

# Serious Incident Investigation London Gatwick Airport EGKK

International Air Safety Summit- IASS 2019

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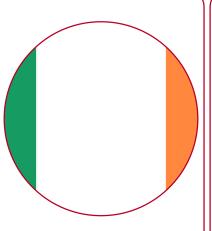
#### Norwegian



Norwegian Air Shuttle/ Norway



Norwegian Air Sweden



Norwegian Air International



Norwegian Air Argentina



Norwegian Air UK

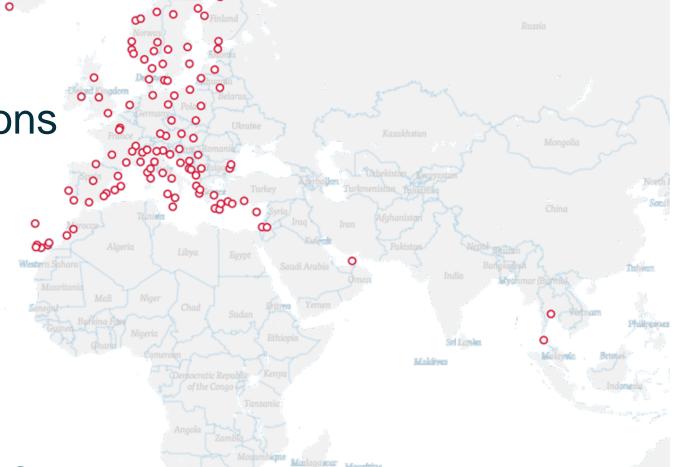
**Multi AOC organisation** 

#### Norwegian in figures

5<sup>th</sup> largest low-cost airline

500 routes to 150 destinations





- Carried 37 million pax in 2018
- Fleet of 170 aircraft 737 & 787



#### **Flight Details**

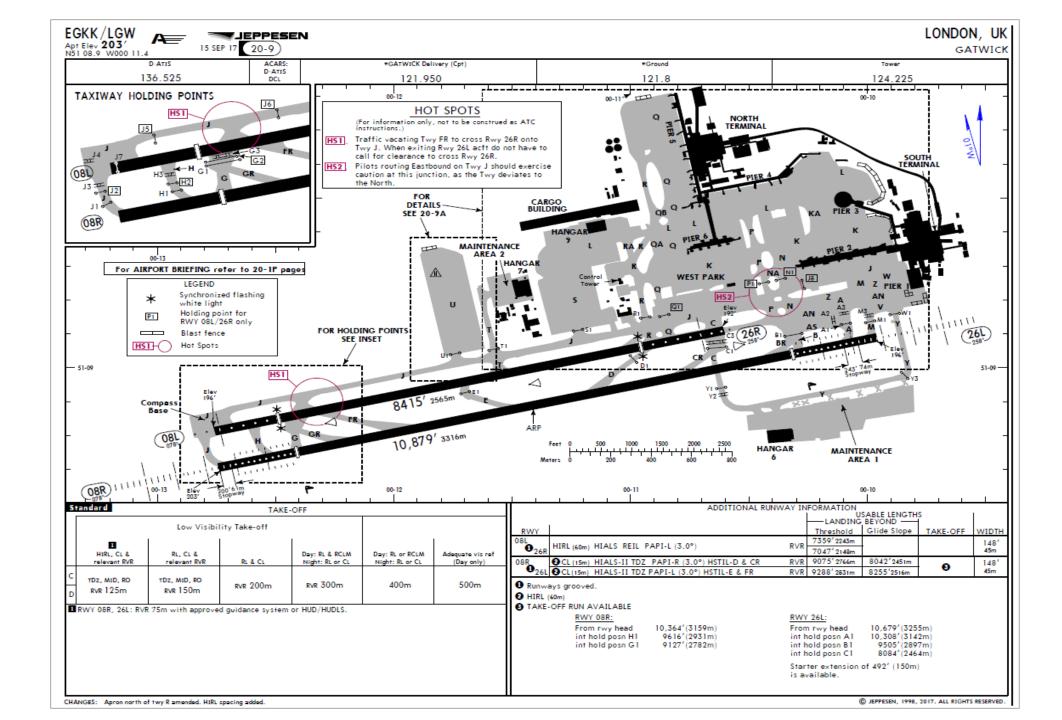
- EGKK (London Gatwick) to SAEZ (Buenos Aires)
- March 28<sup>th</sup> 2018
- STD 2130z
- B787-9 operated by 3 crew: Captain Relief Capt. FO



