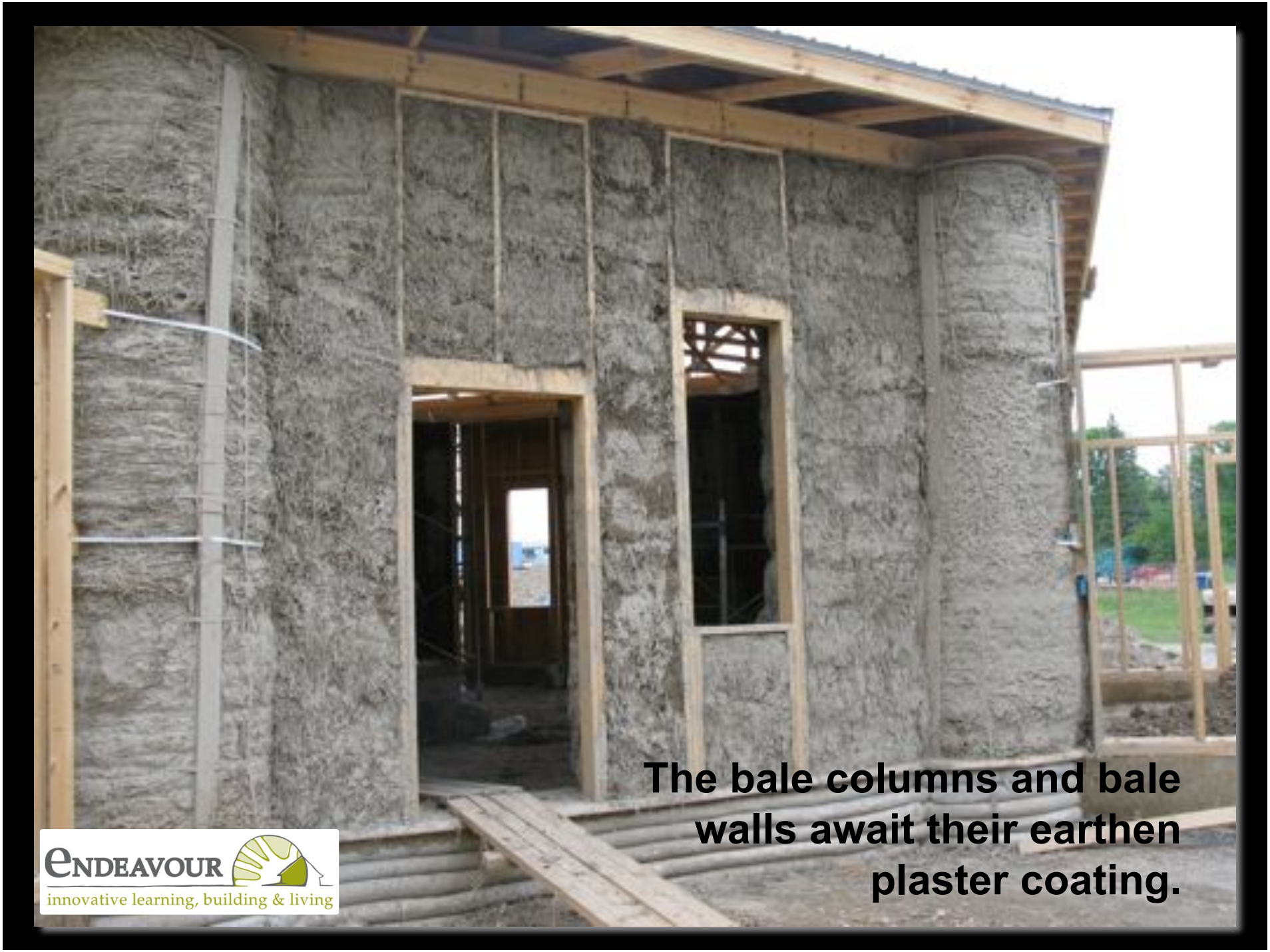
The bale columns and bale walls await their earthen plaster coating.
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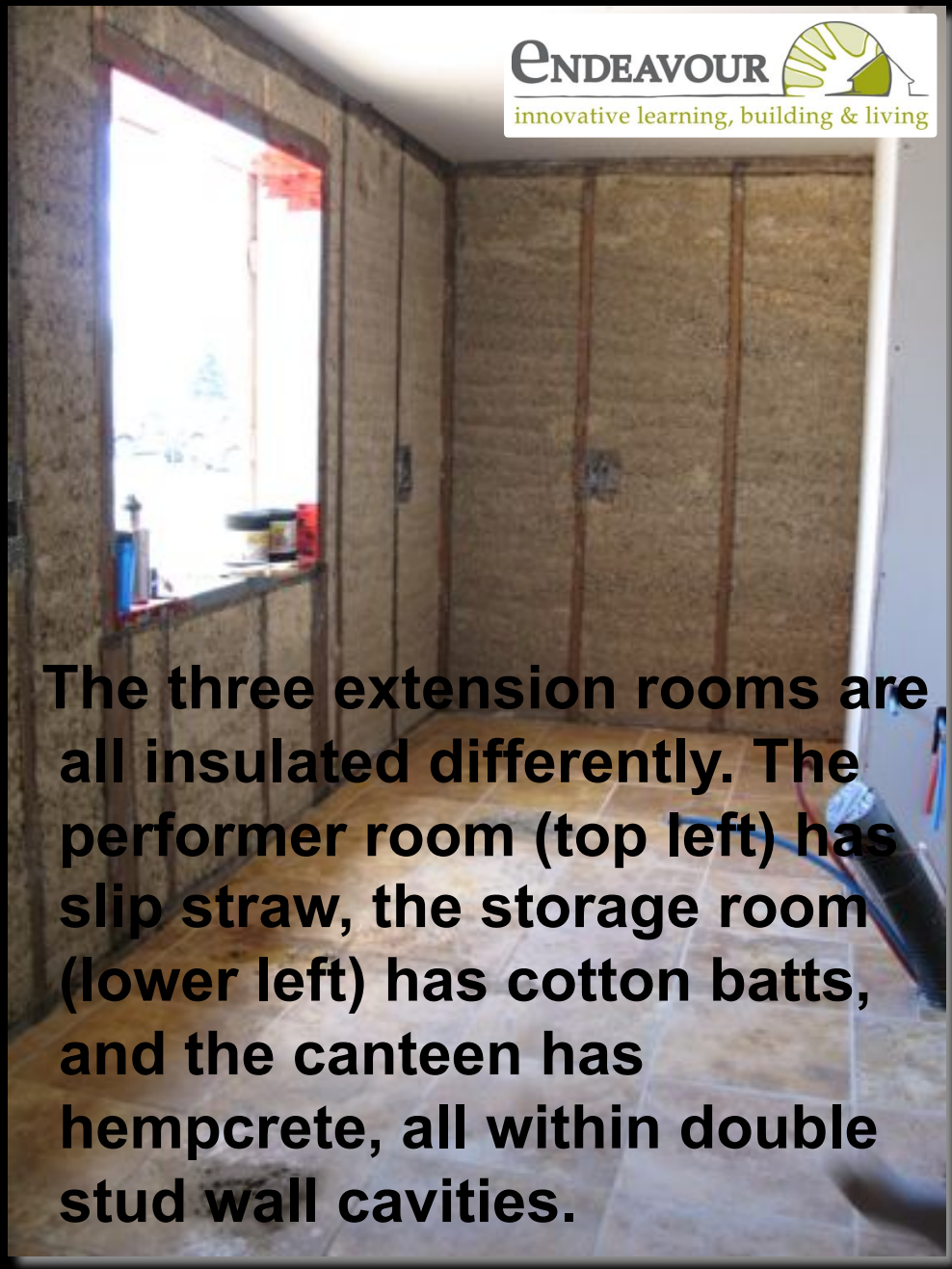

