

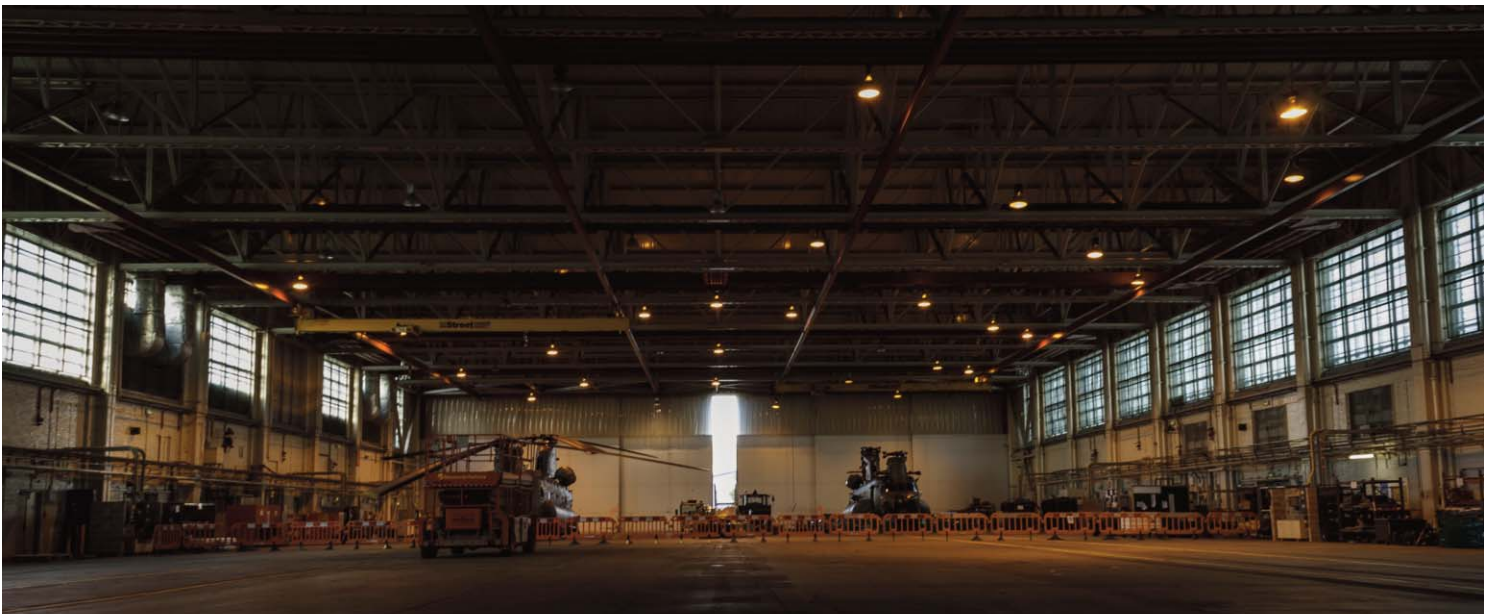
Dialight's DuroSite® LED Lighting Fixtures

RAF Odiham is a front line support helicopter base just south of London and known in recent times as the home of the Chinook force in the UK. The base has many facilities for service personnel and dependents alike and a distinguished history going back to 1925.

The Challenge

Having started life as a multi-use barn, RAF Odiham's 35-year old Building 140 H3 needed a radical lighting upgrade to turn it into a suitable facility for stripping down and rebuilding helicopters. The former barn was fitted 20 years ago with forty 400W SON high bays which were producing so little light that task lighting was necessary. Many of them failed every year and annual maintenance was running in excess of £1500.

Targets for the lighting upgrade included increasing the lux from 100 to 500 at work level as well as delivering energy savings and reducing carbon emissions, all from a turnkey lighting solution with an acceptable payback period.



