

Message

From: Fergus MacGregor [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DF9E19274EB34E039E3AC9F6D5B1852C-FERGUS.MACG]
Sent: 02/05/2014 12:30:01
To: M.Smith@maxfordham.com
CC: Hugh Mahoney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=21c7864f51fe42559a1e4f436ef1d73c-Hugh.Mahone]
Subject: RE: Smoke extract system refurb - as discussed yesterday
Attachments: 1243-12-SC Grenfell Tower.doc

Very rough and ready quote for the 20 floors system – assumes existing kit is stripped out by others!

Does not include for the other AOV's /stairwell vents etc. . . .

Regards

Fergus MacGregor
Above Ground Smoke Specialist

M: [REDACTED]



Smoke Control & Ventilation systems solution provider.

Witt House
Brookwoods Industrial Estate
Burrwood Way
Holywell Green
Halifax
HX4 9BH
England

Tel: [REDACTED]
Fax: [REDACTED]

Website: www.psbuk.com

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From: M.Smith@maxfordham.com [mailto:M.Smith@maxfordham.com]
Sent: 02 May 2014 11:00
To: Fergus MacGregor
Cc: Hugh Mahoney
Subject: Fw: Smoke extract system refurb - as discussed yesterday

Morning Fergus

I understand you're the person to speak to regarding residential smoke extract systems in Hugh's absence. I spoke to Hugh yesterday about a refurbishment job in London which I believe a colleague of mine in our Edinburgh office has previously discussed with Jim Shields. We're looking to bring the existing non-compliant push-pull system up to scratch and after speaking with Hugh it seems a pressure differential system would be the way to go.

I've recently been informed that a deficiency notice has been placed on the building due to the existing system being inoperative. This expires on Monday. For this reason I'd like to have a chat with you to clarify a few points made by Hugh, and also to see if you may have any ideas for interim measures on the existing system.

Feel free to give me a call to get the background on the job, the email and attachments below should help but will not give the full picture. I tried your mobile earlier but there was no reply.

Kind regards,

Matt

MAX FORDHAM

42-43 Gloucester Crescent

London

NW1 7PE

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maxfordham.com

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Registered office 42-43 Gloucester Crescent, London, NW1 7PE

----- Forwarded by Matt Smith/MaxFordham on 02/05/2014 10:50 -----

From: Matt Smith/MaxFordham
To: hm@psbuk.com
Date: 02/05/2014 10:28
Subject: Smoke extract system refurb - as discussed yesterday

Morning Hugh

Thanks again for taking the time to discuss the refurbishment of the smoke extract system I'm working on. I'd like to clarify a few details from our conversation if that's alright? I've attached a floor plan of a typical residential floor, our previous smoke extract schematic, a rough and ready marked-up schematic showing my understanding of our conversation with the addition of general ventilation provision, and a few photos for reference. The building is Grenfell Tower in North Kensington.

As a reminder, each of the 2x supply shafts and 2x extract shafts are 400 x 600 mm builder's shafts, the grilles are 300 x 600 mm each (4 in total per floor, 2x high level extract, 2x low level supply).

Can you clarify the following?

- Inverter drive smoke extract fan speed is to be controlled by pressure sensors in each lobby.
- Pressure relief panels are not required.
- Extract fan(s) to be sized based on maintaining 2 m/s airflow through single open lobby door, leakage around remaining closed lobby doors and duct pressure losses.
- In case of all lobby doors being closed, the maximum pressure differential should not exceed 60 Pa (equivalent to max. 100 N door opening force).

If any of what I have sent is not clear then please don't hesitate to get in touch either via email or 'phone. I'd also like to reiterate that whilst the specification is 'equal or approved', the contractor is well aware of the complexity of the system and I will ensure that your name is prominently mentioned during discussions of the system. Also, do PSB have a London sales rep?

Kind regards,

Matt

MAX FORDHAM

42-43 Gloucester Crescent
London
NW1 7PE

T
F

maxfordham.com

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Max Fordham
42-43 Gloucester Crescent
London
NW1 7PE

2nd May 2014

For the attention of Matt Smith

Re: 1243-12-SC Grenfell Tower – Corridor Smoke Control Systems

Following your enquiry we now have pleasure in submitting our quotation for the above systems, this proposal includes for the smoke ventilation of the corridors only as shown on the information sent to us.