#### Notification of a late lift-off event

- Observed by controller on duty and reported internally
- Air Navigation provider queried Norwegian about the event
- Pilots did not recall anything unusual about the departure









#### Confirmation of the event

- Flight data monitoring flagged "late lift-off event"
- Performance calculations confirmed non-compliant figures
- Notification to the authorities (Mandatory Occurrence)

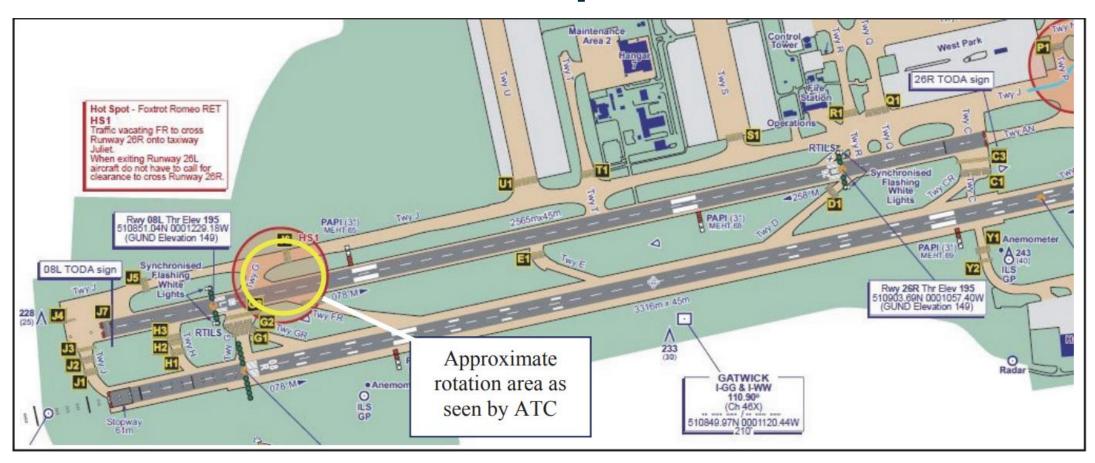
"Inability to achieve required or expected performance during take-off"



