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VPJHQ/CJO/LM (19/05)

14 Mar 05

PSO/CDS

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COSSEC

## FORCE PROTECTION OF UK CAMPS IN IRAQ

### ISSUE

1. Protection of Op TELIC camps from indirect fire attacks.

### TIMING

2. Routine. For consideration out of committee.

### RECOMMENDATIONS

3. That CDS notes:

- a. That accommodation in all UK camps in Iraq is subject to an ongoing programme of compartmentalisation force protection measures.
- b. That recent QinetiQ force protection trials have confirmed that compartmentalisation is effective, but that it has limitations that can be partially ameliorated by revising the design and layout of new camps.
- c. That the prototype CITADEL sleeping accommodation unit provides enhanced, , protection from indirect fire. Moreover, it is relatively costly, and requires considerable engineering and logistical effort to construct.

4. That CDS agrees:

- a. That CITADEL should not be introduced to Iraq, and that the risk of indirect fire attack should be managed through a combination of continued enhancement of accommodation compartmentalisation and active force protection TTPs. This policy should be reviewed in response to any substantial change in threat.

### BACKGROUND

5. Current Indirect Fire Threat to Camps. Since Jun 03, UK camps in Iraq have been subjected to attacks from mortar and rocket indirect fire.<sup>1</sup> (%) of the attacks were in Al Amarah. Indirect fire attacks invariably occur without warning, are short in duration (1-5 rounds) and take place predominantly between 1200 and 0300 hrs local. To date, a total of 43 UK casualties have been sustained; there have

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been no fatalities. A graph showing the number of indirect fire attacks in the last 12 months is at Annex A. The trend shows a decreasing number of attacks since the surge created by the Aug 04 'uprising'.

6. Force Protection Trials. The QinetiQ force protection trials, initiated in response to the threat increase in Aug 04,<sup>2</sup> provided data to support the analysis of the effectiveness of compartmentalisation, and tested the design for a hardened temporary accommodation structure called CITADEL.

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7. Engineering Force Protection Methods. There are 4 broad 'bands' of physical protection that can be incrementally added to existing camps to counter the indirect fire threat. Cost, engineering complexity and logistic burden rise with the increasing level of protection.

a. Band 1 - Compartmentalisation. Most camps in Iraq have some form of compartmentalisation. Enhancement work is ongoing,<sup>4</sup> but its effectiveness is partially restricted by the layout of existing camps. Operational Analysis<sup>5</sup> has shown that the degree of protection increases as the size of the compartment decreases. Overall, compartmentalisation offers 10 to 80% lower casualty rates.

b. Band 2 - Ballistic Refuge Shelter. A ballistic refuge shelter is for personnel to occupy temporarily when a warning of attack is given. This technique is widely employed on airfields, <sup>3</sup> The only UK camp in Iraq where ballistic refuge shelters have already been built is at Al Amarah, following the increased indirect fire attacks in Aug 04. The shelters were used as accommodation for short periods at the height of the attacks.

<sup>3</sup> it is assessed that, in the current improved security situation, ballistic refuge shelters are of little value in Iraq.

c. Band 3 - Hardened Temporary Accommodation. Hardened temporary accommodation provides permanently occupied, purpose built but improvised temporary domestic (ie sleeping) accommodation with air-conditioning and lighting; CITADEL is an example.<sup>6</sup> Provision of CITADEL for all UK forces currently in Iraq would cost £35M, would take in excess of 12 months to complete, and would require the commitment of significant amounts of logistical and construction assets. This would, in turn, create an associated increase in movement on Iraqi roads<sup>7</sup> during the delivery and construction phases, with an attendant risk and LOC security burden. It should be noted that the quality and comfort of CITADEL

<sup>2</sup> QinetiQ Force protection Trial contracted by DEC(GM) Contract No: A/DBE/N02517/C002.

<sup>3</sup> (

<sup>4</sup> The temporary camp layout template has been redesigned. DLO is refitting temporary camp infrastructure at a cost of £1.5M to enable the camp to be spread out over a wider footprint and to allow full compartmentalisation force protection measures to be adopted.

