

GACC Notes on

LONDON AIRSPACE CHANGE – GATWICK LOCAL AREA CONSULTATION

Background

1. The air traffic control company NATS and Gatwick Airport consulted recently on London airspace changes concerning several London airports (Gatwick, Stansted and City airports). The consultation¹, which ended in January 2014, concerned several ideas for the design of routes but did not reveal where those routes would be.
2. This present consultation² follows on but only concerns Gatwick routes below 4000 ft. Again it fails to reveal where the routes would be, except the Noise Preferential Routes (NPRs) for take-offs.
3. Precision navigation (PBN also known as R-NAV) has already been introduced on the existing NPRs (from November 2013) to reduce the extent to which aircraft are distributed within the NPRs and it is proposed that it should also be introduced for arrivals, to facilitate the handling of more aircraft and to reduce noise impacts. However, it is uncertain whether the noise impacts will be reduced by what is proposed.
4. Views are sought on several NPR options and on ways in which precision navigation should be employed in the routing of arrivals.
5. Responses can be made via the consultation web site (see footnote 2) by clicking on “Submit Your Feedback”. Responses can also be sent by e-mail to gatwickairspacechanges@ipsos.com or by hard copy to:

Freepost RSLG ATKL LBAE
Gatwick Consultation
Ipsos MORI
Research Services House
Elmgrove Road Harrow
HA1 2QG

6. The deadline for responses is 14 August 2014.

Badly Written

7. The document is so badly written as to be incomprehensible to most people to whom it is addressed (residents of the area). See Appendix A for a list of examples.

¹ http://www.londonairspaceconsultation.co.uk/?page_id=37

² <http://www.gatwickairport.com/gatwickairspaceconsultation/>

Badly Motivated

8. Paragraphs 1.1 and 1.2 suggest that the motive for the proposed changes is to minimise environmental impacts. This is untrue and misleading. **The real motive is to handle more aircraft** and any minimisation of environmental impacts, if achieved, would serve merely to mitigate the adverse consequence of handling more aircraft.
9. Paragraph 1.13 says that changes to Noise Abatement Procedures are being proposed where it is considered that they “may not be optimal”. **Clearly optimal noise abatement is a good thing but changes should only be made for that purpose rather than to “optimise” the number of aircraft that can be handled.**
10. Paragraphs 3.13 and 3.14 confirm that one of the main motives for change is to enable the airport to despatch more aircraft each hour. It would be achieved by adjusting the departure routes for aircraft when taking off towards the west but the increase in air traffic would impact all communities affected by arrival and departure routes (east and west). This is because increased capacity for departures towards the west would enable more flights to be scheduled and, consequently, when the wind is from the east, easterly departures would be more frequent too. And, of course, more frequent departures necessitate more frequent arrivals.
11. Paragraph 3.14 contains the suggestion that increasing the capacity of the runway when winds are westerly would help reduce delays during the busy morning period. It would not because the delays are caused by over ambitious scheduling. Demand for early morning slots is high and the airport would probably remain over ambitious even if it had more capacity.
12. Paragraph 3.15 suggests that positioning routes away from populated areas and introducing respite routes would improve noise management but no evidence is provided to support this – see paragraphs 17 to 19 below. **The real motive for creating highways in the sky is to facilitate the handling of more aircraft, which would create more noise.**
13. Paragraph 3.24 indicates that there would be a need for further airspace changes if any new runway were to be approved but does not explain why it is so important to make changes now rather than wait until it is known whether there will be a new runway. **Changes now would permit more aircraft to use Gatwick Airport but that is not of great importance because there is plenty of spare runway capacity elsewhere.** On the other hand airspace changes cause a great deal of misery (and financial loss) for people who are newly over-flown and to contemplate two such exercises merely to increase the profits of Gatwick Airport seems unjustifiable. Worse still, we hear that there may be further airspace changes at Gatwick in a year or two when changes at Heathrow are introduced.

