

Request for Proposals (RFP)

Call for Proposals for Grant Funding to Develop a Fire Safety Research and Testing Roadmap for Mass Timber Construction in the UK

Introduction: Built by Nature is a network whose mission is to increase the use of timber and other biobased materials in construction to mitigate the effects of climate change and bring the built environment into closer unison with nature.

Our strategy is to support demand-side industry stakeholders to overcome the challenges preventing wider uptake of timber construction. One of the challenges affecting stakeholders is that of demonstrating fire safety. We are seeking proposals for grants of EUR 100-150k with the aim of 1) identifying outstanding questions concerning the fire performance of mass timber in the UK and 2) identifying solutions to address these outstanding concerns.

Context: In the UK, policy restricts the use of timber (and other biobased materials) in certain specific circumstances due to the combustibility of the material. The use of timber (structural or otherwise) in the external wall of new residential buildings is restricted by 1) The Building Regulations Part B for buildings taller than 11m, and 2) by local guidance such as the Greater London Authority Affordable Homes Programme Guidance, which precludes the use of combustible materials at any height in the external walls of affordable housing schemes funded by the programme.

These policies were put in place following the devastating fire at Grenfell Tower in 2017, which itself followed an earlier fatal fire at Lakanal House, Camberwell in 2009. Combustible external wall materials were a significant contributing factor to both fires, and the policies were a necessary step to enforce building safety in high rise residential buildings.

There has been some confusion surrounding the policies outlined above. Whilst they restrict the use of timber in certain circumstances, this remains a relatively small percentage of new buildings (according to data around 45% of construction output is housing; and of this 17% are flats), but the policies have fed a wider impression that timber is unsafe, particularly more novel forms of timber product such as those collectively known as Mass Timber.

Some stakeholders, including policymakers, state that they require further evidence to be confident about the safe use of mass timber, particularly the products and systems that are becoming increasingly prevalent in the market such as Cross Laminated Timber, Glue Laminated Timber, and Laminated Veneer Lumber.

This situation presents a clear challenge for efforts to decarbonise construction and there is growing awareness in Government and industry circles that further work is required to overcome this challenge of fire safety. Housing accounts for around 45% of new construction in the UK and as we look to the



future this proportion may grow as prospective future governments promise a boost in housebuilding to address the housing crisis.

Furthermore, much of the UK's future housing demand will need to be met with increasing density, as land is scarce, and development is focused in existing urban centres to reduce lifestyle emissions of inhabitants. If this growth in the delivery of new homes cannot be delivered with an increased use of timber and other biobased materials then decarbonisation efforts will be hindered, as these materials are often lower carbon in manufacture and have the additional benefit of storing carbon for the duration of a product lifespan when used in construction.

It is clear however that building safety must not be compromised, and some countries are addressing these inter-related crises via increased research and testing of timber and biobased building systems. Leading examples include the work of the Danish Fire Institute (DBI) and the Research Institute of Sweden (RISE). But in the UK research programmes do not currently appear to match the ambition to build more timber buildings to combat the climate emergency, despite the UK standing out as having suffered the devastating consequences of poor building safety standards in recent memory.

Furthermore, in the years since the events at Grenfell in 2017, it doesn't appear that the performance of timber and biobased materials within external wall build ups of multi-storey housing has been comprehensively and rigorously tested in the UK.

The issue is particularly apparent for mass timber products as developers are adopting them on increasingly large and complex schemes. Large-scale fire tests are often undertaken by developers on a project-by-project basis to gain the approval of authorities. The private nature of this testing leads to results being privately held and not made available to wider industry. As such some developers carry out duplicate tests as results are not shared. For smaller developers, the financial burden of large-scale fire tests can in some cases be prohibitive.

Opinions on how to move forward are varied. Some fire safety experts say there is an extensive body of knowledge regarding the fire performance of mass timber and that most of the questions have been answered, whilst others insist that considerable unknowns remain. In either case, the prevailing doubts and concerns of a wide range of stakeholders cannot be dismissed and need to be answered with clear and compelling evidence. The evidence may already exist, but seemingly it is not forthcoming.