norwegian

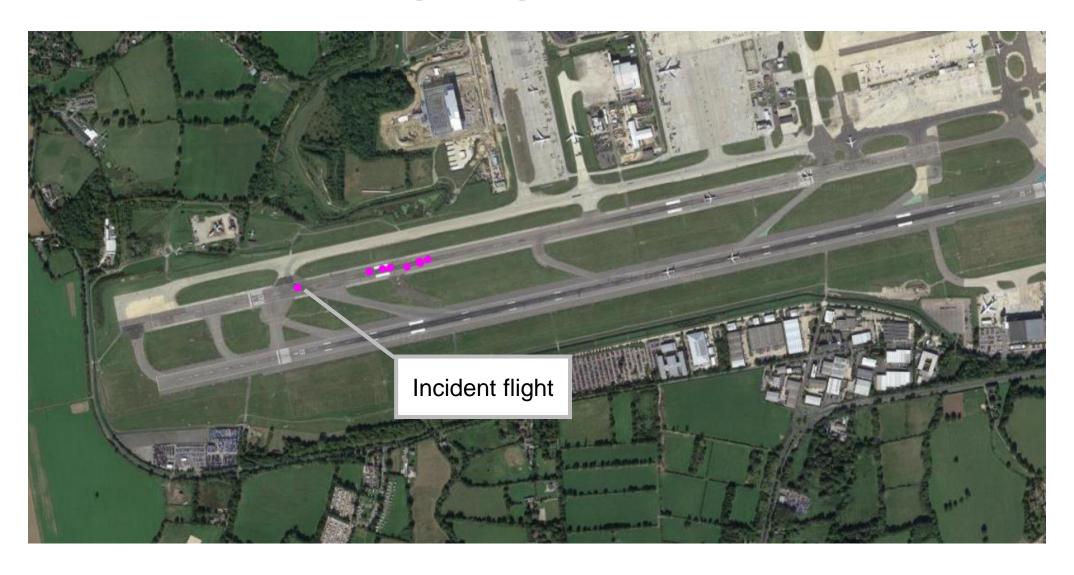
### Investigation Process

#### Lift-off point

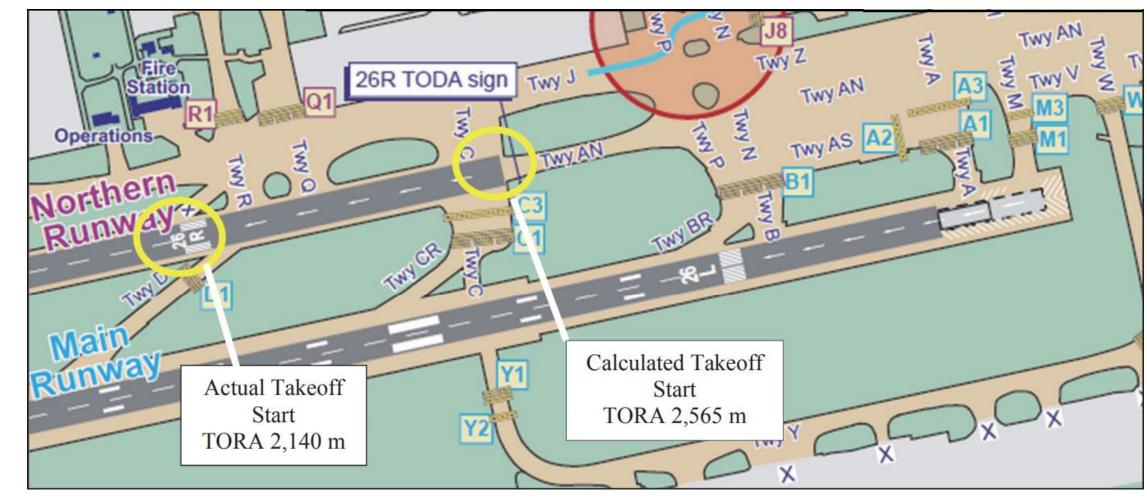




#### **Comparison using Flight Data**



#### Calculated and Actual Take-off start points





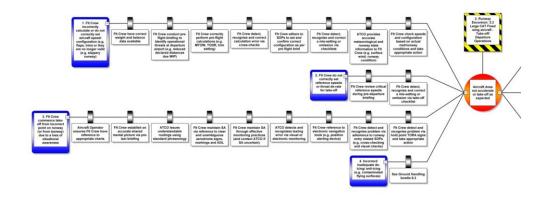
#### **Applicable NOTAM for EGKK**

```
DEPARTURE AIRPORT
===========
EGKK /LGW LONDON/GATWICK /ETOPS ADEQ - DETAILED INFO
1A1156/18
 MON THU 2145-0500, TUE WED 2130-0500
 RUNWAY 08R/26L CLOSED. RUNWAY 08L/26R IN USE TUE WED 2140-
  0450, MON THU 2155-0450. LIGHTS FOR CLOSED RUNWAY AND PARALLEL
  TAXIWAY NOT VISIBLE ON APPROACH. THERE IS A 10 MIN CHANGEOVER
 PERTOD
 WHEN NO RUNWAY WILL BE AVAILABLE LAST DEPARTURE 5 MINS BEFORE
 CLOUSURE. DURING RWY 08L/26R OPERATIONS START OF ROLL IS TO
 COMMENCE
 ABEAM THE TODA SIGN.
1A1161/18
 ACFT STANDS 50M, 51R, 51M, 51L CLSD DUE WIP
```