The three extension rooms are all insulated differently. The performer room (top left) has slip straw, the storage room (lower left) has cotton batts, and the canteen has hempcrete, all within double stud wall cavities.


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The performer room has an earthen floor poured over a base of compressed earth blocks.

A rammed earth floor base covers the main room, with radiant heat tubing encased. Wooden runners support a floating bamboo floor. Moisture damage from the still
-damp earth required the bamboo to be replaced.


The ceiling is strapped and has hemp canvas stretched over it as a sheathing to improve the building's acoustics.
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A timber framed section holds up the living roof over the outdoor stage. The growing medium of crushed brick and duck compost is installed by bucket brigade.

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A geo-thermal (ground source heat pump) provides the heat source for the radiant floor heating, which is embedded in the earthen subfloor.

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A solar air heater provides warmed fresh exchange air during the winter (above).

A 2.1kW grid inter-tied PV array brings the building's energy use to net zero.


The performer room features an earthen floor, cordwood wall and a bench made from discarded library books.
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The outdoor stage features a decorative earth plaster backdrop and a recycled plastic lumber stage floor.

Student made entry doors; Hemp canvas ceiling fully strapped

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The indoor performing area can seat 80, and is fully wired for sound and lighting.

The outdoor stage and the entrance to the building, with the canteen service window to the far left.


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The Arts Centre Hastings is able to house indoor and outdoor performances and other public functions in downtown Madoc.
DanEarle