

## London Ashford Airport Public Inquiry

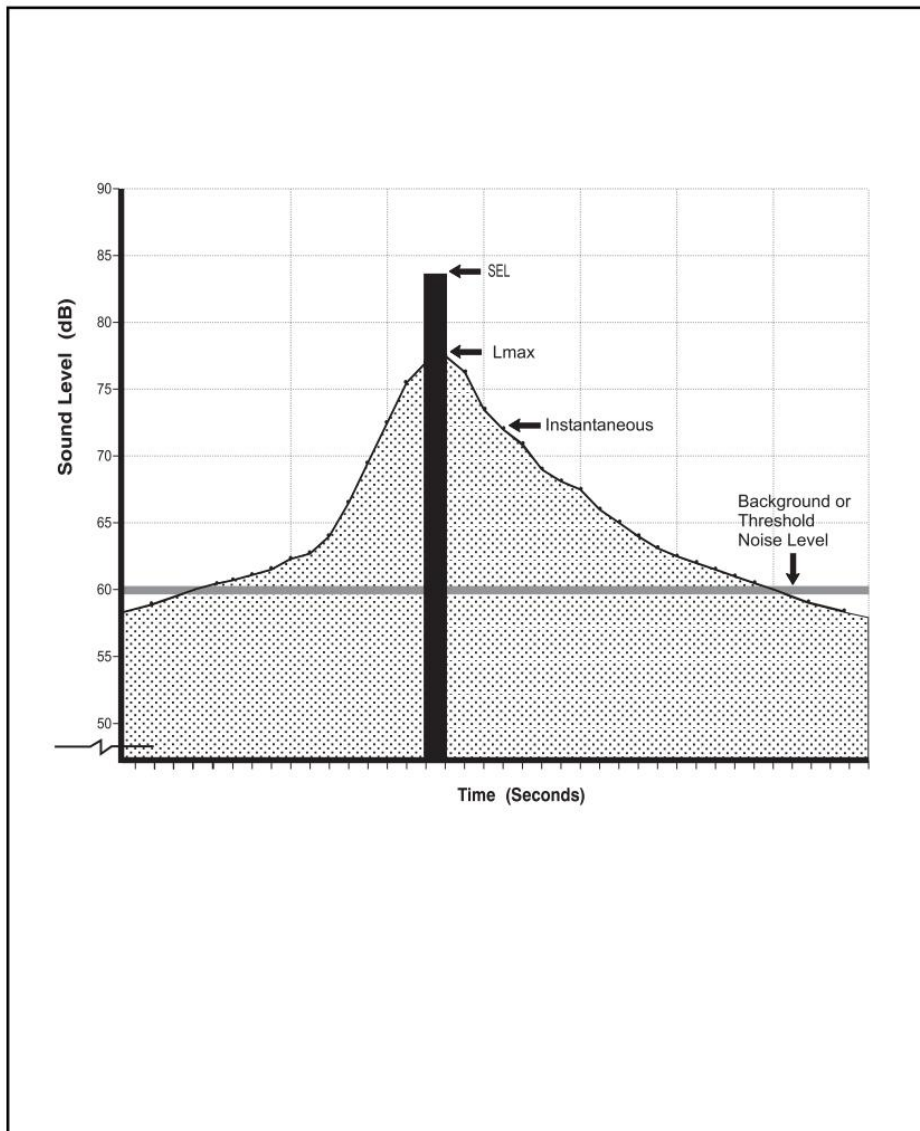
### Notes on Noise in response to comments to date at the Inquiry.

This document has been produced to provide additional explanation or clarification on points in relation to the noise evidence.

