

Response to reviewer 1

Footprints of Single-family Residential Building in Different Construction Methods Exposed to Water Damage

Thank you so much for reviewing our article. Your comments are posted below in **bold text**. Our responses are written in normal text style.

1) The title reads “Carbon Footprints....” It might be better.

The title is commented by one of the other reviewers as well. We have changed the title according to the comments from both of you.

2) As mentioned by the authors, taking a single building as an example makes widespread impact and scientific generalization difficult.

3) The fact that the details belong only to this building is another problem.

Yes, you are right according to comments 2 and 3. Our intention is to put the attention on the topic. A more thorough model is needed to give valuable estimates for all buildings. We have adjusted the objective with the study to pinpoint that.

4) A calculation has been made according to the references given in Table 1-Table 6, but a mathematical modeling and general formulas for how these calculations are made should be given here.

The calculations (excel spreadsheets) are added as supplementary material.

5) “Water Damage” should be defined and examples of this damage should be given.

6) Real application visuals regarding “Water Damage” reinforcement should be added.

Regarding comment 5 and 6. We have now added a picture of the water damage to visualize the damage and the extent, see Figure 6.

7) Since the type of repair may vary depending on the level of damage, the cost of reinforcement and the amount of carbon footprints may vary depending on the level of damage.

Yes, that’s correct. Our calculations are based on a mean given by the dominant property damage restoration firm in Norway, Polygon AS.