Media Release

QANTAS TO OPERATE NON-STOP LONDON TO SYDNEY RESEARCH FLIGHT

- 2nd of 3 Project Sunrise research flights to reduce jetlag and design optimum crew rest and work pattern
- Builds on learnings from New York-Sydney service last month
- ‘Supper at breakfast time’ among changes to on-board service to help passengers adjust to new time zone
- Almost 100 years to the day that the first London to Australia flight operated

London, 13 November 2019: Australia’s national carrier is preparing for its second ultra-long haul research flight, as part of scientific studies into minimising jetlag for passengers and improving crew wellbeing.

The first research flight operated between New York and Sydney non-stop four weeks ago with 49 passengers and crew. It cut around three hours off the typical gate-to-gate travel time of current one-stop flights.

The airline has re-purposed the delivery flights of three brand new 787 Dreamliner aircraft, which would otherwise ferry empty from Seattle to Australia. A third research flight, repeating the New York-Sydney route, will take place in December.

Tomorrow’s flight marks only the second time in history that a commercial airline has flown direct from London to Sydney. The first was 30 years ago in 1989, when Qantas operated a 747-400 ferry flight between the two cities. The aircraft that performed that flight (VH-OJA) is now on public display at an aviation museum, south of Sydney.

Researchers from the University of Sydney’s Charles Perkins Centre as well as the Cooperative Research Centre for Alertness, Safety and Productivity (Alertness CRC) will again travel on the non-stop Dreamliner flight to collect passenger and crew data.

The findings from all three research flights will be used to inform future service and product design, aimed at increasing wellbeing and comfort during travel on long-haul flights – in particular the direct flights Qantas hopes to operate on a commercial basis between the east coast of Australia and London and New York.

Project Sunrise Research Flight #2 – London to Sydney

The research flight will carry around 50 passengers and crew in order to give the 787-9 the range required for the 17,800 km flight, expected to take around 19 and a half hours.

While the flight is over [1,500] kilometers further than New York to Sydney, the duration is expected to be similar due to prevailing tail winds between London and Sydney.

All carbon emissions from the research flights will be offset. Qantas recently announced an acceleration of its efforts to reduce its broader carbon footprint, including effectively doubling current levels of flight offsetting, capping carbon emissions from 2020 onwards and totally eliminate net emissions by the year 2050.

On board, six Qantas Frequent Flyers will take part in the passenger research. They will be fitted with wearable technology devices and follow a redesigned eating and sleeping schedule which aims to facilitate on board wellbeing and adjustment to new time zone.

Qantas CEO Alan Joyce said air travel had evolved over the years and innovation was key, which involved looking at options to redesign aircraft cabins to include “move and stretch” zones and other social spaces.

“We know that travellers want room to move on these direct services, and the exercises we encouraged on the first research flight seemed to work really well. So, we’re definitely looking to incorporate on-board stretching zones and even some simple modifications like overhead handles to encourage low impact exercises.”
Professor Corinne Caillaud from the Charles Perkins Centre said that data from all three flights will be used for the analysis however feedback from participants on the first flight suggests the changes trialed would be welcome by passengers.

“We are hopeful that the interventions and strategies we tried on the first research flight helped passengers better manage the challenges of crossing multiple time zones. From a research point of view, it was something quite novel.

“We’re looking forward to this second flight, which will involve passengers eating supper at breakfast time, with the aim of encouraging them to sleep at 10am in the morning London time to help avoid light and reset their body clock to Sydney time.”

Passengers will board at 6am London time. After take-off they will be offered a range of high GI supper options such as chicken broth with macaroni or a steak sandwich, along with a glass of wine and a milk based panna cotta dessert.

Cabin lighting and temperature, stretching and meditation will also play key roles in the research.

Qantas first started flying between London and Sydney in 1947. It took five days and six stops. Today, the airline flies London to Perth non-stop in around 17 hours and the route has the highest customer satisfaction rating of any flight on the Qantas international network.

Mr Joyce added: “Our Perth to London flight was a huge leap forward and it’s been incredibly popular. The final frontier is New York and London to the east coast of Australia non-stop and we are hopeful of conquering that by 2023 if we can make all elements of the business case stack up.

“I’ve had business travellers tell me they’d rather stay on board and watch an extra episode of their favourite show before arriving at their final destination, rather than spending 90 minutes on the ground waiting for a connecting flight. I’ve also had a few parents tell me they would rather not disturb their kids if they are settled in and avoid having to bundle them and all their carry-on luggage off and back on a flight during a stopover. So, there is definitely support for the non-stop flights”.

