

RESPONSE BY NERL TO SWFL/0/23**Airway and Upper Air Route traffic figures supplied to the Northumberland Public Inquiry.**

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The flight data provided by NERL in NATS/0/12 was extracted from a NERL computer in response to a request from the Steadings developer. NERL has never previously extracted this type of data before.

The data sample was for all flights routing between the reporting points Talla (TLA) and Newcastle (NEW).

The vast majority of traffic which uses L602 originates from or has a destination of Edinburgh, Glasgow or Glasgow Prestwick airports. The majority of aircraft using UL602 is overflying trans Atlantic traffic. As explained in evidence, NERL considers that the controlling of all such traffic in both L602 and UL602 will be affected by the proposed wind farm developments. The data shown in NATS/0/12 did not identify which of the aircraft were in L602 and which were in UL602 since NERL is concerned with the traffic in both airways.

During the course of oral evidence, SWFL submitted a Note (SWFL/0/23) which sought to interpret the data as showing 4 flights per day in L602. This appears to have been based upon an assumption made based on the number of aircraft which were at or below Flight Level 245 at NEW.

Mr Maclean stated in oral evidence based on his experience of that airway that that calculation was wrong and the data incorrect (if in fact it did purport to show that).

Having revisited the data shown on NATS/0/12 it is clear that SWFL/0/23 misrepresents the actual usage of L602. All traffic to and from the above mentioned airports will in fact be in L602 somewhere between NEW and TLA due to the climbing and descending nature of such traffic. In particular:

- In the case of landing traffic at the above airports, this crosses NEW at Flight Level 260 in UL602 and then descends into L602 when instructed by the Tay controller. This is normally immediately after NEW as the aircraft are being descended to achieve Flight Level 140 by TLA.

- In the case of traffic which has departed the above airports, they will be climbing past TLA en route NEW below Flight Level 250 in L602. They will generally cross NEW above Flight Level 260 in UL602.
- Given the proximity of the proposed wind farm development to NEW, it is likely that the majority of traffic passing overhead will either be climbing into UL602 or will have descended into L602.

The assumption made in cross-examination by Steadings that the amount of traffic at NEW represents the approximate amount of aircraft using L602 is therefore not an accurate assumption to make.

As stated in evidence, the nature of this traffic and the fact that it is manoeuvring is a major contributor to the complexity of this airspace, with a high requirement for controller monitoring and intervention. The traffic in both L602 and UL602 will be affected by these developments and the handover of the aircraft between controllers on the Talla, Tay, Dean Cross and Montrose sectors is flexible in both position and level. Controllers in all 4 sectors will sometimes be working traffic in L602 and UL602, and hence there is an effect on all 4 sectors.

Set out below are the monthly breakdown figures for traffic which routed between NEW and TLA on L602 and UL602.

In 2007, **38,831** aircraft used the airspace in these airways affected by the Proposed Developments.

Monthly Breakdown

| Count of Callsign | |
|--------------------|--------------|
| Month | Total |
| January | 2455 |
| February | 2797 |
| March | 2923 |
| April | 2701 |
| May | 3555 |
| June | 3785 |
| July | 4351 |
| August | 3677 |
| September | 3474 |
| October | 3574 |
| November | 2689 |
| December | 2850 |
| Grand Total | 38831 |

If it is desired to estimate what height aircraft are at in the specific stretch of airspace between NEW and TLA, the SWFL assumption is inappropriate, and the best method is to consider the recorded levels of aircraft at both NEW and TLA and then interpolate the results. This is done in the table below. For "callsign" read aircraft.