Inadequate Coverage

14. Paragraph 1.3 says that the earlier London Airspace Consultation presented “the corridors within which we are seeking to position the new routes”. This is not true. The earlier

consultation was widely criticised for failing to show where new routes might be positioned and the present consultation continues to maintain this uncertainty except for areas very close to the airport. **Many people are rightly concerned that they could have a new, busy flight path positioned over their heads with aircraft flying at 4000 ft and lower.** And, because of the intention to narrow the flight paths to narrow tracks, the impact would be very severe with aircraft as frequent as one a minute.

15. The consultation area has been tightly defined (figure 1 on page 4) and excludes areas such as Haywards Heath, Pulborough, and Uckfield that could well experience considerable change in aircraft noise.
16. **It is not acceptable that this consultation, with the earlier London Airspace consultation, should create aviation highways in the sky without telling people where those highways might be.** People should have the opportunity to comment on the detailed proposals.

Problems with Metrics

17. Metrics, in this context, are means of quantifying environmental impacts.
18. Paragraph 3.12 suggests that one of the aims of the exercise is to utilise precision navigation techniques to optimise environmental benefits. This suggests that metrics exist by which the changes can be assessed in environmental terms (noise nuisance and emissions). But this is far from true in respect of noise nuisance. Research in 1982 (published in the ANIS report of 1985) suggested that the impact of aviation noise on people below could be represented, with reasonable accuracy, by average noise contours. However, possibly for a variety of reasons, it is now accepted that this is no longer the case (ANASE Report of 2007). Some have suggested that this is because people are more sensitive to noise than they used to be but it is possible that the increased number of aircraft using Gatwick airport have raised the importance of other factors affecting annoyance. Research is needed into the relative importance of these factors such as background noise, frequency of events, time of day, so that airspace planners can minimise the annoyance caused by aircraft. In the absence of such research **the airspace planners are “flying blind” with faulty instruments.**
19. Anecdotal evidence suggests that people grow increasingly annoyed as the number of noise events increases per hour and that there is a critical point at which their responses become much more severe. **Research is needed into this response curve to seek to ensure that misery and the health consequences of aviation noise are kept down.**
20. Another metric used in the consultation document is the SEL footprint (maps 9, 15, 22 and 31). This is used to represent the noise contours at night resulting from single flights as opposed to the contours resulting from a combination of flights. The use of this metric suggests that the impact of night flights is only felt in the immediate area of take-off noise whereas **complaints about night flights are most common from areas under approach paths up to 20 miles out from the airport.** The noise experienced at these distances is far below the 90dBA level mapped in the SEL footprint but people are disturbed because of low background noise at night, particularly in rural areas.

21. Paragraph 3.15 declares that precision navigation would be used to improve noise management but there is no evidence that the proposed “improvements” (flying over less populated areas and creating respite routes) would create less annoyance. It is quite possible that the extra annoyance caused by disturbing the tranquillity of rural areas would outweigh the benefit of impacting a smaller population. It is also possible that respite, while an attractive word, only serves to disturb the conditioning that enables unremitting aircraft noise disturbance to become tolerable to some.
22. Paragraph 3.15 reveals that precision navigation is to be used to avoid populated areas and noise sensitive areas. This implies that **rural areas, including Areas of Outstanding Natural Beauty (AONBs) are going to suffer much more aircraft noise** and, around Gatwick, those areas are significantly populated. Furthermore there are many businesses providing recreation services (e.g. historic houses, riding schools and holiday accommodation) to additional numbers of people. Taken with the fact that **aircraft noise is more noticeable when background noise is low**, it is questionable whether avoiding urban areas would reduce noise nuisance. We do not know and neither do the airspace planners. Paragraph 3.16 acknowledges this difficulty but comes to no conclusion about how it should be resolved. It also acknowledges that respite routes increase the number of people affected by noise but provides no evidence that benefits outweigh this disbenefit.
23. Precision navigation is also being used to minimise the number of people being over-flown by narrowing the departure and arrival routes. There is no doubt that this will tend to minimise the number of people over-flown but neither is there any doubt that it will tend to maximise the number of times each person on the narrow routes is over-flown. It is in line with Government policy nevertheless nobody knows whether it is better to fly over 600 people once an hour or 10 people once a minute because no research has been done into the impact of concentrated routes. **It is outrageous that such concentrated highways in the sky are being contemplated with no evidence that they are better than dispersed routes.** It is particularly nonsensical to compare a broad NPR (paragraph 6.27 for example) with a narrow one in terms of population counts if one takes no account of how often a person is over-flown and at what height. This counts a person that is over-flown at 1000 ft the same as one over-flown at 4000 ft and a person that is over-flown once a minute the same as one over-flown once an hour.
24. Paragraph 4.5 refers to the 57dBA contour as empirically linked to the onset of significant community annoyance. This related to urban areas around Heathrow, and took no account of areas around Gatwick with lower background noise. Moreover, it overlooks the subsequent ANASE study which showed that things have changed. (See paragraph 18 above).

