Airfield Pavements - monitoring of condition and maintenance requirements by EWCs at monthly intervals

Note: This Technical Bulletin (TB) is a re-issue of TB 95/27 under a new issue number only. The contents of the TB have been editorially updated for this re-issue.

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DEFENCE ESTATES
MINISTRY OF DEFENCE

December 2000
Airfield Pavements - monitoring of condition and maintenance requirements by EWCs at monthly intervals

INTRODUCTION

1. This Technical Bulletin is directed at Property Managers with a responsibility for operational airfields, their Establishment Works Consultants and Specialist Term Consultants carrying out Airfield Maintenance Inspections.

2. The contents of this Bulletin are advisory. No work involving expenditure on any MOD account is to be entered into without authority from the Property Manager or the appropriate MOD officer for that airfield.

3. This Bulletin is issued under the patronage of Royal Air Force Infrastructure Organisation (RAF IO).

BACKGROUND

4. Commencing FY 1995/96 and with the agreement of Commands responsible for operational airfields, the frequency of Specialist Airfield Maintenance Inspections and Reports contained in Defence Works Services Specification 005 Issue 002 June 1992 Schedule 6A (pages S6A-1 and S6A-6) Task No 552 was altered to two yearly from:

   a. Airfield Pavements - previously 15 months.
   b. Aviation Ground Lighting - previously 'to be determined'.
   c. Aircraft Arrestor Gear - previously 'to be determined'.
   d. Runway Friction Test - previously 3 yearly.

(The frequency of Runway Friction Test is being amended to 4 years and will be promulgated in an amended JSP 455 currently in draft. It has already been advised to Commands and Property Managers).

The two yearly frequency is included in DEO(W) Specification 005 Issue 003 (incorporating Amendment 01 dated 31/10/96) Schedule B (page B12) Task No 552.

5. Aircraft operations are sensitive to the condition of the airfield pavements. A single piece of grit can damage an aircraft and place aircrew at risk of injury.

6. The condition of airfield pavements can change over a two year period such that faultless areas or areas containing benign faults can develop into a potential hazard to aircraft. Any such potentially hazardous or actually hazardous areas observed during a Specialist Airfield Maintenance Inspection are reported upon and recommendations made for works services or monitoring.

December 2000
7. The timely and quality execution of works services upon airfield pavements reduces the hazard to aircraft and aircrew, reduces maintenance costs and protects the capital investment made in providing the airfield pavement.

REQUIREMENT

8. It is a requirement that Establishment Works Consultants carry out monthly monitoring of the airfield pavements and report their findings in writing to the Property Manager each month and also provide an annual digest of the monthly reports to the Property Managers at the end of each December. This task is required under DEO(W) Specification 005 Issue 003 (incorporating Amendment 01 dated 31/10/96) Schedule B (page B12) Task No 552.1.

9. The monthly monitoring is required to cover all airfield pavements but with detailed observation confined to:
   a. known hazardous and potentially hazardous areas observed.
   b. areas recommended for monitoring within the most recent Specialist Airfield Maintenance Inspection Report.
   c. areas advised by Air Traffic Control.
   d. works services being undertaken or recently completed.
   e. a sample of other areas with a change of sample each month, but ensuring that all the airfield pavements are observed in detail on an annual basis.

10. The written report upon the findings of the monthly monitoring and the annual digest are recommended to take a tabular format as in Annex A.

11. Information upon the requirements and techniques for airfield pavement works services is contained within Defence Works Functional Standard Guide to Airfield Pavement Maintenance ISBN 011 772730X already distributed to Property Managers and MOD EWCs, and available through HMSO outlets.

Bulletin Authorised By:

S C POTTS
Airfield Pavements
ANNEX A TO
TECHNICAL BULLETIN 00/14
DATED JUNE 2000

NAME OF EWC FIRM/COMPANY

AIRFIELD PAVEMENT ROUTINE INSPECTIONS

RAF EXAMPLE

DATE: ________________________________

AREA INSPECTED: NO 3

INSPECTION CHECKLIST

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
<th>Act</th>
<th>ROC*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Concrete Areas/Joints</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Marshall Asphalt/Blacktop</td>
<td></td>
<td></td>
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<tr>
<td>C. Line Markings</td>
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<td></td>
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<tr>
<td>D. Rubber Deposits</td>
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<tr>
<td>E. Gullies and Gratings</td>
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<td></td>
<td></td>
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<tr>
<td>F. Other Items</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

C/F Dispersals

A,B. The Dispersal comprises the concrete hardstandings and the sterile blacktop areas. The concrete bays are heavily weathered and contain cracks, moribund sealant and loose epoxide mortar repairs. The bitumen on the blacktop areas has oxidised and loose stones are encountered at various locations on the sterile ovals. The concrete areas of the Dispersal are not currently used by aircraft. Their condition is, as reported in previous reports, below Airfield Pavement Standards. The heavily weathered concrete bays as well as the blacktop sterile areas are being monitored by the EWC. The client should include the Dispersal on the regular sweeping programme.

C,D,E. Satisfactory

D Dispersal

A. The condition of the pavements has remained the same since the last inspection. Heavily weathered concrete bays need to be replaced, whilst spalling cracks and defective joints need to be repaired and resealed.

A 20mm step has reappeared between the concrete bays on the West side of the Dispersal. The projecting edge of the step is being damaged by trafficking aircraft.

B. The blacktop sterile areas are badly cracked in places and signs of heave are encountered on the NW and NE corners of the Dispersal.

C. The sterile area markings are beginning to fade away.

D,E. Satisfactory.

F. Repair work at A and B above will be implemented during this financial year, only if funds are available after the completion of "Priority 1" work on the Runway and other Dispersals.

WEATHER: Sunny/Dry

Signature and date when inspected:

* Rough Order of Cost (ROC) based upon ......................... rates at ..........Q 199....