



## SAFETY ALERT

## PART A, B & C

**Subject: Design and Construction of Assault Course Obstacles**

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**Who Should Read this:** Top Level Budget Holders, Prime Contractors, Private Finance Initiatives, Public, Private Partnership and other traditionally procured contracts, Project Managers, Infrastructure Managers and Property Managers with responsibility for MOD projects and Property Management Works Services (including the legacy work of EWCs/WSMs), Coordinating Authorising Engineers, Authorising Engineers (WaH), Authorised Persons (WaH), Heads of Establishment and Health & Safety Advisors.

This Safety Alert does not necessarily cover all aspects of the subject matter and readers should make themselves aware of other potential issues. Readers should also not rely on DIO Safety Alerts as their only means of becoming aware of safety issues, but they should consult widely across other media to maintain awareness.

**When it takes effect:** immediately

**When it is due to expire:** When updated or rescinded.

Health and Safety

### Aim

1. To bring to the attention of appropriate persons the failure of obstacle structures on assault courses due to inadequate design and construction standards, resulting in the risk of damage, serious injury or fatality.

## **Introduction**

2. Compliance with the contents of this Alert will enable compliance with the Health & Safety At Work etc Act 1974 and its subordinate Regulations.
3. The appropriate MOD officer shall arrange for the Maintenance Management Organisation (MMO) contractor to carry out all actions in accordance with this Alert.
4. Any work required as a result of this Safety Alert must be carried out in accordance with JSP 375.
5. On MOD Establishments occupied by United States Visiting Forces (USVF), responsibility is jointly held by USVF and DIO(USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Alert. Where this Alert contains procedures which differ significantly from USVF practice, DIO (USF) code of practice will be issued.

## **Background**

6. In a recent incident, a 2.1m high brick retaining wall collapsed as part of an obstacle course. It was not in use at the time, but it had the potential to have caused serious injury or a fatality. At just 215mm thick in plain brickwork, the 2.1m high retaining wall was inadequate and it was not built to a compliant structural design.

## **Requirement**

### **Part A**

7. To ensure compliance with the Workplace (Health Safety & Welfare) Regulations 1992 and the Provision and Use of Work Equipment Regulations 1998 (PUWER), all obstacles for assault courses must be of adequate structural design and specification; and be constructed in accordance with appropriate standards.
8. On direction from the DIO Service Delivery Manager, the MMO is to:
  - (a) Locate and identify all obstacle course installations on the MOD estate.
  - (b) Check site records for the presence of inspection reports and completeness of the required H&S file and design information for these installations.
  - (c) Assess the adequacy and robustness of the obstacle structures.
  - (d) Where there is doubt as to the adequacy, obstacles are to be taken out of service until proven otherwise via the Part B actions.
  - (e) Confirm to the DIO Service Delivery Performance Management Team – DIO SD-Perf Mgt Team (MULTIUSER) account, through the respective DIO Service Delivery Manager, which obstacle courses have adequate designs and which require further design assessment with possible remedial measures.

## Part B

9. On direction from the DIO Service Delivery Manager, the MMO is to:
  - (a) Undertake further design assessment to check the adequacy of existing structures where identified at 8(f) above.
  - (b) Where found to be inadequate, develop suitable remedies and carry out the necessary remedial works to strengthen or replace deficient structures.
  - (c) Resolve any deficiencies in the completeness of the H&S file and the design information.

## Part C

10. On completion of any remedial works, the MMO is to notify the DIO Service Delivery Performance Management Team – DIO SD-Perf Mgt Team (MULTIUSER) account, through the respective DIO Service Delivery Manager, of the date when the installation is confirmed as being adequate with up-to-date inspection records.

### Supporting information

11. JSP315 Scale 44 for Obstacle Courses is supported by a series of 30no. DIO/DE drawings as follows: E8949/DE/AB01, E8949/DE/A, E8949/DE/A1 to A18, E8949/DE/B and E8949/DE/B1 to B9. These drawings state that the information given is only indicative of the end-user training requirements, and *“is not intended to indicate structural design requirements”*. The drawings also confirm that the contractor is *“fully responsible for the structural design, stability and detailing of each obstacle to suit the particular requirements of the site”*.
12. In order to develop appropriate design solutions and construction specifications that provide the necessary functionality and robustness in use, it is essential that the requirements of each obstacle are appraised along with how it will be used. The design will also depend on the local ground conditions and prevailing environmental factors at each specific site. It must not be assumed that any aspect of the Scale 44 drawings represents structural adequacy.
13. In addition, Scale 44 drawing proposals may need to be adapted in order to be buildable (eg. to suit brick dimensions or to enable the placing of backfill). Completed obstacles must be functional and durable without onerous or costly maintenance implications.
14. For all existing assault courses, the adequacy and condition of obstacles are subject to regular inspections and maintenance work by the MMO as per Serials 373 and 374 of the Hard FM Standards & Tasks schedule.