Concentration versus dispersal

25. Concerning arrivals, aircraft presently take undefined routes around Gatwick to join the final approach paths which are narrow straight lines in line with and leading to the runway (one for easterly approaches and one for westerly). The area north of Gatwick is virtually free of approaching aircraft (below 7,000 ft) because of the need to avoid Heathrow flight paths but the tracks of aircraft approaching from elsewhere cover a very wide area of East Sussex, West Sussex, Surrey and Kent. The intention is to replace this multitude of undefined tracks with a very limited number of defined approach paths by

which aircraft would join the final approach paths. Aircraft would join each defined path at the same point (the merge point) and would then all follow exactly the same headings and join the final approach path at the same point. The motive for doing so is to enable the air traffic controllers, more easily to handle an increased number of aircraft. The impact on the ground would be to concentrate the disturbance on fewer people but to subject those people to a far greater number of aircraft per hour than at present.

26. For departures, aircraft presently take-off on one of a number of Noise Preferential Routes which have been designed to minimise the number of people subjected to loud take-off noise. Once aircraft reach 4000 ft (3000 ft in certain circumstances) they then disperse in various directions towards their final destinations. The NPRs are in fact broad corridors 3km wide and until recently the navigation techniques used resulted in aircraft being dispersed within those corridors. However, departures from Gatwick now use precision navigation which has resulted in concentrating their tracks within the corridors so that fewer people are directly over-flown within the NPR but those that are suffer a far greater number of take-offs than previously.
27. It should be noted that the people affected by any route will be those directly under that route and a great number of people either side of it. The distance either side depends very much on the height of the aircraft, the noise it is emitting and the ambient noise. Topography also plays a part with hills reducing the relative height of the aircraft and acting to reflect the noise towards or shield the noise from the people concerned. Aircraft noise typically spreads noticeably 2 or 3 miles each side of the track taken.
28. **We are unable to conclude whether concentration is better than dispersal because no research has been done.** If 10 people suffer more annoyance and ill health in order that 100 people suffer less the degree of annoyance and ill health still needs assessment. Leaving aside the human dimension, nobody knows whether the costs of medical treatment for the 10 would be greater or less than the treatment savings for the 100 people. And there may well be education and employment (sickness absence) consequences too.

Respite – good or bad?

29. People talk about respite as if the benefits are undoubted. But, for aircraft noise, there is little evidence one way or the other. It is well known that, in some circumstances, people can become accustomed to annoyances and cease to notice them (conditioning). So much is this the case that people who live in noisy towns sometimes complain that they are unable to sleep for the first night or two on holiday because “it’s too quiet”. Similarly when they return from holiday sleep is again disturbed until, after a few days, they get used to town noises again. It is clear that whether conditioning occurs and the degree to which it can be disturbed depends both on the individual and the nature and circumstances of the nuisance that is being suffered.
30. There are several forms of respite that are possible.
 - (a) Dispersal as opposed to concentration provides a form of respite but not predictably.
 - (b) One route one day and another route the next or some similar fixed pattern.
 - (c) Like (b) but only at night.
 - (d) One route for daytime and another route for night time.