The following are the systems proposed:

1. Two powered smoke systems each comprising of two shafts (at opposite ends of the corridors) and on each shaft a duty and standby fan units either mounted on the roof level (for exhaust) and lower down (for inlet) along with four dampers and grills on each level, to serve the corridors in a push pull mode (4m³/s exhaust flow rate). We have assumed the builders work shafts (4 off) are provided by others and we provide no ductwork except adjacent to the fans.
2. The powered system will be of the push pull type for smoke ventilation only – but can be utilised for day to day use with modification.
3. Each powered system will be controlled via a control system which will comprise of a control panel remote outstations (aprox every 2 floors) and a remote control HMI panel to provide fireman's and maintenance functions.
4. The system will operate on an automatic basis via a smoke signal provided by others.
5. Our costing includes for enhanced specification cabling from the control panel to the equipment – it has been assumed containment is by others.
6. The only external power supply required is to the main control panels, all other controls are powered via our system wiring.

Our system includes for the design, supply, installation and commissioning of the system, consisting of, smoke ventilators, smoke dampers and grills and control panels. We have however excluded smoke detection which we assume is by others.

The prices quoted at this stage are in accordance with PSB-UK standard terms and conditions of sale. If you have any questions in connection with the attached proposals, please do not hesitate to contact the undersigned. We hope we will have the opportunity to talk to you soon.

Yours sincerely

Fergus MacGregor

Fergus MacGregor
Above Ground System Specialist





Stairwell & Corridor Smoke Ventilation System Proposal for

Grenfell Tower

Quote Ref: PSBUK1243-12-SC

PSB-UK Limited

Witt House
Brookwoods Industrial Estate
Burrwood Way
Holywell Green
Halifax, West Yorkshire
HX4 9BH

Tel : [REDACTED]
Fax : [REDACTED]
Website: www.psbuk.com

Your PSB-UK contact on this project is:

Name: **Fergus MacGregor**
Tel : [REDACTED]
Mob : [REDACTED]
Email : fm@psbuk.com

Registered Office: WITT House, Brookwoods Industrial Estate, Burrwood Way, Holywell Green, Halifax HX4 9BH ENGLAND
Company Registration Number: 400 66 40

PSB00000814_0006

PSB00000814/6

Specification & Estimate

Quote Ref: PSBUK1243-12-SC

2 No Smoke Fan Set

Duty & Standby fan set, 610mm dia, roof mounted to 300deg C for 2 hours CE marked BS EN12101-3. Complete with mounting kit, outlet vent and mounting plates. Fixed to a builders work curb by others.

80 No Dampers

Nominal size 300mm H x 400mm W - fire rated to EN1366 Part 2 for 1 hour. Manufactured from 1.5mm thick galvanized steel. Damper to be mounted into prepared opening to shaft wall. Damper finished matt black.

80 No Grills (For Above)

Manufactured from aluminium extrusions and in a polyester powder finish to one of our standard RAL colours.

1 No System Control Panel

Floor mounted IP65 Form 1 control panel complete with, fuses, inverters, contactors, smoke detection interface, 24v DC & mains healthy indicators. A 3ph maintained supply is required to be provided by others.

1 No Touch Screen Control Panel

Wall mounted control panel complete with 5.7" HMI touch screen menu driven control. Panel allows key switch override to allow fireman to select floor of operation and maintenance operation and monitoring.

10 No Outstations

Wall mounted addressable control panel to connect to the dampers, and break-glass overrides (controls up to 2 floors).

20 No Break-glass Switch

Wall mounted Kac type break-glass switch in a yellow housing mounted at each floor.

1 No Installation

Installation of the above.

1 No Cabling

All electrical control & power wiring has been included in our scope of works and is to an 'enhanced' specification to BS8519, suitably fixed to containment provided by others. Power supplies to the control panels have been excluded – a 3 phase maintained supply is required to each control panel.

1 No Carriage

Delivery of equipment to site within normal working hours.

1 No Commissioning

Commissioning has been allowed for based on being carried out in line with the normal working day as defined in the terms and conditions sheets attached.