#### Tools used during the investigation

- Discussion with ANSP
- Information available from airport authorities
- Interview with the crew



https://www.caa.co.uk/Safety-initiatives-andresources/Working-with-industry/Bowtie/Bowtietemplates/Bowtie-document-library/



#### **Bow tie barriers**

ATC issues understanda ble routings using standard phraseology

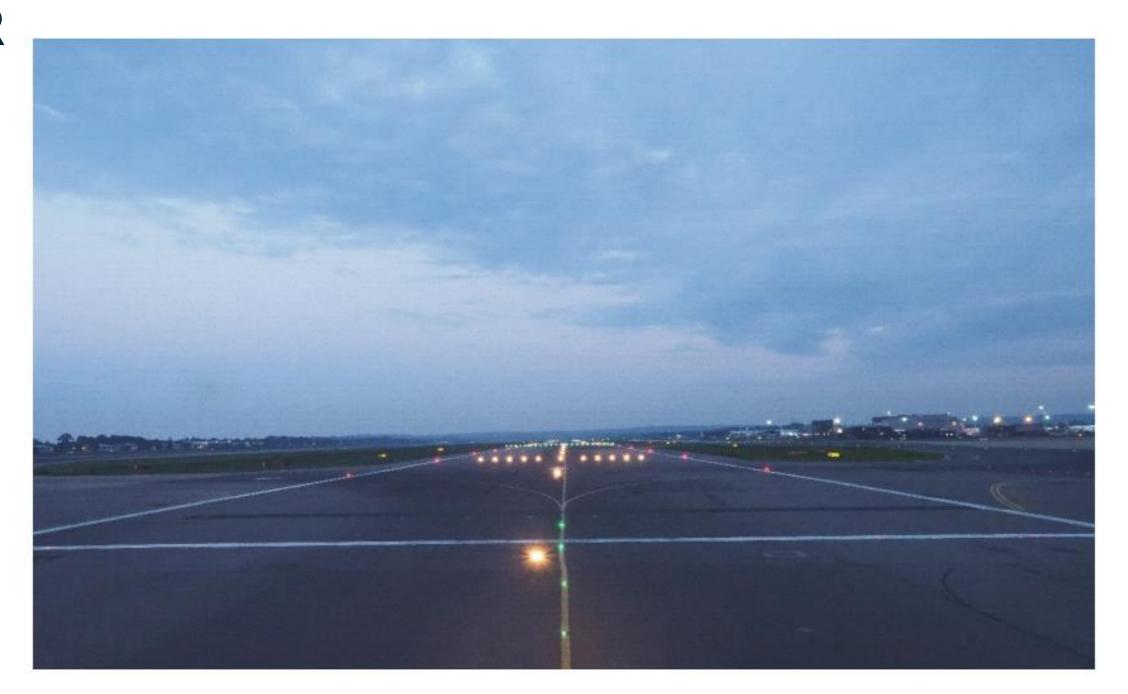
ATC recognises taxiing error via visual or electronic monitoring

Flight crew establishes appropriate mental picture: \*preflight brief with reference to appropriate charts

Flight crew maintains situational awareness by

\* Reference to clear and unambiguous signs, markings and lighting

#### **26R**



#### Internal investigation recommendation

To promote the event as much as possible



#### 1. Proposed Actions for Operators

To encourage the recognition of take-offs that fail to meet regulatory performance, as part of the hazard identification events in their SMS systems

To monitor and pursue investigations into "late lift-off" events as part of their FDM/FOQA system





#### And then this happened....

UK CAA asked the AAIB to investigate



## **AAIB** findings

#### **Extract from AAIB investigation**

...." This was not the first time that an aircraft had begun its takeoff roll from the landing threshold. Gatwick reports indicated there had been at least six incidents, involving multiple operators OTHER THAN NORWEGIAN, between September 2017 and this incident involving G-CKWC.