31. One can see that type (b) might be useful in the planning of barbeques and other outdoor events. So if the new narrow paths within the existing Noise Preferential Routes for departures are replaced by two or three similar paths to provide predictable day time respite that might be useful. On the other hand two or three paths will inevitably disturb a greater number of people and may well disrupt conditioning too. Similarly for arrivals two or three paths may well provide benefits during the day that outweigh the disbenefits. **Just as with concentration/versus dispersal (respite is watered down concentration) nobody knows whether respite is a good idea.**
32. But when it comes to night time respite of the same sort (option (c) in paragraph 31 above) one only needs a moment's thought to realise that, except for night workers, there are no activities that can be scheduled for the quiet nights. Most people want to sleep every night and will not benefit from a night without planes in exchange for a night with twice as many. Indeed, those people who have got used to aircraft noise at night may well find their tolerance disrupted so that they are far worse off. **Respite that involves no planes one night and twice as many the next is clearly not a good idea.**
33. Section 6 of the consultation document suggests another form of night time respite for which the above remarks do not apply. The proposal is that an existing Noise Preferential Route (NPR) should be replaced by one of three alternatives but that, at night, the old NPR could continue to be used as respite for those newly over-flown (option (d) in paragraph 31 above). This seems worthy of consideration except we see no reason to depart from the old NPR anyway.
34. Similarly Sections 8 and 9 of the document describe routes that would be used every night for arrivals (from east and west) to provide people on the day time routes with respite (type (d) in paragraph 31 above). Sadly no data is provided to evaluate this option and the document suggests that existing regulations to limit arrivals noise close to the airport would have to be revoked. It is suggested that the rules exist to ensure continuous descent (which is quieter than stepped descent) but this is not true. **The rules exist to prevent the noisy manoeuvre associated with turning onto the final approach path from taking place at too low an altitude (3000 ft) and so the rules should be maintained.**
35. The document suggests that it is not possible to have respite routes for day time arrivals, because of the volume of day time traffic but in that **case it might be best to retain the present dispersed system of arrivals so that communities and recreational areas are not burdened with concentrated arrival routes.** However, it is puzzling, because the switch to precision navigation and concentrated routes from merge point to final approach path is supposed to be a means of handling increased air traffic. It should therefore be possible to replace the present broad swathes with several concentrated paths (to be used alternately – paragraph 31 (b) above).

Noise Preferential Routes (NPRs)

36. The most important part of a departure route, from a noise perspective, is the initial section from zero to 4000 ft. The existing Noise Preferential Routes were carefully designed, in the 1960s, to minimise the impact on local communities during this early phase of departure. In addition, patterns of settlement since have taken account of the NPRs. People who have chosen to live within the area of an NPR have done so knowing

that they will experience considerable take-off noise and those who have settled elsewhere have done so in the expectation of less noise (for which they have often paid a premium in house prices). This means that **NPRs should not be moved without a clear demonstration of an overall environmental benefit and people who are newly affected should receive compensation for the loss of property value.** GACC has suggested to local MPs that they should press for an amendment to the Land Compensation Act to ensure that compensation is paid for the loss of value in any property affected by a new flight path.

37. Sadly the route changes proposed in this consultation can not be properly assessed for environmental benefit because insufficient information is available concerning the number of people over-flown at various heights and at various frequencies (numbers of flights per day.) Neither is the term “over-flown” adequately defined to include those who are so close to the flight path as to consider themselves over-flown.
38. The consultation suggests that NPRs should be shortened. Generally this only reflects the fact that aircraft climb more quickly than when the NPRs were designed. Consequently they reach the critical height of 4000 ft sooner at which point the requirement to remain within the NPR no longer applies anyway. **This proposal can therefore be accepted as of little consequence.**
39. As reported in paragraph 26 above, a significant change within the NPRs has already occurred and people may wish to comment on it. In line with overall Government policy, NATS and Gatwick have established **new precision navigation departure routes within and extending beyond the existing NPRs.** For practical reasons these routes do not follow the centre lines of the existing NPRs precisely but, with one exception they remain within them although sometimes off to the left or right of the centre lines. Because aircraft follow these narrow tracks precisely and are no longer dispersed across the full 3 Km width of the NPRs, fewer people are directly over-flown. **But some people are being over-flown constantly and have reason to be aggrieved. And because the tracks are not on the centre line other people are getting more noise than they used to.**
40. One of the new precision departure routes (the one that involves a departure towards the west followed by a loop round Horley to fly east) does diverge from the existing NPR for some distance below 4000 ft **bringing all flights closer to North Holmwood.** Furthermore flights tend to stay on the same heading for longer **bringing more noise to Reigate, Brockham, Betchworth and Redhill than they were used to.**