<sup>5</sup> QinetiQ operational analysis of temporary deployed accommodation camps in Iraq dated Apr 04.

<sup>6</sup> CITADEL is a prototype, modular, ISO container based, protected sleeping accommodation design. Ninety two ISO containers provide accommodation for 192 personnel at a cost of £715K. This would equate to approximately £35M for provision for the 8500 deployed personnel in Iraq.

<sup>7</sup> This could involve the movement of over 3000+ ISO containers, dependent on the level of deployment.

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accommodation would be significantly lower than that currently occupied, with personnel sleeping in bunk beds inside a single ISO container. Current investment in Tier 1 and 2 accommodation would be wasted.

d. Band 4 - Purpose Built Protected Building. An example of a purpose built protected building is the permanent company base at :

. Because of cost, time to build and permanence, such buildings are not considered appropriate for use in Iraq.

8. Indirect Fire Risk Management. It is possible to mitigate against the likelihood and significance of an indirect fire attack through a package of mutually supporting TTPs and engineering force protection measures. Events have shown that the level of attacks will oscillate. In light of the risk across Iraq, it is assessed that Band 1 Engineering measures are suitable wherever UK forces are based. However, these measures should be constantly reviewed in relation to changes to, or the development of, the threat.

## CJO

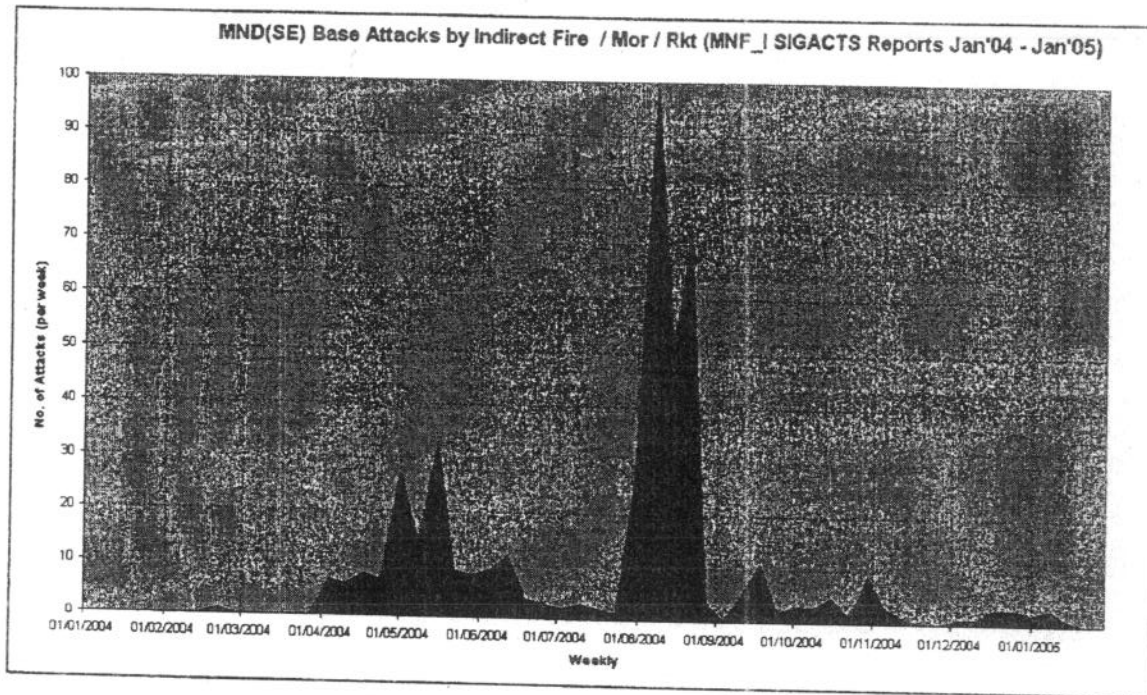
Annex:

A. Graph of the Number of Indirect Fire Attacks on MND(SE) Camps.

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ANNEX A TO  
D/PJHQ/3/310/5/11  
DATED \*\* FEB 05

GRAPH OF THE NUMBER OF INDIRECT FIRE ATTACKS ON MND(SE) CAMPS



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