#### 1) Noise Parameters

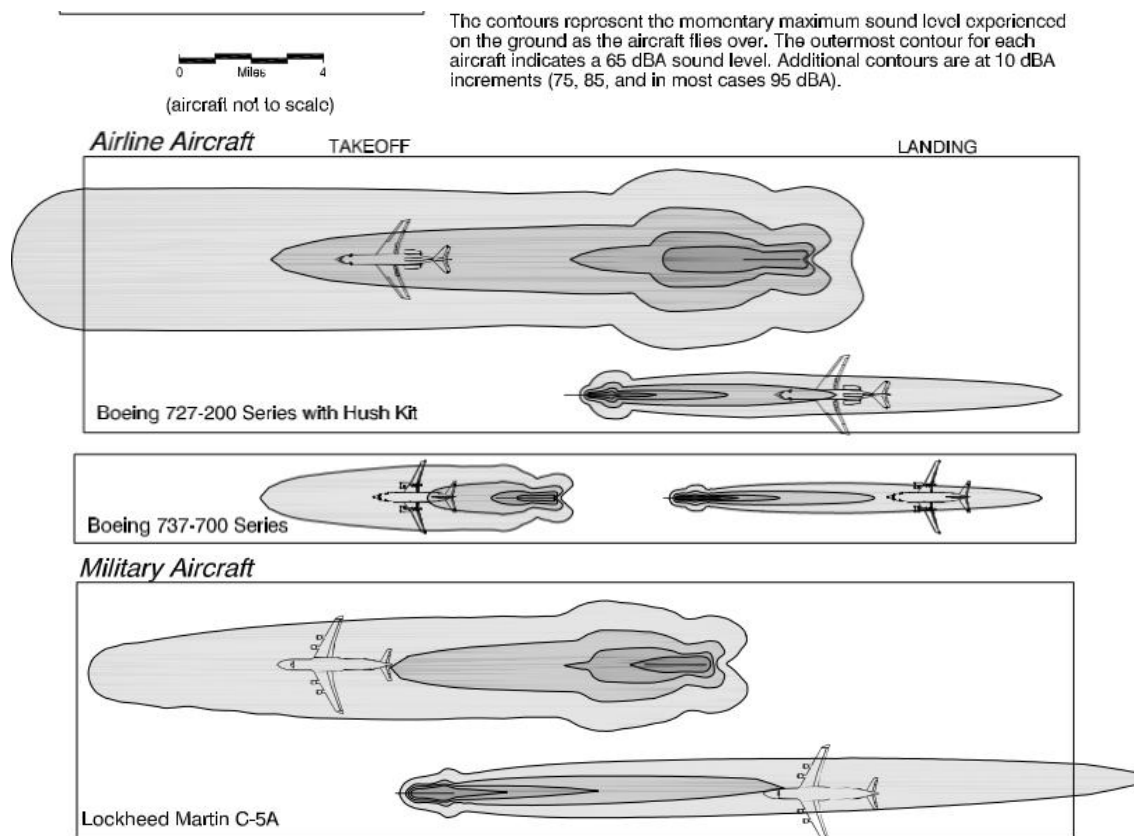
The noise evidence includes a number of parameters, all described in terms of decibels. In the chart below, the most common parameters of SEL, Lmax and Background (LA90) are presented for a single aircraft Passover event lasting 40 seconds.

This graph shows a time history of an aircraft flyover event for a period of 40 seconds. It shows the maximum level at the peak of the time history and the calculated SEL, which is the equivalent acoustic energy when expressed over 1 second. The average sound level  $L_{Aeq, 40 \text{ seconds}}$  of this event is approximately 70dB.



## 2) Noise Footprints

The relative noise profile for each aircraft have been presented in numerical terms (SEL, L<sub>Amax</sub>, etc.), so here follows a graphical comparison of the noise footprint for some typical aircraft under discussion at this Inquiry.