Options for RWY26 departures heading to the west and then south

41. Section 6 of the consultation document concerns options for adjusting departure routes that involve a westerly take-off followed by a turn towards the south. Map 1 shows that there are four such routes:
- SAM/KENET
 - BOGNA/HARDT
 - SFD
 - TIGER/DAGGA/WIZAD

42. Map 2 shows that TIGER/DAGGA/WIZAD was unused between 2 and 10 January 2014. It is very little used generally but greater use was predicted in the previous consultation and in view of the way in which it passes over and close to heavily populated areas (including areas of Horsham) where people are unused to significant aircraft noise we believe that a sensible change would be to **delete it from the list of approved NPRs**.
43. Paragraph 6.4 reveals that the tracks shown in Maps 1 to 3 include aircraft using conventional navigation as well as aircraft using precision navigation but, because the switch to precision navigation took place very recently we need more information to see how the change has already impacted upon the people below and how the proposed changes would further impact upon them.
44. The main focus of attention in Section 6 is on the BOGNA/HARDT route and the present Warnham trial (also known as the ADNID trial) which aims to facilitate the despatch of a greater number of aircraft by turning them south sooner than before, so that the next aircraft can be despatched straight on without suffering turbulence from the previous aircraft. Clearly this could benefit the airport and the airlines but not neighbours of the airport for whom an increase in the number of aircraft handled would be bad news. Furthermore the three options all depart from the existing Noise Preferential Route and so expose a new set of people to noise they are unused to (see paragraph 36 above). Local people may well wish to suggest **all three options (A, B and C) should be rejected and any adjustment to this route should be within the existing NPR or further south, where the aircraft will have reached a greater altitude and the change will have less impact**.
45. As demonstrated above in the section on metrics (paragraphs 17 to 24) the complicated analysis of environmental impacts and population comparisons have no validity and can be ignored.
46. Concerning the width of the new precision navigated NPRs, because aircraft are using precision navigation the width of the NPR will have no impact on the number of people experiencing noise nor on the amount of noise they experience. For this reason we suggest that the precision navigated **NPRs should be only 500 metres wide** and should be used only as a test of whether aircraft are “on track” or not. But anybody buying a house within 3 miles of an NPR should be warned that they can expect a good deal of aircraft noise.

Options for RW08 departures heading east/north east

47. Section 7 concerns departures towards the east that then turn north east (the LAM route) or east (the DVR/BIG/CLN route). It can be seen from map 25 that most flights intended for the LAM route have been diverted to go straight on rather than turn north east. Air traffic controllers have done this to avoid conflict with Heathrow traffic. This has inflicted increased noise on Edenbridge, Hever, and other villages on the straight ahead route – though generally the aircraft are already between 4000 and 5000 ft.
48. The suggestion now being made is that the little used LAM route should be closed and that both sets of traffic should use the DVR/BIG/CLN route following a precision navigation track illustrated in Map 26. That track remains within the existing NPR but

the fact that it is not on the centre line would take it closer to some communities and further away from others.

49. There are benefits to this proposal in that Edenbridge and Hever are avoided and so are the villages under the existing LAM route. However people living under the DVR/BIG/CLN route would suffer an increase in traffic. We can make no sense of table 7, which purports to show the impact in terms of flights per hour and, as discussed earlier, the population counts have no validity either. So it is not possible to say whether there would be an overall net benefit.
50. **We suggest that respondents should make the point that it is not possible to assess the overall impact of this proposal from the data provided.**

Night Time Respite for RWY26 arrivals.