Building 140 H3 lit by 400W SON high bays – 100 lux at work level

The Solution

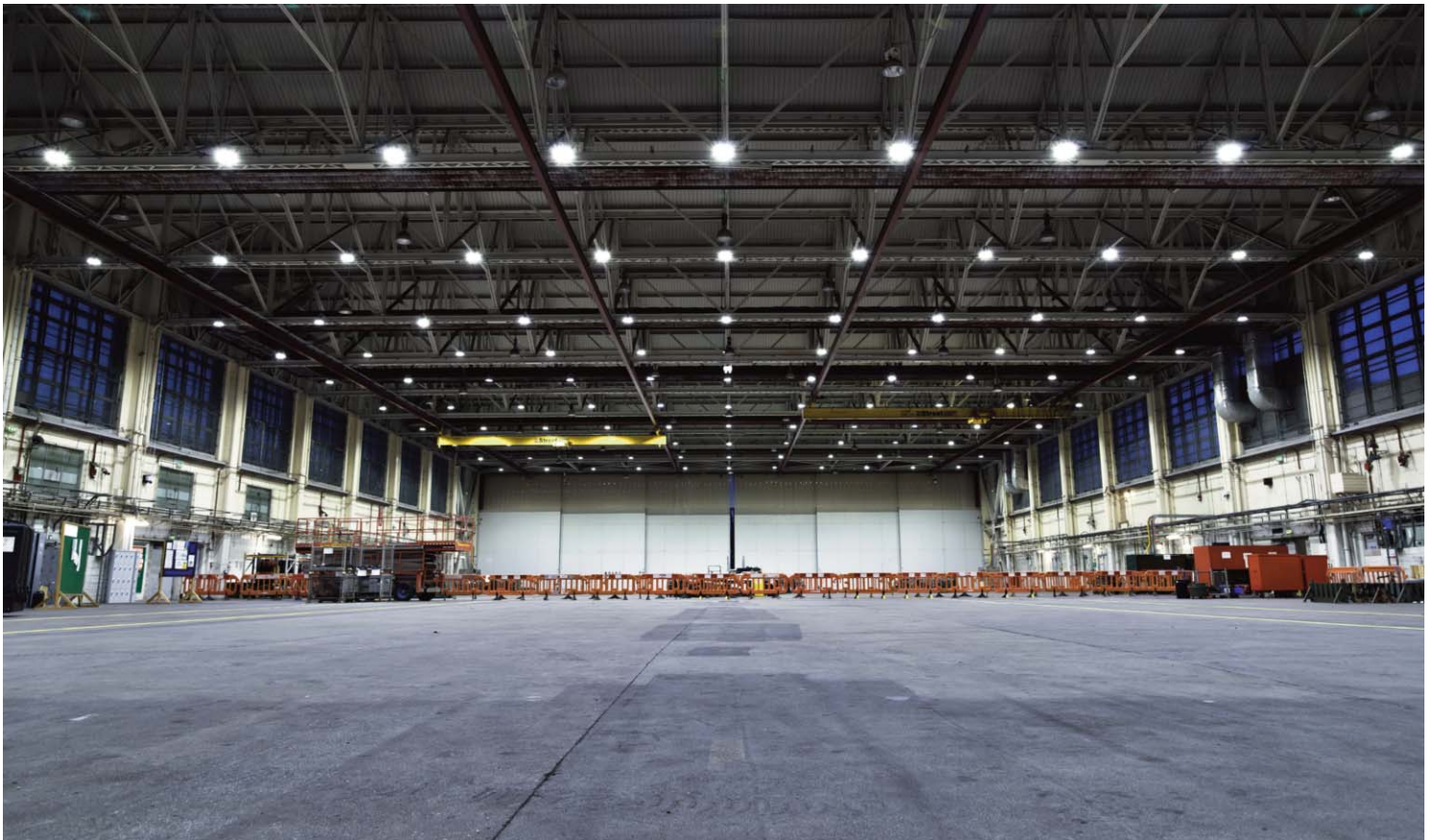
Working with energy saving specialists the Dodd Group, two solutions were evaluated as replacements for the entire lighting installation. It was calculated that 192 x 400W SONs or 132 x 170W LED high bays would be required in order to achieve the 500 lux target alone. Specialist in LED technology Dialight was chosen for its proven track record of high volume applications in commercial and industrial sectors and its constant high end production of LED lighting manufactured in the UK. As each LED fitting also carried a 5-year warranty and could be expected to last 10-15 years, maintenance would also become a thing of the past.

The Result

The Dodd Group completed the installation in only five weeks from start date, delivering the turnkey solution promised. By opting for Dialight's 170W LED high bays energy use in the 24/7 facility is over 70% lower than it would have been if the SONs had been installed instead. Unlike SONs the LED fittings can be switched off without re-strike delays, so the installation now features four workable lighting zones and one central walkway. These can be operated to suit users during the 24 hour shifts and this flexibility allows even more energy savings and associated reduction in carbon emissions. When combined with the maintenance savings, these efficiencies have allowed RAF Odiham to achieve a payback period of only 1.2 years when comparing this investment in LED technology with the alternative solution of energy-hungry and limited lifespan SONs.

Installation Snapshot

- 170W LED high bays chosen in place of 400W SONs
- Lux up from 100 to 500 at work level
- Increased productivity
- Power consumption down by 70% by choosing LED
- Extra savings with lighting zones
- 5-year warranty eliminates maintenance
- 1.2 year payback period



Building 140 H3 lit by 170W Dialight LED high bays – 500 lux at work level

Matt Clarke of the Dodd Group commented:

“The lighting has made a dramatic difference to the works space, enabling the RAF to efficiently work on detailed engine systems and maintenance tasks without supplementary task lighting. There is virtually no difference from night to day in the hangar now and this helps with the 24 hour shifts utilising the building and improves staff morale. H3 at Odiham is a benchmark for sustainability as well as value for money.”

To contact the Dodd Group email customer.services@doddgroup.com or call +44(0)1952 290290



HPS

- Voluminous body
- Fragile
- Total power consumption 400W
- Sensitive to voltage change
- Slow warm-up
- Accumulation of dirt due to heat
- Contains dangerous and harmful gases
- High CO2 emissions
- Low energy efficiency
- Rapid deterioration of bulbs



LED

- Small and compact body
- Resistant to shock and vibration
- Total power consumption 172W
- Non-sensitive to voltage change due to its wide voltage range
- Instant on/off ability
- Low heat, so doesn't accumulate dirt, easy to clean
- Contains no harmful gases
- Low CO2 emissions
- High energy efficiency
- 100,000 hours lifespan

Dialight reserves the right to make changes at any time in order to supply the best product possible.

The most current version of this document will always be available at: www.dialight.com/news/details/RAF_Odiham_Case_Study