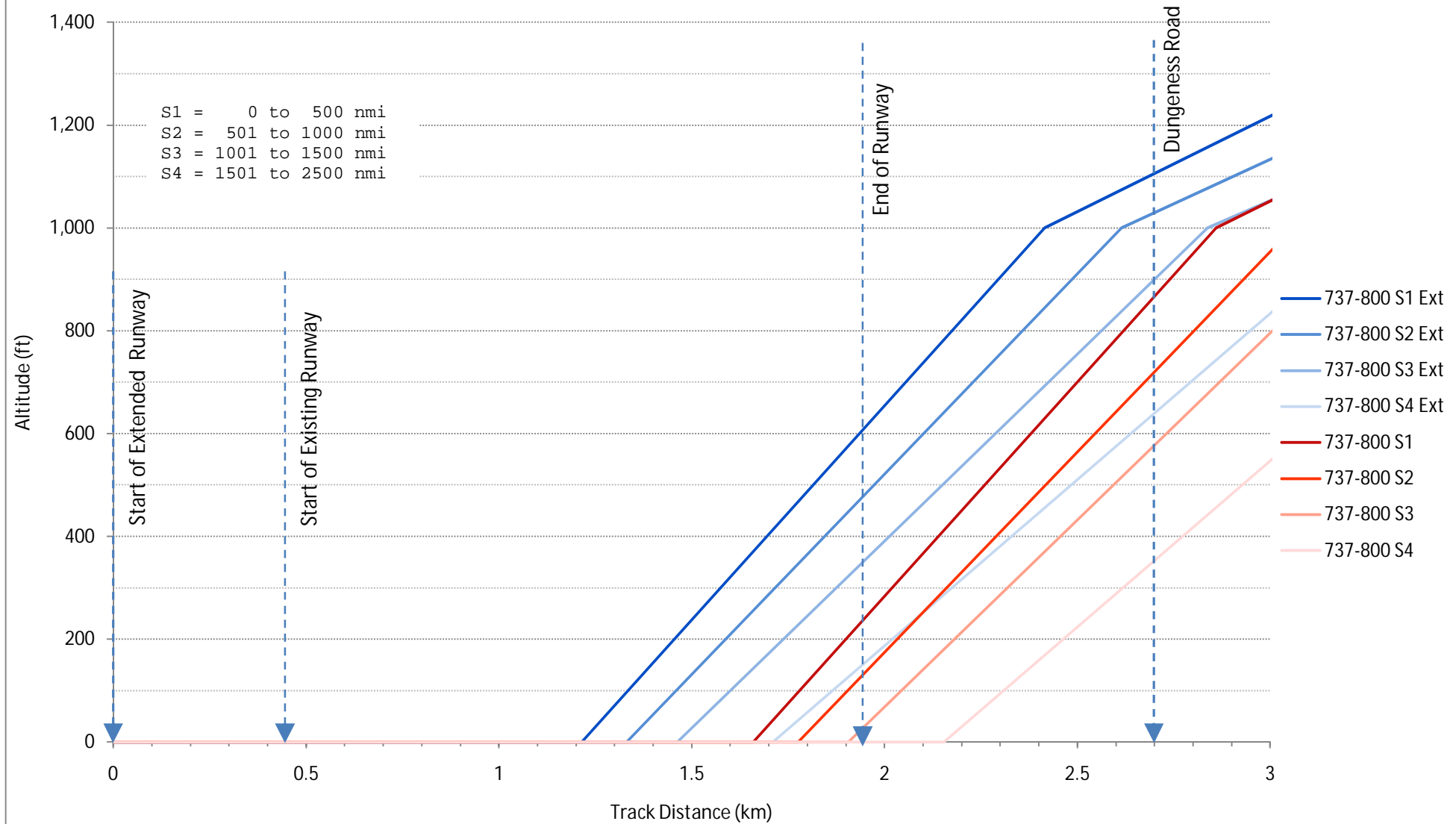


This graph shows the relative noise footprint for each aircraft. As aircraft designs have improved, such as comparing the 737-200 to the 737-700, the noise footprint has reduced. The military aircraft are significantly noisier than the 737 – 800 profile which is similar to the 737-700 profile above.