Recognising this situation, the UK Government recently made a request to industry, during a stakeholder meeting about stimulating timber in construction:

“Can Industry develop a comprehensive list of the outstanding research questions and evidence gaps and agree a priority for research to be undertaken, feasibility for industry to deliver this and in what timescale?”

Further to this, the recently [published Timber in Construction Roadmap](#) from departments including [DEFRA](#) and [DLUHC](#) challenges industry to finally address apparent concerns around mass timber: “We



welcome industry initiatives to improve the evidence base around the safe uses of engineered mass timber.”

Objective: The objective of this RFP is to identify solutions to address this context statement. We are looking for proposals that convincingly *outline an approach* to;

- 1) Develop a comprehensive list of outstanding research questions and evidence gaps related to mass timber;
- 2) Propose how any data gaps can be addressed through existing or new research / testing;
- 3) Highlight and address critical competence and knowledge shortfalls throughout the industry;
- 4) Inform regulations, policies and statutory guidance.

Applicants should detail **how** they will agree priorities for research to be undertaken against the questions above, the feasibility for industry to deliver this research and in what timescale.

Due to the considerable cost of large-scale fire tests, it is unlikely that BbN’s funding capacity will be able to support this kind of activity, but the goal is to highlight and identify any evidence gaps so that private and public funding can be targeted towards a structured framework.

It is essential that the approach achieves consensus within industry, so applicants should consider how they will achieve this.

Whilst we are seeking proposals that aim to address specific doubts and concerns in the UK, we welcome proposals that look beyond this geographic scope for answers. As a pan-European organisation, Built by Nature seeks to build knowledge across the geographic remit of our Fund which includes the European Union, the United Kingdom, Switzerland and Norway. We welcome opportunities for the sharing of knowledge, understanding and policy between geographies that might solve country-specific and/or shared challenges.

Furthermore, it is possible the approach developed through this grant, might later be applied to a wider range of biobased materials, and we welcome thoughts on how this wider scope could be addressed.

Scope of Work: Proposed initiatives could include, but are not limited to, the following:

- A comprehensive summary of existing and ongoing research and testing.
- A comprehensive review of fire regulations, policies and practices in the UK and how these compare to other countries in Europe.
- An analysis of the current concerns of policymakers in the UK and how these could be addressed.
- Overview of proposed research and testing that might overcome specific prohibitive policies and move towards supportive regulatory and policy landscape.



- An analysis of where existing research from across Europe might plug gaps in understanding in the UK (and optionally how this pan-European approach might address prohibitive policies elsewhere.)
- Development of a roadmap for outstanding large scale fire tests and research, if necessary, including feasibility studies of proposed research and development, outlining costs, timeline, and required resources.
- Identification of priority areas for research globally.
- Dissemination strategies for more effective knowledge sharing between critical stakeholders.
- Any other innovative solutions that might address the Context / Problem Statement.

Eligibility: Organizations, companies, research institutions, and universities located in Europe (EU, UK, Norway and Switzerland) are eligible to apply for this grant. Due to Built by Nature's ANBI status (Organisation working for the public benefit), successful submissions will need to demonstrate clear public benefit.

Consortia of complementary organisations will be favoured, especially those representing multiple geographies and/or stakeholder groups.

Submission Guidelines: Expressions of interest (EoI) must be submitted electronically to Built by Nature by 14th May 2024 and must include a description of how the project will answer this call-out, the proposed timeline and budget, and a brief overview of the qualifications and relevant experience of the organisations involved. A template for submission is provided. Following selection of successful EoI's, a full proposal template will be provided.

Evaluation Criteria: Proposals will be evaluated based on the following criteria:

- Response to the RfP
- Geographic fit
- Indicative fundraising (co-funding) – our investment committee requires a minimum of 25% either in-kind or direct co-funding. Qualifications and relevant experience of the organisation and team
- Degree of innovation – in approach, method or format
- Scale of impact
- Cross-industry engagement
- Knowledge transfer – Dissemination strategy and capacity for communications.
- Resilience – will the initiative provide value in multiple scenarios?

Award: Built by Nature will award a grant, or multiple grants, between EUR 100-150k.

Contact: For any questions or additional information, please contact Built by Nature at j.vincelot@builtbn.org or j.giddings@builtbn.org