51. This concerns arrivals landing from the east. The previous London Airspace consultation concerned the establishment of arcs, merge points and precision navigated tracks for arrivals. Aircraft would join the arcs at a relatively high altitude, they would be called off the arcs at appropriate intervals, would head for the merge points and would then follow the tracks one behind another to join the final approach path about 10 miles from the end of the runway. We are not being told where the arcs, merge points and tracks would be in spite of the fact that their positioning could have a dramatic impact on communities around the airport (except north of the airport because these features would be south of Gatwick to avoid conflict with Heathrow traffic). **We can not suggest too strongly that the proposed positioning of the arcs, merge points and tracks should be published for comments.**
52. Map 33 shows the present pattern of arrivals to join the final approach path but the intention is to replace that broad swathe extending from Dormansland to Tonbridge with narrow, precision navigated tracks. It is acknowledged that the narrow tracks will cause greater disturbance for those living under or near them (because aircraft will be concentrated on them) so it is proposed that they will be carefully designed to avoid sensitive areas and that the point at which they join the final approach path will be somewhere within the two broad routes shown in Map 34. However, the respite route, nearer to Dormansland, would only be used at night and the use of that route might necessitate joining the final approach path at a lower altitude than is presently permitted.
53. Local people may well wish to suggest **it would be quite wrong to remove the present regulations insisting that aircraft do not join the final approach path too close to the airport or at too low an altitude** because those regulations minimise the noise suffered by communities that are heavily burdened with noise. As the consultation document acknowledges (paragraph 8.5) the noise made by aircraft turning on to the final approach path is greater than aircraft that are already established on the final approach path and the regulations exist to prevent such noisy manoeuvres at low altitudes.

Night-time respite option for RWY08 arrivals

54. The pattern of arrivals from the west is shown in Map 37. Again the intention is to employ precision navigation so the pattern would be more concentrated. And like

arrivals in the other direction it is suggested that those who suffer more concentrated arrivals should get respite at night by employing a respite route bringing aircraft onto the final approach path closer to the runway and at lower altitude. It would require the removal of the present noise abatement rule preventing such manoeuvres and would be bad news for Rudgwick, Cox Green and places nearby and they already suffer a great deal of noise from arrivals. **This change would remove the present noise abatement rules and subject these communities to more noise, particularly at night.**

Other NPR changes

55. Section 10 of the consultation concerns other changes proposed to NPRs.
56. The first proposal is to narrow the NPRs (see paragraph 38 above) to match precision navigation possibilities. We believe the proper purpose of NPRs is to limit the area of sky that can be used for take-offs to that area that will cause the least disturbance. This suggests that they should be as narrow as possible. On the other hand it is not known what impact such concentrated routes might have, nor whether it might be better to have several such routes within each NPR so as to provide respite. **Until research is done to answer these questions we suggest that the NPRs should not be narrowed.**
57. The second proposal is to shorten the NPRs to reflect the fact that aircraft reach 4000 ft sooner than they did when the NPRs were first established. **We feel this is acceptable (see paragraph 38 above).**
58. The third issue discussed is the re-centering of the NPRs to match the routes taken using precision navigation. **We do not feel it would be appropriate to move any of the NPRs on the basis of the data provided.** It is not possible to demonstrate an overall benefit (see Problems with Metrics above) whereas the disbenefit of including new people within an NPR is obvious.
59. As mentioned in paragraph 40 above, precision navigation has resulted in the establishment of a departure route which is outside the established NPR for a short distance. Paragraph 10.18 of the consultation suggests shifting the NPR to match the track that aircraft are taking. **No doubt the people affected by the new track will wish to oppose this suggestion and seek to have the track repositioned back inside the NPR, notwithstanding the difficulties that are alleged.** The decision to position the track outside the NPR was made by the CAA³ and is due to be reviewed, in the light of experience, shortly. See the decision letter (footnote 3) for details of where to make representations.