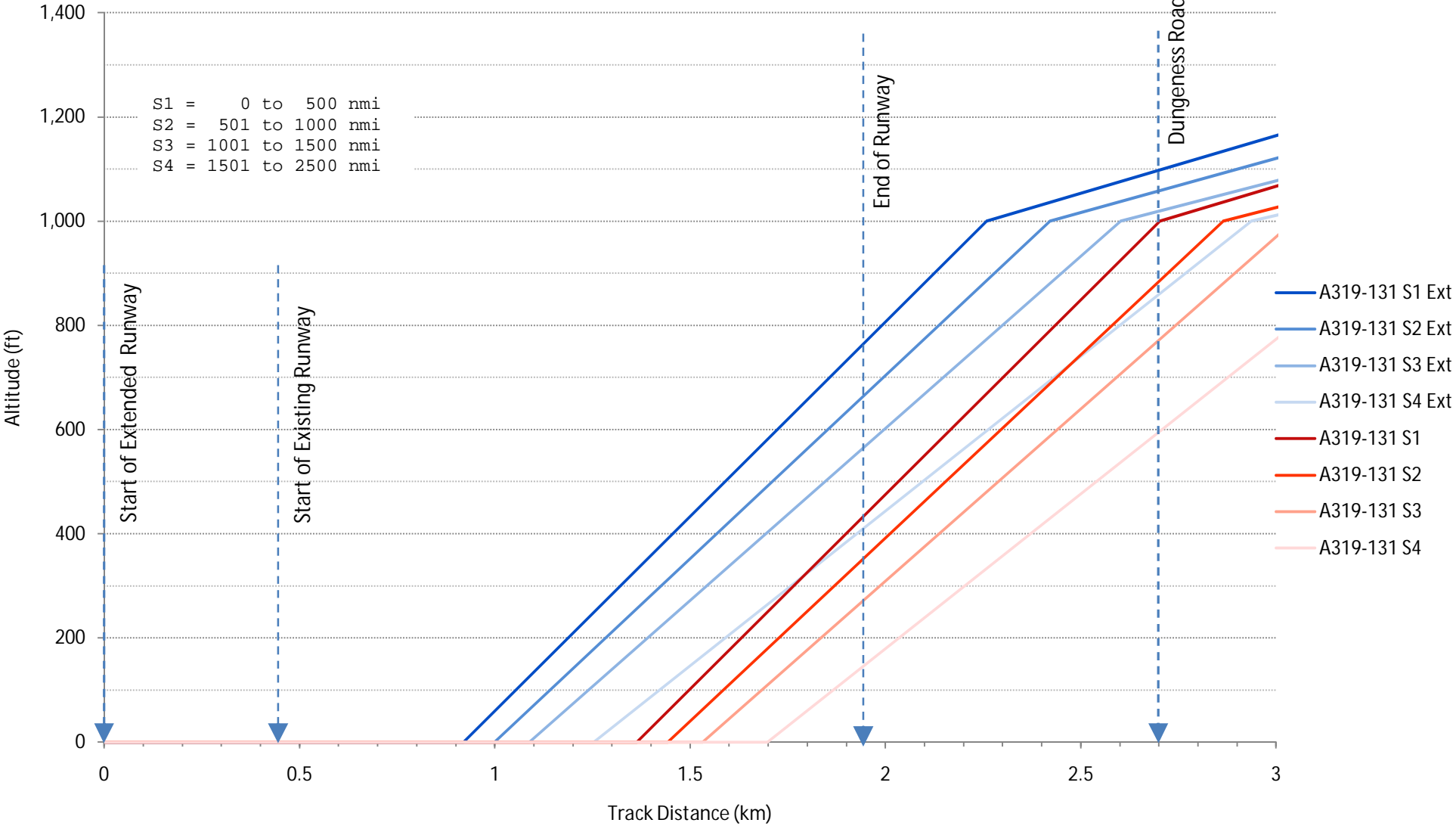
## 3) Flight Profiles for Departures (attached graphs).

- i) B737-800 using Existing & Proposed Runway 21 departure  
This graph compares the flight tracks for various aircraft and departure stage lengths for the existing and proposed runways.
- ii) A319 using Existing & Proposed Runway 21 departure  
This graph compares the flight tracks for various aircraft and departure stage lengths for the existing and proposed runways.
- iii) Comparison of an S1 departure for various aircraft types  
This graph compares for an S1 stage length departure the relative heights of five aircraft types.

