

**Report to the Asset management and  
Economic Development Cabinet  
Committee**



**Epping Forest  
District Council**

**Report reference: AMED-003-2014/15**

**Date of meeting: 14 July 2014**

**Portfolio: Asset Management & Economic Development**

**Subject: Main runway at North Weald Airfield**

**Responsible Officer: Derek Macnab (01992 564050)**

**Democratic Services Officer: Jackie Leither (01992 564756)**

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**Recommendations/Decisions Required:**

- (1) To consider the findings of the RPS report on the current condition of the runway at North Weald Airfield;**
- (2) To consider the confidential advice from Counsel with respect to the Council's obligations under the leases and Licenses with Aviation Tenants;**
- (3) As a result of the above, to maintain the current maintenance and inspection regimes which are considered fit for purpose with respect to maintaining safe operating conditions; and**
- (4) To defer any significant remedial work or consideration of the reduction in runway length, until such time as the Local Plan process is concluded.**

**Executive Summary:**

This report provides up to date details in respect of the condition of the main runway (RW02/20) at North Weald Airfield and sets out potential remedial options. The report also considers, in the confidential part of the report, Counsel's opinion on the obligations of the Council in respect of the leases/licences held by aviation tenants.

**Reasons for Proposed Decision:**

To give consideration to remediation options in the context of the current condition of the runway as assessed by the RPS report, the implications of the local plan process and the Councils lease/licence obligations

**Other Options for Action:**

Not to address the issues presented by the runway condition report and legal advice. However, this would expose the Council to risk..

## **Report:**

### Background

1. A number of reports have been commissioned since 1988 on the condition of the main runway at North Weald Airfield. These have included Scott Wilson in 1998, Halcrow in 2011 and Deloitte in 2013. The Halcrow report suggested that the condition of the runway was such that whilst the Council should introduce formalised runway inspections, in all other respects the runway was suitable for its current use, but that its strength should be assumed to be no different to when it was last intrusively tested by Scott Wilson back in 1998. The Scott Wilson report suggested that the pavement strength classification number (PCN) should be 6.

2. In the light of the Halcrow report, and to ensure that the Council was not seen to be compromising its insurance cover, officers informed tenants that the PCN for RW02/20 had been reduced to 6, but that they would be able to operate aircraft up to and occasionally in excess of a PCN of 9 provided that the Council was informed and able to approve that operation following a runway inspection. Given the nature of the aircraft routinely using the airfield, and the fact that the PCN regime generally only applies to aircraft in excess of 5,700kgs in weight, this was not considered to be a restraint to the businesses of the tenants, although it was recognised that some leases enabled heavier aircraft to operate.

3. In order that the Council could fully understand the relationship between the leases/licences and its obligations under those licences, the Council appointed Piers Harrison of Tanfield Chambers to provide the Council with advice..

4. The Council also considered it wise to seek further advice on the steps required and probable costs related to bringing RW02/20 up to a standard of at least PCN 9. Halcrow were approached to undertake this work, but they declined, suggesting that we approach another aviation based consultancy RPS. Following research on RPS, officers concluded that their background and experience were suitable, and they were duly appointed to undertake the assessment.

### Leases and licences and Counsel's opinion

5. Given the commercially sensitive nature of the leases and licences in place between the Council and its tenants, and Counsel's advice appertaining to them i.e. details of leases etc, Counsel's opinion is therefore set out as a confidential section to this report.

### The RPS report and suggested remedial solutions

6. The final version of the RPS report is attached to this agenda. The main findings of the report are as follows:

- runway 02/20 is currently, in parts, under strength (PCN 6), whereas the licences stipulate PCN 9;
- the original asphalt section of the runway surface is in a comparatively poor state; however maintenance has maintained a satisfactory runway;
- based upon the level of traffic at the aerodrome and type of general aviation aircraft that operate from there, the runway surface is considered fit for purpose;
- current runway operating distances are larger than required for the "design aircraft" (a Hawker Hunter T7), and its overall length could be reduced;
- to achieve a PCN of 9 the asphalt section of the runway requires a minimum of a 250mm overlay;

7. RPS have not undertaken any intrusive testing of the runway. Their report is based upon the previous Scott Wilson and Halcrow reports, and a thorough visual inspection. Their report essentially divides the runway into three sections, with distances referenced to runway 02 (i.e. running south to north – see figure 3 on page 12 of the RPS report):

- (i) the flexible (asphalt) section (0m to 840m);
- (ii) the composite section (841m to 1090m); and
- (iii) the rigid (concrete) section (1091m to 1920m)

The Scott Wilson report designated these section lengths as having PCNs of 6, 10 and 9 respectively. RPS have formed the view that overall, a PCN of 6 is appropriate.

8. RPS considered what the runway length requirements were, based upon the current aircraft using the runway. This information was provided by the Airfield Operations Team from their local knowledge and records. On the advice of officers RPS assumed the “design aircraft” to be the Hawker Hunter T7, as previously operated by the RAF at the Airfield, a historic jet fighter, which requires the use of a parachute to assist in its braking once it has landed. This results in the T7 having a longer runway landing requirement than for taking off, the opposite of most aircraft. The PCN of the T7 is not known, and cannot be determined. However, its weight is thought to be less than 5,700kg in the condition that it normally flew.