1 No Detailed System Design

The engineering design work will consist of the following

- ◇ Technical submission
- ◇ Cause & Effect chart
- ◇ Control schematic & cabling selection
- ◇ Design of control system software

Completion of this work will qualify for payment of the 20% design fee as detailed under the terms and conditions of tender.

Total Price for above

£151,514

The above price and scope of works is based on design, supply and commissioning only. These proposals are based on the assumption that a power supply, meeting the requirements of current national and local Building Regulations, and terminating adjacent to the PSB main control panel.

Listed below are additional items that if required can be undertaken by PSB-UK Ltd. Prices available upon application.

Exclusions

The following items are specifically excluded from our scope of supply in this tender:

- Value Added Tax.
- Fire stopping.
- CFD modelling.
- Ductwork (unless listed above).
- Builders work, including builders work shafts, preparation of openings, holes for cabling, containment and sealing.
- Duct sleeve for dampers.
- Roof curbs.
- Power supplies to main control panels.
- All Containment.
- Safe access to fixing positions.
- Offloading and hoisting of equipment to roof.
- Maintenance programme
- Non-standard health & safety procedures
- Any item not specifically referred to in this tender as being included.

Terms & Conditions

Quote Ref: PSBUK1243-12-SC

General Terms & Conditions

Final terms and conditions are to be agreed. These proposals are based on standard PSB-UK Ltd Terms and Conditions of sale (available on request, and on our web site). The sum of 20% of the contract value will be charged on completion of detailed design work as detailed under equipment overview above.

Payment of all approved applications will be due within a maximum period of 28 days, overdue payments will be subject to interest charges equivalent to 5% above the bank rate ruling at the time of invoice.

System warranty will be 12 months from practical completion or 15 months from installation, whichever is the sooner, and from first handover in phased installations.

Validity

This quotation is valid for acceptance up to 30 days from the date of this tender, unless withdrawn in writing and is not transferable to a third party.

This quotation is valid for completion of supply and installation work within 6 months of order placement.

Delivery

Engineering and drawings, including the calculations of the electrical wiring will be available within 4 weeks of your firm order enabling us to proceed.

The supply, installation and commissioning of the equipment and system will be determined in conjunction with yourselves or other interested party to fit, wherever possible, into the build programme.

Drawings

It is a condition of this tender that full details of the building, in so far as that which affects the work undertaken by PSB-UK Ltd, are provided in AutoCAD Electronic format.

No information contained within this tender should be used for construction purposes. PSB-UK Ltd will provide construction issue drawings on receipt of an order. To save time, the detailed design/drawing work can proceed on the receipt of a letter of intent, but the drawings will only be released once an official order is received.

Validation of the System

Cold smoke generation will be used at the time of commissioning to prove the air and smoke paths within the car park.

Property Rights

The contents of this tender are exclusive to and remain the property of PSB-UK Ltd and must not be copied or divulged to any other party without the express permission of PSB-UK Ltd.

Tender Proposals

Please note that information contained in these proposals, such as fan and sensor quantities, are subject to confirmation at detail design stage and cannot be used for construction purposes.

Electrical Power Supply

It is assumed that a 110V electrical power supply will be provided free of charge for installation and commissioning work. It is also assumed that an essential power supply of adequate capacity will be provided to the PSB control panel.

Working Hours

The tender is based on two attendances on site for installation. Only normal working hours are allowed for in this tender, these hours being Monday to Friday, 8.00am to 4.30pm. Working outside these hours can be arranged at extra cost if required.

Removal of Rubbish

Allowance is made for ensuring that all rubbish created by PSB will be deposited into skips. However, it is assumed that suitable skips and removal of the rubbish will be provided free of charge.

Containment & Cabling Clarification

Please note that the cabling included within these proposals specifically excludes containment unless stated otherwise. Where containment is included, or is provided by others, it is based upon all fan cables being laid within cable trays. Should cables trays be inverted additional costs will be incurred due to the additional labour required, and we reserve the right to adjust our price accordingly.

Similarly our quotation includes for the running of cables via the most practical and shortest routes. Should the installed cable trays take diverse routes to the locations of the respective equipment then additional costs will be incurred due to the additional parts and labour required, and we reserve the right to adjust our price accordingly. Please note that we do NOT include for "clipping" cables directly to the soffit or walls.