

## **Zerodraft Workshop Series # 1**

### **The “House as a System”**

This introductory **“House as a system”** workshop is designed to introduce you to a modern approach involving building principles applied to houses and their living environment.

This course will build on your existing knowledge and skills related to a total system approach to existing housing.

This training workshop is designed to do the following things:

- Introduce this new way of looking at the **“House as a System”**
- Build on your existing knowledge of the building science and other principles behind the **“House as a system”**
- Explore the dimensions of the business opportunities inherent in the total **“House as a System”** approach. It will also help you position your trade and business within the context of this approach.

## “House as a System”

<b>AGENDA:</b>	
8:30 - 9:00 am	<b>Opening remarks &amp; introductions</b>
9:00- 9:15 am	<ul style="list-style-type: none"> <li>• Concept</li> <li>• Business advantages:</li> </ul>
9:15- 10:15 am	<ul style="list-style-type: none"> <li>• What is in a house? The system approach               <ul style="list-style-type: none"> <li>• Sub-components                   <ul style="list-style-type: none"> <li>• The building envelope</li> <li>• Mechanical system</li> <li>• Occupants</li> </ul> </li> </ul> </li> </ul>
10:15- 10:30 am	<b>Coffee Break</b>
10:30- 12:00	<ul style="list-style-type: none"> <li>• The physical process               <ul style="list-style-type: none"> <li>• Heat Flow, Air Flow, Moisture Flow                   <ul style="list-style-type: none"> <li>• Heat flow, conduction, convection and radiation</li> <li>• Air flow, stack effect, wind effect</li> <li>• Flue and ventilation effect, composite effect</li> <li>• Moisture flow, movement of water as liquid</li> <li>• Gravity, capillary action</li> <li>• Movement of water as vapour</li> <li>• Vapour diffusion and movement</li> </ul> </li> </ul> </li> </ul>
12:00- 1:00 pm	<b>Lunch</b>
1:00- 2:00 pm	<ul style="list-style-type: none"> <li>• Interaction of the physical processes and the house sub-systems               <ul style="list-style-type: none"> <li>• Building envelope, Mechanical system, Occupants                   <ul style="list-style-type: none"> <li>• Interaction of:                       <ul style="list-style-type: none"> <li>• Heat, air and moisture flow                           <ul style="list-style-type: none"> <li>• Influenced by:                               <ul style="list-style-type: none"> <li>• Building envelope</li> <li>• Mechanical system</li> <li>• Occupants</li> <li>• External environment</li> </ul> </li> </ul> </li> </ul> </li> </ul> </li> </ul> </li> </ul>
2:00- 3:00 pm	<ul style="list-style-type: none"> <li>• Effects of building materials               <ul style="list-style-type: none"> <li>• Heat Flow, Air Flow, Moisture Flow                   <ul style="list-style-type: none"> <li>• How a renovator impacts physical processes and operation of a house</li> </ul> </li> </ul> </li> </ul>
3:00- 3:15 pm	<b>Break</b>
3:15- 4:00 pm	<ul style="list-style-type: none"> <li>• Air quality and ventilation               <ul style="list-style-type: none"> <li>• Air, Moisture, Ventilation                   <ul style="list-style-type: none"> <li>• Indoor air quality (IAQ)                       <ul style="list-style-type: none"> <li>• A key factor in comfort</li> <li>• Increasing in importance</li> <li>• Affects health of occupants</li> </ul> </li> <li>• You must know                       <ul style="list-style-type: none"> <li>• How the work you do affects IAQ</li> <li>• How to solve and prevent IAQ problems</li> </ul> </li> </ul> </li> </ul> </li> </ul>
4:00- 4:45 pm	<ul style="list-style-type: none"> <li>• Combustion backdrafting               <ul style="list-style-type: none"> <li>• Household venting systems suck air out of the house</li> <li>• Lower pressure indoors relative to outside</li> <li>• Negative pressure (depressurization)</li> </ul> </li> </ul>
4:45- 5:00 pm	<b>Discussion &amp; Wrap-up</b>