

Protecting and extending the life of airport asphalt infrastructure

## CASE STUDY

### Queen Beatrix International Airport ARUBA

Aruba Queen Beatrix International Airport is the only airport in Aruba located near the capital, Oranjestad. The airport offers US Border pre-clearance facilities and is publicly owned and is operated by the Aruba Airport Authority. The runway was treated with RHINOPHALT® to protect and extend the life of the asphalt surface.

#### AIRFIELD PRESERVATION

##### The Challenge

In 1934, commercial airlines were introduced to Aruba. The paved runway was originally constructed in 1954 and reconstructed in 1987 and 2012. In 2019 it stands at 2743m x 45m.

The centre of the runway takes more trafficking stresses and the touch down and take off area had been resurfaced in 2012 with a 70mm asphalt in-lay.

##### The Solution

The contract was to preserve 18,000m<sup>2</sup> of asphalt surface on the runway and 2,000m<sup>2</sup> on the taxiway with RHINOPHALT®. This would extend the service life of the runway and delay the next maintenance period.

A 1000m long section, 9m either side of the centre line was selected for preservation treatment, to include the touch down zones.

#### CONTRACT

Roadgrip was the appointed contractor and treatment was carried out using Roadgrip's applicator which has been designed to apply fine RHINO-Dust at a calibrated rate in conjunction with RHINOPHALT®.

Roadgrip carried out the rubber removal from the centre of the runway in advance of the RHINOPHALT® application. Their specialist equipment ensures no damage is caused to the asphalt surface.

#### MINIMISING DISRUPTION

Application commenced in September 2019 working to strict night-time operating windows. The Runway was treated in 2 shifts, and the taxiway in 1 shift.

All lines were re-instated within the same shift once the RHINOPHALT® had cured.



#### FRICITION RECOVERY

Fine RHINO-Dust is applied at the same time as the RHINOPHALT® which maintains grip and helps to abrade the RHINOPHALT® from the aggregate surface under trafficking. Once the aggregate micro-texture is exposed, the grip values are returned to pre-application levels.

Friction testing was carried out prior and post application. The grip values of treated sections were at 0.67, well above the required minimum level of 0.30.

#### EXTENDED PAVEMENT LIFE

One application of RHINOPHALT® on older asphalt surfaces can extend pavement life by an additional 3 to 5 years or more, delaying the massive cost and disruption of a resurfacing intervention.

Aruba Airport chose RHINOPHALT® to extend the service life for at least 3 years.



*We from the Aruba Airport Authority are very satisfied with the Rhinophalt product. The application with dust has been performed over-night and in the morning the runway was open and ready for normal operation. After application of the Rhinophalt the friction coefficient has increased in general more than double of our required minimum of 0.3*

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Leaders in asphalt preservation