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ROOF ACCESS SYSTEM

Executive summary

1. This paper seeks the SPCB's approval to install new high level access solutions to create a safe, effective and efficient working environment for external high level maintenance to preserve the asset value and minimise business continuity risks.

Background

2. The SPCB is aware of the need for officials to address the significant deficiencies with the current roof access system following discovery of a small degree of movement with one of the anchor posts on the roof of Tower 3. An invasive check of all 201 such posts across the site was undertaken and the use of the roof access systems was suspended. As a courtesy the Health and Safety Executive was notified, however at no point was anyone using the roof access systems or the public at risk.

3. The SPCB is also aware of previous legal advice that there is little prospect of pursuing any of the involved parties due to the insolvency of Coverite, the original trade package contractor.

4. New roof access systems have been installed on the MSP building and grass canopies. Officials have been working with a safety engineer and design specialist along with our high level maintenance contractor to identify optimum access solutions for the remaining roofs and facades across the complex.

Current status

5. There is currently limited roof and facade access for the Debating Chamber, Towers 1 to 4, Bagpipes and the Canongate building. The consequences of these restrictions include:

    - increased risk to contractors working at height due to the complex workarounds for high level working;

    - reputational damage as a result of deterioration of the external fabric due to lack of access for maintenance;

    - increased maintenance costs as a result of longer set up times to manage work around solutions, maintenance accessed by mobile platform and scaffold takes longer and comes at a higher cost with more disruption to the building users;

    - increased business continuity risk as reactive response time is significantly slower especially in areas not accessible by mobile

platform and as a result access to business critical spaces such as the Debating Chamber and Committee Room roofs/facades is affected.

Issues and Options

6. Regulations within the Health and Safety at Work Act require risks to health and safety arising from high level work to be controlled by measures ranked in a *hierarchy of risk*. This work at height hierarchy recommends that working at height is avoided where possible for example by using extending equipment from the ground. Ideally measures should be chosen to prevent falls (such as mobile elevating work platforms) before other measures that may only mitigate the distance and consequences of a fall (such as fall protection systems) or which may only provide personal protection from a fall.

7. Nevertheless the building's complex footprint and various access and bearing restrictions at ground level, when combined with high level facade maintenance requirements, presents a limited range of facade access options. As a result many of the facades can only be reactively accessed using roped access. Whilst this is not ideal, the future maintenance of the building is significantly dependent on the rope access skills of specialist trained technicians together with appropriate access equipment.

8. There are a variety of roof access systems available for standard roof constructions. However, given the bespoke nature of our roofs, any solution requires to be tested, in a laboratory environment, to demonstrate the design efficacy for the building and the purpose it is to be used for.

9. A detailed options appraisal was undertaken which considered options such as: doing nothing; bringing back into commission the existing roof access posts through modification; installing new systems; and using scaffold towers.

Recommendation

10. It is recommended that a new two tier system is installed on the roofs of the Debating Chamber, Canongate and Bagpipes buildings and Towers 1 to 4 as follows:

    - Phase 1 - New surface mounted restraint rails to provide general roof access for inspection and light maintenance tasks such as gutter and roof cleaning.

    - Phase 2 - New roof abseil points to give access to selected facades and ensure a balance is achieved between minimising the number of points from a cost, weathering and maintenance perspective and ensuring reasonably practicable access and coverage of the elevations required. Sample abseil points will require laboratory testing. In some cases scaffold or other temporary access solutions will be required to facilitate the installation of the abseil points.

11. The benefits include:

- Quick and effective response to incidents on roofs and facades reducing the risk of disruption to parliamentary business.
- Reduced risk of failure and reputational damage as all facades and roofs can be accessed and maintained.
- Installation of a safe and effective access system for maintenance operatives working in a challenging and high risk working environment.
- Robustly designed, engineered and tested solution that works with our unique building construction.
- Cost effective solution for maintaining the long term design life of the building.

12. Given the significant costs involved and the high profile, unique nature of the building, officials engaged a working at height consultant to carry out a peer review of our recommendation. This provided the necessary assurance that the proposed combination of a surface mounted restraint system for roof and gutter access, combined with a limited array of new rope access abseiling points, will satisfy the need for lightweight reactive maintenance to the roofs under consideration and to those elevations inaccessible by mobile platforms.

13. The project will be carried out over financial years 2014/15 and 2015/16 with some contingency for completion in 2016/17. Installation will be concentrated around recess periods to minimise the risk of disruption to parliamentary business. It is anticipated that phase 1 would be completed within 2014/15.

Resource Implications

14. The total cost of the project, including contingency and design & safety consultancy is £550,000. A breakdown of the cost is provided in Annex A.

Governance issues

15. Should the SPCB decide to proceed, a detailed installation programme would be developed.

Publication Scheme

16. It is recommended that this paper should be published in line with the SPCB's Publication Scheme, subject to final discussion with our consultant. Annex A, which sets out our anticipated project costs, can be published once contracts have been agreed securing best price.

Next steps

17. Subject to the SPCB's decision, officials would begin discussions with contractors to programme works for the installation of the fall restraint system in line with the proposed programme. Officials would also commence the fabrication and testing of roof anchor posts.

Decision

18. The SPCB is invited to decide whether to proceed with the proposed roof access solutions to improve maintenance access for roofs and facades.

Facilities Management
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