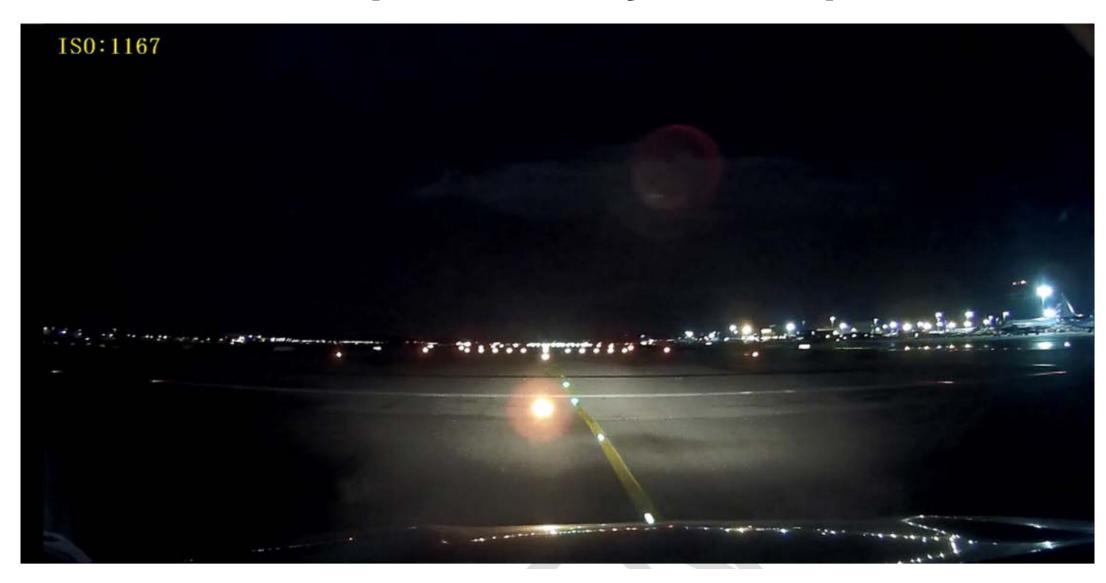
The airport, aware of the risk, put in place several actions to improve the awareness of crews about the location of the beginning of the runway.



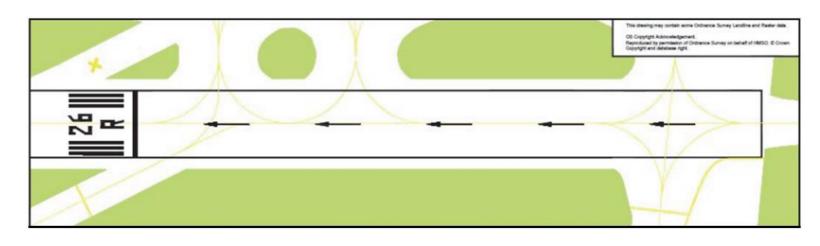
#### **NO** recommendations for Norwegian



#### Picture provided by the Airport

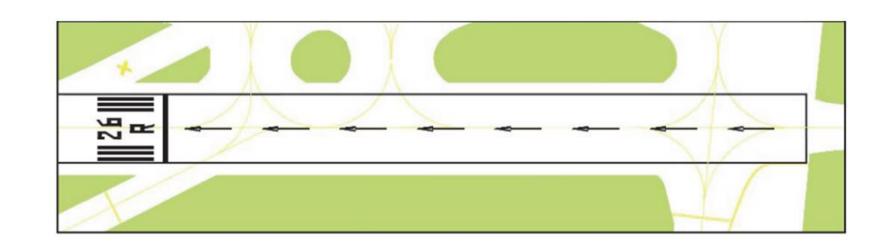


#### Recommendations to the airport



At the time of the inspection

Required by EASA



## 2. Proposed Actions for Investigation bodies and Regulators

To support operators during investigations of serious incidents, particularly when the operator is unable to assess how robust other elements of the system are, for example with aerodrome and air navigation standards.



## Further Actions proposed by Norwegian

#### 3. Proposed Actions for FDM / FOQA suppliers

A complete study or survey should be conducted into the capability of detecting take-off performance errors and risks through FDM/FOQA tools



## A last note for Manufacturers and Certifying Authorities

Shouldn't the technology that could alert crews of this errors be available as standard in all commercial aircraft?





**Thanks**