

Engineered Wood Products Association of Australasia Ltd

Submission on Green Building Council of Australia (GBCA) Life Cycle Assent in Green Star Discussion Paper

Introduction

The EWPAA would like to thank the GBCA for providing this opportunity to comment on your LCA Discussion Paper.

By way of background, the EWPAA represents Plywood, Laminated Veneer Lumber, Particleboard and MDF manufacturers in Australia, New Zealand, Fiji and Papua New Guinea. EWPAA members contributed approximately 2 billion dollars to the economies across the region and provide both directly and indirectly over 5,000 jobs.

The EWPAA has a strong interest in the continued development of LCA as a useful tool for determining the environmental impact of building materials and building systems and is delighted to see the GBCA progressing LCA to complement existing material specifications.

The EWPAA wishes to confirm our continued **very strong** support for their existing Timber Credit which provides equal recognition to bona fide Forest Certification Schemes operating within Australia (ie PEFC/AFS and FSC). The EWPAA would voice quite serious concerns should there be a move away from equal recognition where new rating schemes and tools are developed.

The EWPAA position on specific questions in your discussion paper is as follows:

Q1: *(Page 6) Is it appropriate for the GBCA to undertake this project or would any other organisation be better placed to do it. If yes, which organisation?,*

It is the position of the EWPAA that the GBCA has both the credibility and market influence to co-ordinate the development of this project. However, in the opinion of the EWPAA, LCA is both complex and technically challenging and development work should be undertaken by experts in the field of LCA such as members of ALCAS. The GBCA will also need to maintain very strong and clear lines of communication to other stakeholders such as the Building Products Innovation Council (BPIC) and be prepared to accept their input.

Q2: (Page 6) Is the Australian market ready for LCA as a tool for assessing the environmental impact of materials? If no, in how many years' time do you think the market would be ready?

It is the opinion of the EWPAA that the Australian Construction Sector is well aware of LCA and has been using it, albeit with mixed effectiveness for some time. There is always resistance to change and innovation. No doubt there will be resistance to LCA but it is anticipated this will diminish once LCA principles become more widely established.

Q3: (Page 6) What do you see as the main barriers to implementing LCA as an assessment methodology for materials in Green Star?

The main barriers are:

1. A shortage of experienced LCA professional;
2. The availability of Australian based and specific LCI data;
3. A lack of awareness and understanding by many in the design, specification and manufacturing communities.

Q4: (Page 6) If the GBCA decided to introduce the methodology described in this paper, how much notice would you recommend the GBCA give to the market?

An implementation period of 2-3 years would be required.

Q5: (Page 8) The GBCA invites feedback from stakeholders on the objectives of the project.

The EWPAA supports in-principle the objectives stated in the GBCA paper.

Q6: (Page 10) The list of inclusions may be expanded in the future, is it appropriate to start with a limited scope of assessment in order to simplify the LCA?

The EWPAA supports the concept of an initial limited scope assessment until such time as LCI information across a much broader range of products, materials and systems becomes available.

Care must be taken not to unnecessarily limit the scope as additional LCI data becomes available or to favour or exclude those industries who for their own reasons choose either to participate, or decline.

Q7: (Page 10) Please provide feedback on the list of inclusions and exclusions.

As a starting point, the list of inclusions would appear appropriate.

The EWPAA believes what has been proposed is a good start.

Q9: (Page 11) Is the use of a 'cradle to constructed, sealed and serviced' building approach appropriate?

The EWPAA supports the initial cradle to constructed, sealed and serviced LCA approach.

Q10: *(Page 11) Is it practical to make qualified assumptions about the origin and the distances that material must be transported in a Green Star design submission, ie at a tender stage when some of the specific materials are unknown.*

The EWPAA acknowledges that it will be necessary at some time to make assumptions. However, the EWPAA has concerns over product substitution where assumptions are made that the material is of local manufacture when in fact it is imported. This may result in inaccurate and misleading LCA assessments.

Q11: *(Page 12) Is 1m² of GFA an appropriate unit?*

The use of 1m² of GFA is supported as an appropriate unit.

Q12: *(Page 12) Are there constraints to using this unit?*

The EWPAA is not aware of any.

Q13: *(Page 13) Is it appropriate to limit the number of environmental impact categories to six?*

The EWPAA is supportive of limiting the number of impact categories during the commencement phase.

Q14: *(Page 13) If more categories are to be included, which categories do you recommend be included? What method should be applied to determining the impact categories the LCA will take into account?*

No additional categories are perceived as high priority.

Q15: *(Page 13) If fewer categories are to be included which categories do you recommend be removed?*

The proposed environmental impact categories "Land Transformation and Use" and "Water Depletion" should be removed in the initial phase of the project.

It is understood that the ALCAS Best Practice Guide to Life Cycle Impact in Australia categories the above as "provisional methods that need development". If there are questions over the relevance or suitability of these categories, they should be removed from this initial phase of the project.

Q16: *(Page 13) If six impact categories are appropriate, are the six categories above the most appropriate?*

As above.

Q17: *(Page 13) Is it appropriate to refer to the AusLCI impact categories? Is there an alternative which should be used? Why?*

The EWPAA supports the use of the AusLCI impact categories.

Q18: *(Page 14) Is it appropriate to reference the BPIC LCI weightings? If not, what should be used instead?*

The BPIC weightings may offer a reasonable starting point however, it is understood they are not supported by all LCA professionals. The EWPAA's preferred position is that weightings be developed via a consensus process during the development of this project.