Summary

60. The consultation is extraordinarily badly written, hindering those who might want to respond. It also includes a great deal of data on population counts that is useless and misleading because it does not relate to the areas affected or potentially affected by noise.

³ http://www.caa.co.uk/docs/2111/20130814DecisionLetterLGW_RNAV1_SIDs.pdf

61. The airspace is being redesigned in ignorance of what causes disturbance. The necessary research has not been done. **Airspace planners are “flying blind” with faulty instruments.**
62. There is no evidence that concentration will cause less disturbance than dispersal. Again research is needed.
63. The consultation does not extend far enough because disturbance is experienced way beyond the noise contours, particularly in areas where background noise is low and in areas that are frequently over-flown at relatively high altitudes.
64. People have paid extra for houses that are not on flight paths only to find that new flight paths are being created without compensation.
65. Any change in flight paths causes serious misery because previous peace is shattered, future expectations of peace are destroyed, houses are devalued and people feel imprisoned and unable to move.
66. There is no need for any change in flight paths at present apart from a desire to get more aircraft off the runway, and thus to make a larger profit for GAL. There is no need for extra flights when Stansted is only half full.
67. It is disgraceful that no details are given of the new point-merge approach system which will affect much of Sussex. **People should have a chance to comment on these highways in the sky.**
68. GACC cannot comment on the details of proposed routes – that will be for each community. But the effect of this consultation will be to set community against community. **Anger should be directed at the airport, not at your neighbours.**

1. Footnote 4 on page 1 states “NPRs define a swathe around a route where noise may be expected and are a means of displaying and monitoring the areas likely to be overflowed.” The first part of this statement is untrue. Take-off noise has always extended significantly beyond the NPRs. The present NPRs are corridors within which aircraft are expected to remain during take-off.
2. The use of the word “generic” to describe the consultation area on page 4 is nonsensical. It is simply the consultation area and it is not large enough.
3. The word “by” seems to be missing from the first line of paragraph 3.6 before “air traffic control”.
4. Page 8 (comments in red)

"The ADNID PBN Trial

3.20 There is an on-going trial at Gatwick to develop the technical assurance for PBN [PBN has not yet been explained other than to say it stands for Performance Based Navigation. Nor is it clear what “technical assurance” means.] routes that diverge shortly after take-off. This is referred to as the ‘ADNID’ trial and is specifically testing PBN criteria for separating aircraft on routes that diverge by 20° approximately 2 nautical miles after taking off. [In the glossary, PBN is defined as "See Performance Based Navigation". So looking at Performance Based Navigation - that says: "... a generic term for modern standards for aircraft navigation capabilities (as opposed to ‘conventional’ navigation standards). See www.eurocontrol.int/navigation/pbn for details. That website is unobtainable. There is no indication of what PBN criteria might mean though they are mentioned twice in the document.]

3.21 This trial has so far generated enough data to enable us to develop the design options presented in this consultation. However more data is required to provide the full technical assurance required to support an implementation; therefore the trial continues to run in parallel with this consultation as further data is collected. Further details of the ADNID trial can be found on our FAQs page at www.gatwickairport.com/gatwickairspaceconsultation.” [The term ADNID does not appear on this page, so there is no explanation].

5. Paragraph 6.19 the third bullet point (comments in red)
“NPR – as per the SEL, both NPRs would remain, although note that the existing BOGNA NPR could be reduced in size as described in Section 10.”
[Unintelligible]
6. Paragraph 6.2 (comments in red)
"...(see Section 3 for details of FAS and the ADNID trial). [But section 3 of the document, on pages 5 - 9, says nothing about ADNID other than that "The system of routes used air traffic control is defined around points in the sky which have codenames made of 3 or 5 letters e.g. BOGNA, ADNID, SFD. " I have had to go

to the minutes of the GATCOM meeting of 30th January to find the ADNID trial means the one over Warnham]

7. Within the Glossary “SEL” is defined as “See Noise Footprint” but the explanation of Noise Footprint in the glossary gives no explanation of SEL.
8. Paragraph 10.1, final sentence makes no sense in this context.