Flight Level Breakdown at **NEW**

| | |
|-------|-------|
| Month | (All) |
|-------|-------|

| Count of Callsign | |
|--------------------|--------------|
| Level Band at NEW | Total |
| <141 | 811 |
| 141-250 | 3057 |
| >250 | 34963 |
| Grand Total | 38831 |

Flight Level Breakdown at **TLA**

| | |
|-------|-------|
| Month | (All) |
|-------|-------|

| Count of Callsign | |
|--------------------|--------------|
| Level Band at TLA | Total |
| <141 | 10201 |
| 141-250 | 13292 |
| >251 | 15338 |
| Grand Total | 38831 |

It has been previously noted that the base of L602 steps down into the Scottish TMA from the highest base point (which is over the Proposed Developments).

The normal profile expected of the majority of traffic inbound and outbound to the Scottish airports is that they will cross TLA at or above Flight Level 140. Anything remaining below this is likely to be unusual types of aircraft which cruise at low levels and may be leaving L602 en route to NEW, as the base of the airway rises above their cruise level. Such traffic will be given a Radar Information Service by ScACC as it leaves the Airway L602.

Flight Level 250 is the upper limit of the Talla and Tay sectors. Above this level, traffic will be in the Dean Cross or Montrose sectors.

Almost all aircraft using L602 will be climbing or descending between NEW and TLA. Accordingly:

There will be a comparatively low figure shown at NEW of aircraft below Flight Level 140, combined with those between FL141 and 250. This equates to 3,868 per annum = 10.59 per day.

There will be a larger number of aircraft in these two level bands at TLA, as the aircraft are closer to their destination or departure point. The number of aircraft in these two bands is 23,493 per annum = 64.36 per day.

At NEW we can see that above FL250, there were 34,963 per annum = 95.78 aircraft per day in UL602. By contrast at TLA there are only 15,338 per annum or 42.02 aircraft per day above FL250. All the traffic in this sample will have used both L602 and UL602. In addition, it can be seen that all of this traffic will have been worked by at least 3 out of the 4 ScACC sectors. The only exception to this is the 4 aircraft per day which cruised only in L602 and appear both at NEW and TLA at the same level.

Accordingly, the data produced by NERL properly interpreted demonstrates that:

- In 2007 **38,831** aircraft used the airspace in L602 and UL602.
- All such aircraft would be affected by the Proposed Developments.
- In 2007 at least **19,625** aircraft climbed or descended through L602. This equates to 54 aircraft per day and is significantly higher than the figure of four per day suggested by Steadings.

In addition, as stated in evidence there are 4 sectors affected by these Proposed Developments. L602 and UL602 appear in all four sectors. The annual traffic figures for Tay are **105,482**, Dean Cross **192,288**, Montrose **103,056** and Talla **146,380**.

NERL has already provided monthly statistics for the sectors and this is repeated below for the affected sectors (Tay, Dean Cross, Montrose and Talla). There is no means of extrapolating L602 or UL602 traffic. The table can only indicate a relationship between the above traffic and total sector figures. It shows that all the sectors affected by the proposals have a very significant amount of traffic each month throughout the year.

| | TAY (84) | DCS (87) | MNT (85) | TLA (ZK) |
|-----|-------------|-------------|-------------|-------------|
| Jan | 7,805 | 14,888 | 7,856 | 11,218 |
| Feb | 7,343 | 13,817 | 6,813 | 10,603 |
| Mar | 8,315 | 15,598 | 8,028 | 11,972 |
| Apr | 8,308 | 14,763 | 7,662 | 11,611 |
| May | 9,337 | 17,459 | 9,457 | 13,052 |
| Jun | 9,514 | 16,954 | 9,038 | 13,000 |
| Jul | 9,991 | 19,068 | 10,824 | 13,765 |
| Aug | 9,609 | 17,646 | 9,732 | 13,320 |
| Sep | 9,546 | 16,606 | 9,078 | 12,883 |
| Oct | 9,699 | 17,008 | 8,743 | 13,431 |
| Nov | 8,552 | 14,158 | 7,541 | 11,522 |

| | | | | |
|-------------|----------------|----------------|----------------|----------------|
| Dec | 7,463 | 14,323 | 8,284 | 10,003 |
| 2007 | 105,482 | 192,288 | 103,056 | 146,380 |