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Job No: 304032  
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**BY EMAIL ONLY**

21/06/2019

Dear Riaz,

Please find below Warringtonfire letter regarding the green wall issue on the Caledonian House project.

### Warringtonfire Company Profile

Our company has been working in the field of fire safety since 1965 and has established an extensive worldwide reputation for excellence in fire safety. We offer fire safety expertise in a wide range of areas, including fire engineering, smoke modelling, evacuation analyses, fire testing, fire certification and on-site inspection.

Our worldwide coverage includes offices and testing facilities in the UK (London, Manchester, Warrington), Germany (Frankfurt), the Middle East (Dubai, Abu Dhabi, Oman), Australia (Melbourne, Sydney, Brisbane, Perth), Canada (Mississauga), Hong Kong and Singapore.

One of our primary goals has always been to ensure that we provide an extremely high standard of service to our clients. As a result, we regularly win awards for our work on a variety of projects. Recent awards include:

- 2014 – Fire Engineering Project of the Year (UK or International) for The Belong Village Concept
- 2011 – Fire Excellence Award for the fire engineering design of Crossrail Whitechapel Station
- 2007 – Fire Engineering Award for Small and Medium Premises for the design of Heathrow Airport Air Traffic Control Tower
- 2006 – Fire Engineering Award for Small to Medium Premises for the design of Spitalfields Market
- 2004 – Fire Engineering Award for All Premises for the design of Queen Mary School for Dentistry and Medicine

Warringtonfire (formally Exova Warringtonfire, notably Chris Hughes and Claire Barker) in partnership with DCLG (now MHCLG) and others (acknowledgments) helped to author 'Fire Performance of Green Roofs and Walls, ISBN: 978-1-4098-3997-2' published by the DCLG in August 2013.

### Discussion summary (Email correspondence)

#### EMAIL 1

With regard to your request for an opinion from Warringtonfire on the green wall proposal on the Caledonian House project we comment as follows.

Due to the presence of combustible materials within the planting modular in that planters themselves are constructed of Polypropylene and (to a lesser extent) the soil, which is composed of peat and shredded wood fibres we would not be able to support this proposal on a building over 18m.

We have also discussed with our facades certification team and they were of the same opinion, given the current guidance and climate, where external walls of buildings 18m+ should be constructed of none or limited combustibility material. – Jordon Gore (Senior Fire Consultant)

#### EMAIL 2

The main issue with the green wall is considering all materials that are used within the walling.

This extends to the planter material and the actual soil itself.

If the planters were changed to a non-combustible material, there is still the issue of the soil itself which will be combustible and, I would imagine, will not have any test evidence to show that it is a material of limited combustibility/non combustibility.

On other site there could be a number of different variables, i.e. height of the building, when it was built (pre-Grenfell) etc. However, in-line with current advice the wall would not be acceptable unless it could be categorically shown to be non-combustible. – Jordon Gore (Senior Fire Consultant)

#### EMAIL 3

Thanks for your email. You have asked us to give opinion in regard to green wall compliance. You ask:-

1) Do you know of any other developments that include buildings over 18m with a green wall where it was designed to demonstrate compliance with the limited combustibility test?

Post new guidance issued by MHCLG, we are not aware of such cases or at least we have not been involved with such proposals. They may exist but not on projects we are currently aware of.

2) If not, are you indicating that it is not possible for a green roof on this building to meet building regs?

Currently we do not consider there is either enough research or approved guidance that can be relied upon for green walls. We were involved the production of a green wall guidance document some years ago the DCLG however in light of the latest MHCLG guidance we do not consider it is still appropriate to rely on this guidance.

We do consider that any possible compliant green wall system in the future (when this is defined) will rely on plant holders being non-combustible (terracotta or similar inert material) and the irrigation system that keeps the moisture content high, being robust and not liable to failure. Without further approved guidance or research Warringtonfire would not wish to support a green wall system at this time.

I hope this answers your questions. Happy to discuss further should you think it necessary. – Andrew McCracken (General Manager)

#### Conclusion

In light of the current guidance from MHCLG and in the current climate within the building industry in regards to external wall construction, it is Warringtonfire opinion that a green wall would not satisfy the current guidance and legislation.



**Jordon Gore**  
**Senior Consultant**  
**Warringtonfire Consulting Limited**

Reviewed by:	 Chris Hughes Associate (for and on behalf of Warringtonfire Consulting Limited)	21/06/2019
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