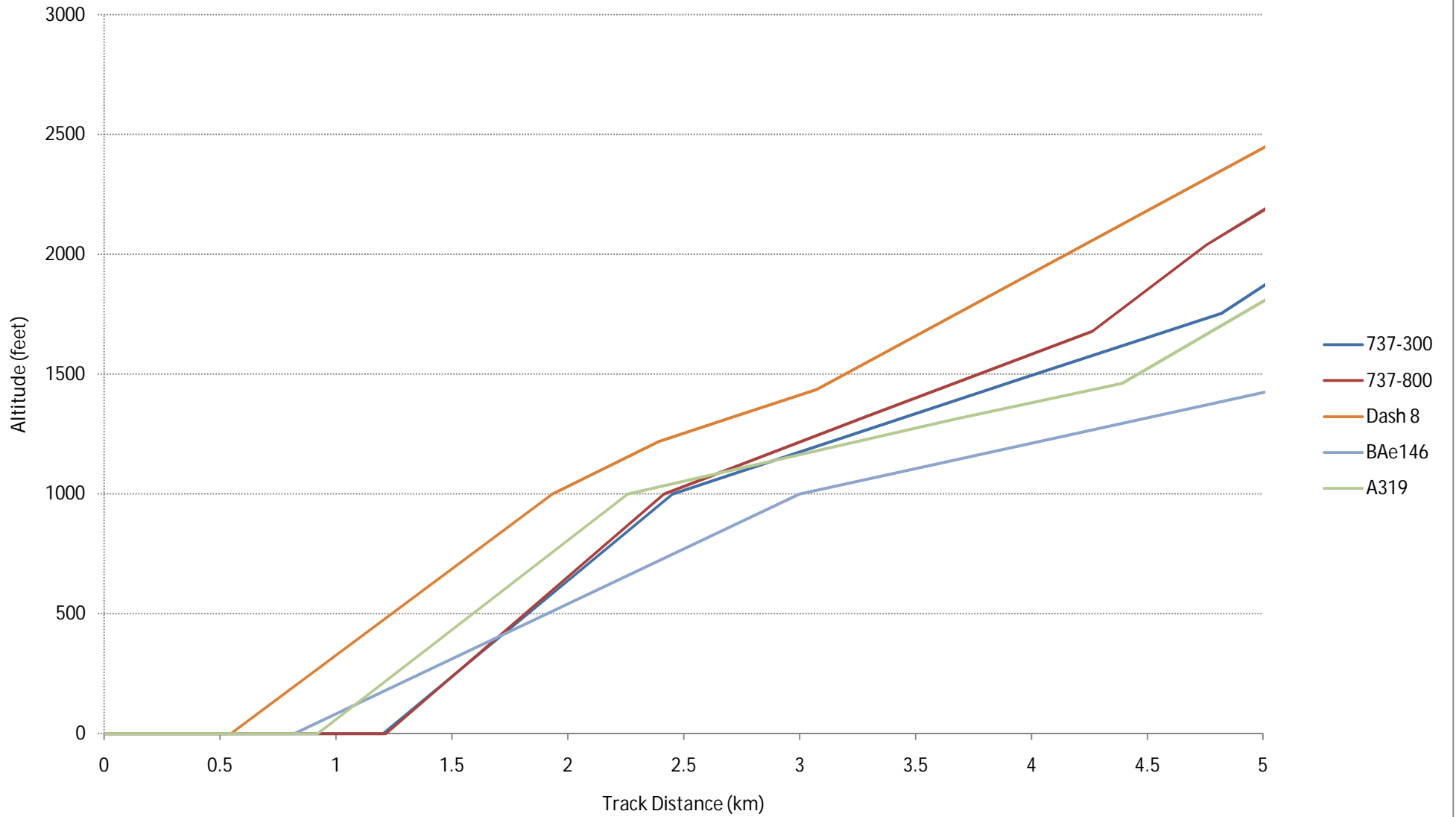
# INM Profile: Track Distance vs Altitude for B737-800 Aircraft Standard Profiles 1 - 4 With and Without Extension



# INM Profile: Track Distance vs Altitude for A319-131 Aircraft Standard Profiles 1 - 4 With and Without Extension



# INM Profile: Track Distance vs Altitude Standard 1 Profile



- 4) Table Clarification CD1.41a Table 16.21 – this table relates to the range of SEL data for the entire B737 range, not just the 737-800
- 5) The following noise modelling assumptions are correct:
  - The 70/30 “modal split” is the starting point for assigning aircraft movements to a corresponding flight path for take –off or departure. This has been agreed with LAAG in the statement of common ground;
  - The flight paths through the Lydd range are capable of being flown when the range is not active. In 2008, the range was closed every day before 08.30am, and for 37% of days, which was 135 days in the year.
  - The omission of an RNAV flight path in the noise modelling is appropriate as in practice the ILS flight path would be used as the preferred arrival route. This was confirmed in the evidence given by Mr Tim Maskens;
  - The DO44 and R063 boundaries are shown indicatively on the noise contour maps, and do not affect the flight paths indicated, which do not encroach into these areas. Note that the noise contours will ignore these boundaries as noise spreads geometrically from the source – this does not indicate that the plane has flown within the danger area, merely that the noise effects from the plane will be experienced in the danger area;
  - In his evidence, Tim Maskens has confirmed that all of the flight paths can be flown as indicated;
  - The length of the flight paths indicated in my evidence is not indicative of the length of flight. The noise modelling software extrapolates the flight path continuing in the same direction as the last point. Whilst noise contours have been shown going down to 45 dB, the important contour is the 57 dB one. Given that this contour only extends just outside the airport boundary, and before the various flight paths diverge, it is largely irrelevant for the 57 dB contour what happens further away from the runway.
  - Noise modelling has been checked and verified by Bureau Veritas, the acoustic consultants appointed by Shepway District Council.