Q19: *(Page 14) Is it appropriate to have separate credits for each of the environmental categories or should the total score be weighed together and assessed in one credit?*

Applying separate credits for each of the environmental categories is a sensible approach.

Q20 *(Page 17) Is it practical to establish a standard practice reference case for low-rise, mid-rise and high-rise buildings of different classes? If not, what other methods could be used to establish a reference case?*

This would appear a practical solution.

Q21: *(Page 17) Should the reference case distinguish between new building on a green field site, refurbishment of existing buildings and fit-outs? How can an equitable system be developed which acknowledges the advantages of the options from an environmental impact perspective?*

It is the EWPAA's position that the reference case must distinguish between a:

- Green field site;
- Refurbishment of an existing building.

The environmental impacts of both may be significantly difficult.

Q22: *(Page 17) If the reference case is constructed in a similar manner to that described above, would you be able to provide your interpretation of how this may operate in practice?*

No feedback.

Q23: *(Page 17) Can LCA methodology in the Green Star Materials category operate without a reference case? If so, how do you see this working?*

It is believed that ultimately LCA tools will be developed that will allow timely and effective modelling to determine the best environmental outcome.

Q24: *(Page 17) Is it practical to conduct two iterations of the LCA with different inputs for the project?*

It is believed it will be necessary to conduct a second iteration of the LCA with different inputs to establish the lower bound Environmental Impacts. It is understood that one of the objectives of the LCA is to lower environmental impacts. This is best achieved by a competitive process comparing two or more designs.

Q25: *(Page 17) How much additional time would it take to do the second iteration of the LCA having completed the first one? Is it 25% more, 50% more, 100% more etc?*

Have no idea, but would suggest that with computer based modelling and the availability of BIM modules, this time would be a fraction of the initial assessment.

Q26: *(Page 17) Does the intended content of Table 1 include enough data to determine the input parameters for the standard practice case LCA? If not, what is missing?*

Uncertain?

Q27: *(Page 17) What would be the best way to determine the rules for the input parameters in Table 1?*

No feedback

Q28: *(Page 17) Is it appropriate to nominate ISO 14025 as the reporting mechanism?*

Yes. Appropriate international standards should be used in the absence of alternative Australian Standards.

Q29: *(Page 17) Is there an alternative that is preferred or should be considered?*

No feedback.

Q30: *(Page 18) Is percentage reduction in impact an appropriate way to award points for improvement?*

The EWPA is supportive of this proposal. Care should be taken to ensure that a reduction in 1 category does not lead to an increase in another.

Q31: *(Page 18) Is it appropriate to have separate credits for each of the environmental categories or should the total score be weighed together and assessed in one credit?*

It is believed that individual separate credits provides more transparency when comparing results.

Q32: *(Page 19) Should the AusLCI Building Product inventory dataset be used in a LCA methodology within Green Star rating tools?*

Yes, preference should be given to data derived from Australian sources.

Q33: *(Page 19) Should a European LCI be used?*

No, as above.

Q34: *(Page 19) Are penalties needed?*

No idea.

Q35: (Page 19) What data sources would be acceptable for a credible LCA to be conducted?

The BPIC database is a suitable source of Australian LCI data.

Q36: (Page 20) Is it appropriate to exclude fit-outs based on the lack of an agreed functional unit for fit-out items?

The inclusion of fit-out is supported. Again, it is noted that significant work is required prior to commencement.

Q37: (Page 21) Will the proposed LCA methodology accommodate existing LCA systems and tools?

The proposed methodology would appear to have flexibility to accommodate existing systems and tools. The system may need updating over time as new tools are developed.

Q38: (Page 21) What constitutes an LCA practitioner, what qualifications should be required and should the system ALCAS are developing be referenced?

No comment.

Q39: (Page 21) How much would you estimate it would cost to complete the assessment outlined in this paper? And how does that cost compare to the cost of demonstrating compliance with the current Materials Category in Green Star?

No idea.

Q40: (Page 21) Is the requirement to adhere to international standards necessary?

International or Australian standards should be used wherever they exist.

Q41: (Page 21) Which are the relevant standards the Green Star related LCAs should adhere to?

These would include a number of standards in the current ISO 14040 and ISO 14020 series.

Q42: (Page 21) Is the requirement to use recognised software necessary?

It is essential that software has undergone some transparent validation process. Software could either be recognised or proprietary provided evidence of validation could be provided.

Q43: (Page 21) Should the GBCA recognise particular software?

I see no reason why GBCA should endorse a particular software product, rather it should reference a standard or process (assuming this exists) that would be used to validate the output for the software. If necessary, this could be performed independently.

Q44: (Page 21) Which software should be recognised and why?

No idea.

Q45: (Page 21) Does equivalent software exist for LCA?

No idea.

Q46: (Page 21) Is the requirement for peer review necessary?

Peer review provides credibility and transparency to the process.

Q47: (Page 21) What other requirements are necessary to ensure best practice LCA modelling?

The EWPAA would like to support the submission from AFPA as follows:

As the project develops it is proposed that to further underpin LCA modelling:

- Key product / site waste allowances are incorporated. It is understood that product LCI's should include and account for, wastage to the processors gate, onsite wastage as a result of construction is not usually included. Wastage can potentially be a significant factor and can impact on environmental indicators (such as climate change impact category) if it is a material that has used a lot of fossil fuel / energy to produce; and
- The use of Environmental Product Declarations (EPD) as a basis for materials assessment we see as a worthy objective but one that will take time to implement and get right. It is suggested that an EPD education program is implemented to generate wider acceptance and understanding of them into the future (refer to Q5 above).



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