9. Therefore, a presumption has been made that the main runway should accommodate a Landing Distance Available (LDA) of 1,400m and a Take Off Distance Available (TODA) of 1,100m.

10. Based upon a minimum LDA of 1,400m, it can be seen that this cannot be accommodated within those areas of the runway which are currently designated as PCN 10 and 9 (i.e. between 840m and 1920m). Therefore, if a PCN of 9 is to be achieved for the entire runway, some remedial works will be required to the asphalt and composite sections of the runway. In considering the scale of this additional work it is not simply a matter of remediating the minimal amount of asphalt runway, since the safe operation of the runway requires the thresholds (those areas where the aircraft actually touch down on landing or commence their run for take-off) to be located relative to the local surroundings and in particular to any obstructions which aircraft need to safely clear either upon take-off or landing. By slightly amending the commence of take-off runs on RW02, such that they commence at the threshold and not before, the overall requirement for remediation can be reduced. Figure 4 on page 14 of the RPS report sets this all out quite clearly.

11. The remediation suggested is intended to bring the sub-standard parts of the runway up to a standard of PCN 9, to meet licence conditions. Figure 5 on page 17 of the RPS report sets out the core proposals, splitting the work into two categories:

- (i) overlaying the necessary part of the asphalt runway with 250mm of new material; and
- (ii) tying in that new overlay with the existing runway surface on RW02/20 and with the much shorter and rarely used cross runway, RW13/31

with the intention of providing a LDA of 1,400m and a TODA of 1,100m. The runway width would be retained at its current 45m. Two of the options set out below would however reduce the operational width of the runway from 45m to 30m.

12. The RPS report sets out the types of overlay material which are suitable for purpose and could be used. RPS have not recommended the cheapest solution available, although they have stated that cheaper options could be utilised dependent upon the future proposed uses of the Airfield.

13. RPS have provided a number of estimated solutions, again dependent upon what the future use of the Airfield might be, for example, any intention to seek a CAA licence. All of the options are set out in detail in the report, but in summary are as follows:

Remediation	Baseline Overlay, existing runway profile	Option 1 Overlay, 1% transverse section to meet min. CAA stds.	Option 2 As option 1 , but 1.5% transverse section to fully meet CAA stds.	Option 3 As option 1 but with width reduced to 30m	Option 4 As option 2 but with width reduced to 30m
Runway overlay	£2,675,000	£4,100,000	£4,700,000	£3,600,000	£3,800,000
Runway reconstruction	£305,000	£305,000	£305,000	£305,000	£305,000
Runway tie-in areas	£450,000	£450,000	£450,000	£450,000	£450,000
<b>Total</b>	<b>£3,430,000</b>	<b>£4,855,000</b>	<b>£5,455,000</b>	<b>£4,355,000</b>	<b>£4,555,000</b>

14. The above costs make a number of assumptions:

- (1) there is no contingency (assume at least 10%);
- (2) normal daytime hours working;
- (3) unfettered access to the runway;
- (4) access elsewhere on site for plant, asphalt production etc; and
- (5) good weather

Work of this scale could take 6 to 8 weeks to undertake and require a runway closure for that entire period. RPS suggest that once a full technical solution is designed, this time period could reduce a little. It might also be possible to enable some use of the cross runway RW13/31.

15. The above costs are very significant, especially whilst the future of the Airfield remains subject to deliberation through the local plan. RPS were therefore asked to advise what the costs might be if a decision was made to simply overlay the existing asphalt areas, without seeking to achieve a PCN of 9 for the runway as a whole. Although not part of the report, RPS have indicated that in their view a simple 50mm overlay to deal with the immediate issues would cost in the region of £700,000.

#### Discussion on options

16. The RPS report does not reach any new conclusions, but does usefully provide support to previous cost estimates for the remediation of the runway provided. There are two main issues to consider:

- (1) the costs of remediation of any type at this point in the local plan process; and
- (2) the advice of Counsel and the approach the Council wishes to take with regards to those tenants who may demand the Council to meet the full conditions of their licences, with respect to PCN's.

17. In terms of (1) above, despite the existing Cabinet resolution to retain aviation at the Airfield, it would perhaps be prudent not to do any significant remedial works to the runway at NWA which could be seen as setting a precedent for the future use of the Airfield in the context of the North Weald Bassett Masterplanning exercise as a whole, and until the Local Plan is further advanced. It will be important however, that the existing inspection and maintenance regimes are fully applied during this period.

18. Discussion on Counsel's advice can be found in the commentary in the confidential part of this report

**Resource Implications:**

As set out in paragraphs 20 to 22 on Part II report.

**Legal and Governance Implications:**

See commentary in confidential part of this report.

**Safer, Cleaner and Greener Implications:**

None for the purposes of this report

**Consultation Undertaken:**

Counsel's advice

**Background Papers:**

Scott Wilson Report 1998  
Halcrow Report 20xx  
Deloitte Report 20xx  
RPS Report 2014

**Impact Assessments:**

Risk Management

See commentary in confidential part of this report