

cc Miss C. Campbell - for info.

EASTERN HEALTH AND SOCIAL SERVICES BOARD

MEMORANDUM

From: W A Murray | To: Ms A Lynch
Chief Ambulance Officer | Director of Planning
Date: 25 September 1992 | Ref. CAO/127/92

UNINTERRUPTIBLE POWER SUPPLY FOR
AMBULANCE COMPUTER-AIDED DISPATCH SYSTEM

As a result of Wednesday night's bombing of the Forensic Science Laboratory at Newtownbreda Road, Ambulance Control lost both its exchange lines and its electric power.

In the few seconds that it took for the back-up generator to cut in, our McDonnell Douglas minicomputer hung due to interruption of its power supply. This meant that, at a time when emergency demand was at major incident levels, the control staff had to revert to paper-based systems.

In light of this experience, it is now imperative that £15,000 be made available to purchase an uninterruptible power supply, to protect this vital system from any future power interruption.

I know that the Board is facing severe financial constraints, but I would urge you to give the utmost priority to this request, as the Service simply cannot afford to lose emergency systems in this way.

W A MURRAY
CHIEF AMBULANCE OFFICER

cc Mr E J A McCullough
Mr E Macarthur

W. J. ARMSTRONG - have discussed with P. Lynch (Director of Planning)
WJA 9/11/92



EHSSB

Eastern Health and Social Services Board

Your Ref:

Our Ref

TMCK/8236/92

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Chief Ambulance Officer
W.A. MURRAY L.A.S.I.

22nd December 1992

Ms C Campbell
Emergency Planning
Dundonald House
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Dear Ms Campbell

FUNDING FOR UNINTERRUPTIBLE POWER SUPPLY

I refer to Mr Murray's memo of 25th September last, to Ann Lynch, a copy of which was given to you by Bill Armstrong. This indicates the need to install a UPS in Ambulance Control, Purdysburn.

Following the reports about the London Ambulance Service computer problems, and the large bomb at the Forensic Laboratories, which caused electrical interruption to Ambulance Control, a risk assessment has been started. Although not completed, this has indicated a need to improve the arrangements to protect the integrity and upgrade the contingency arrangements of the command and control systems.

A clearly identified requirement is the installation of a UPS. To provide to the existing system and future contingency arrangement will require a 15 KVA system. The cost to supply and install the system will be £20,000. This is an increase of £5,000 on the amount indicated in Mr Murray's memo.

The Service has examined all possible sources of funding within the EHSSB with negative results. I would, therefore, ask if you could release this amount from your budget in order that the risk to the electrical supply is removed.

Yours sincerely

T McKEE
DEPUTY CHIEF AMBULANCE OFFICER

From B Maguire, Directorate of Information Systems
Date 4 February 1993

To P Lynch, Emergency Planning Branch

Uninterruptable Power Supply for Ambulance Control System, Purdysburn

As a result of difficulties experienced following a recent bomb incident the EHSSB Area Ambulance Service have sought quotations from several suppliers for an uninterruptable power supply (UPS) device for the Ambulance Control System computer at Purdysburn. The following estimates have been obtained:

Supplier	Capital	Revenue
Alfred J Hurst Ltd	£11,700	£610 in year 1, £985 pa thereafter
McDonnell Douglas	11,895	under warranty in year 1, £1,058 pa thereafter
Erskine Systems Ltd	12,705	n/k

(Some work will be required by HPSS works personnel to prepare appropriate connections in advance of delivery)

To justify the expenditure many factors must be considered including the frequency of power failures and the implications for the service and the general public if this risk is not addressed. With respect to the former, apart from the bomb incident in September last year, our records show no history of power related problems with this computer. As for the latter, it would be inappropriate for me to comment on the possible consequences should another power failure occur, other than from a technical point of view.

When the power supply to a computer such as that hosting the Ambulance Control System is unexpectedly interrupted the system cannot be guaranteed to resume normal operation when power is restored, whether from the mains or a standby supply. In addition, the integrity of the data may also be adversely affected, potentially resulting in data corruption or loss. Sometimes in these circumstances the only recourse is to reload the system from the latest security back-up. If DIS security guidelines are enforced then, at worst, only one day's work would have to be re-entered and an appropriate paper record should be available to facilitate this.

A UPS ensures that continuous power is provided to the system, even during a failure of the mains supply. I understand that a standby generator is available at this site. A UPS should ensure a smooth, trouble free transition from the mains to the standby supply. If, for whatever reason, the standby generator is inoperable and the power failure lasts for an extended period then the UPS will enable the continued operation of the computer for a limited period of time, dependent on battery capacity and the load (some of the products listed above provide a back-up time of approximately 50 minutes at the expected load, longer if the load is less). If it becomes clear that the interruption will exceed the back-up time provided by the UPS then a controlled shutdown of the system should be performed to avoid the risk of data loss.

In conclusion, to ensure the smooth transition from the mains supply to a standby supply and, therefore, avoid the risk of introducing possible data corruption which might, in the worst case, result in having to reload the system from a security back-up, the installation of a UPS is considered, from a technical point of view, to be essential.

If a decision is taken to proceed it is worth noting that McDonnell Douglas, in addition to offering a device of slightly higher specification, also maintain the computer hosting the Ambulance Control System. There would be advantages in having a single maintenance supplier for both the computer and its uninterruptable power supply.

I hope you find these comments of some help and if I can be any further assistance please do not hesitate to contact me.



B Maguire

For all enquiries with this FAX.