BESPOKE PERMIT APPLICATION – MANAGEMENT SYSTEM

Project:	London Southend Airport
Purpose:	Surface De-icer Drainage Discharge Permit Application
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MANAGEMENT SYSTEM FOR PROPOSED SURFACE DE-ICING OPERATIONS AT LONDON SOUTHEND AIRPORT

To enable London Southend Airport (LSA) to make the runways and taxiways safe for aircraft (in accordance with relevant Civil Aviation Authority guidance) it is necessary to remove ice, snow and frost during the winter months. Due to increased aircraft movements the airport anticipates an increased need for de-icing of aircraft and pavement surfaces.

This document outlines the management procedures that will be implemented by the airport operator, LSA to prevent environmental damage caused by runoff containing chemicals used for de-icing of airport pavements not de-icing of aircraft. When Aircraft de-icing is required the run-off generated is diverted to below ground storage to be dealt with separately. This permit application deals with the run-off that will discharge to Eastwood Brook and Prittle Brook. A non-technical summary of how this system will operate is provided in document CS/0441900-BPA-003.

It should be noted that this management system document is an outline document prepared on behalf of LSA for the purposes of the bespoke permit application. The airport will write its own detailed management procedure documents which will integrate with existing procedural documents. The principles of the management system in this document have been reviewed by LSA to ensure they correlate with those of the Airport's own procedures.

Activity Summary

During the winter months the airport operator de-ices runway and taxiways to provide a safe operating platform for aircraft.

The runway and taxiways to be de-iced are listed below[1]:

- Runway extension
- Main runway
- Taxiway Alpha
- Taxiway Bravo
- Taxiway Charlie

Aircraft de-icing will take place in the following areas[1]:

- PB2-F
- PB2-G

[1] Refer to drawing 044190-CPI-BPA-ZZZ-DSK-CE-001 for plan showing listed runway and taxiways.

Aircraft de-icing is carried out using different chemicals to surface de-icing, these have greater potential to damage the aquatic environment of the receiving watercourse. When aircraft de-icing takes place run-off will be diverted to a holding tank to prevent it from discharging to Prittle Brook.

The airport operator will monitor the weather conditions and when freezing conditions are predicted procedures to de-ice will be prepared. Surface de-icing and aircraft de-icing operations will not necessarily always take place together. This application covers the de-icing of pavements and does not cover aircraft de-icing.

De-icing Procedure

De-icing activity can be either prior to or after a frost, ice or snow event.

Liquid de-icing chemical (potassium acetate) will be safely stored on site in readiness for a de-icing event. The exact method of storage of this chemical has not been defined at this stage. It should be noted that this bespoke permit application deals specifically with the runoff containing de-icing chemicals as opposed to how the chemicals are handled prior to application.

The de-icing chemicals are mixed with water prior to application. Depending on the conditions the application rate of the de-icing chemical may vary - manufacturer's recommendations are to be followed in this regard. Generally the mixture applied will contain between 50% and 70% water.

De-icing chemicals will be sprayed onto the identified runways and taxiways by means of a tractor towing a Team Sprayer de-icing unit.

De-icer Runoff Management

Melted frost, ice or snow containing de-icer chemicals will drain into the existing below ground storm water drainage network where it will be conveyed via a piped system to the outfall watercourse.