The London to Sydney Project Sunrise research flight will operate almost 100 years to the day that the first ever flight from the UK to Australia took off from Hounslow Heath (near today’s Heathrow Airport) on 12 November 1919. It landed in Darwin 28 days later on 10 December 1919.

Airbus and Boeing have pitched aircraft (the A350 and 777X respectively) with the range to operate Project Sunrise flights on a commercial basis. These pitches, together with findings from the research flights and other streams of work, will form part of a business case being developed by Qantas to inform a final yes/no decision on Project Sunrise expected by the end of this year. If approved, flights could start as early as start in 2023.

Qantas has named its endeavor “Project Sunrise” after the airline’s historic ‘Double Sunrise’ endurance flights during the Second World War, which remained airborne long enough to see two sunrises.

Link to vision and image library and B-roll

Qantas flights to London over the years

<table>
<thead>
<tr>
<th>Year</th>
<th>Aircraft</th>
<th>Stops</th>
<th>Flying Time</th>
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</thead>
<tbody>
<tr>
<td>1947</td>
<td>Constellation</td>
<td>6 Darwin, Singapore Calcatta, Karachi Cairo, Castle Benito (Libya)</td>
<td>55 hours (across 5 days)</td>
</tr>
<tr>
<td>1969</td>
<td>Boeing 707</td>
<td>3 Singapore Calcutta Rome</td>
<td>28 hours (across 2 days)</td>
</tr>
<tr>
<td>Today</td>
<td>Airbus A380</td>
<td>1 (Singapore)</td>
<td>22 hours, 20 mins</td>
</tr>
<tr>
<td></td>
<td>Boeing 787-9</td>
<td>0 (London-Perth direct)</td>
<td>18 hours, 8 minutes.</td>
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Background:

Pilot and Cabin Crew research – in partnership with the CRC for Alertness, Safety and Productivity

- The primary aim of the research is to examine the sleep cycles and alertness of pilots and cabin crew during extended flight duty to establish optimum crew work and rest patterns.
- Four pilots and six cabin crew will be involved in the data collection, wearing devices to measure activity and light exposure, completing sleep diaries and tests of alertness and reaction time.
- Pilots will wear EEG (electroencephalogram) brain monitoring equipment for the duration of the flight to track brain activity and monitor alertness during their “on” times and quality of sleep during their “rest” periods.
- Pilots will also provide researchers with urine samples from before, during and after the flight which will track melatonin levels to establish individual body clock timing.
- Cameras will be mounted in the cockpit for the flight duration to record alertness cues and operational activities.
- The pilots have spent time in the 787 flight simulator to ensure the EEG brain monitoring equipment doesn’t interfere with aircraft systems and standard operations.

Passenger research – in partnership with University of Sydney’s Charles Perkins Centre

- The aim of the research is to identify strategies to reduce jetlag and promote inflight health.
- Passengers will be fitted with wearable device technology to track movement and light exposure.
- Lighting schedule in the cabin is designed to maximize adaptation to the destination time zone.
- Customers will experience altered food and beverage menus and service timings
- Regular out of seat movement and activities will be recommended.
- Passengers will keep a daily log for a week prior to the flight, during the flight, and for two weeks after the flight and will note how they feel throughout the study.
- Passengers will complete a test on an iPad, similar to a game of “Whack a Mole”, to gauge reaction time and cognitive performance.

Flight fast facts

- QF 7879 flight from London to Sydney will take around 19-and-a-half hours subject to wind and weather conditions on the day. Distance between London and Sydney is 17,800 kilometres (11,000 miles). This compares to a travel time of 22 hours and 35 minutes on the current London to Sydney via Singapore flight.
- The flight will be operated by a brand-new Boeing 787-9 with a special Qantas Centenary livery, registration VH ZNJ, named “Longreach”.
- Four pilots will be on rotation throughout the flight. Two additional pilots will be in the cabin, having flown the aircraft to London.
- The route will depart London and overfly 11 countries including England, Netherlands, Germany, Poland, Belarus, Russia, Kazakhstan, China, Philippines and Indonesia before crossing the Australian coast near Darwin, tracking across the country before descending into Sydney.
- The aircraft will operate with a maximum fuel load of approx. 126,000 litres. Projected fuel remaining upon landing is approximately 7,500 litres which translates to about 100 minutes of flight time.
- Maximum take-off weight for a 787-9 is 254,000kg. QF 7879 LHR to SYD will depart at 233,000kg take-off weight with the same amount of fuel that Qantas departs Perth to London flights with.
- Flight will travel at 85% the speed of sound which is around 930 kilometres an hour. Cruising altitude will start at 35,000 feet and then as the aircraft weight reduces with fuel burn, the cruising altitude will increase to 40,000 feet.

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